



AUTOMOTIVE

HEAVY MACHINERY

ELECTRONICS

FLUID POWER

POWERSPORT



recho

SEALING | NVH | CONNECTING | FASTENING

CAPS | PLUGS | TAPES | DIE CUTS | HOOKS

WELCOME!

Since 1966, Echo Engineering and Production Supplies, Inc. has been providing world-class companies with both standard and custom masking, hanging, OEM components and assemblies, as well as protection products. We have an extensive selection of materials available that meet various performance requirements, and our operations include multiple stocking locations, in-house converting, and extensive molding capabilities.

These specialized operations—coupled with our team’s design expertise, engineering knowledge and product development success—guarantees that you receive fast, innovative, cost-effective solutions that make sense for your budget.

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We'll partner with you to understand what role each component plays in your product development or manufacturing process so we can confidently recommend a solution that best meets your needs. We will be there to help you identify opportunities for increased line output, reduced labor costs, enhanced efficiencies, or any number of other bottom-line tangibles.

That’s engineering ingenuity—and that’s ***The Echo Way***.

Within these pages....

You'll find our most up-to-date product offerings. Don't see what you need? Please don't hesitate to reach out to our incredible sales team to discuss creating a custom component to fit your needs.

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IT IS ALWAYS THE RESULT OF HIGH INTENTION, SINCERE EFFORT, INTELLIGENT DIRECTION, AND SKILLFUL EXECUTION.

At Echo Engineering & Production Supplies, Inc., we're committed to ensuring you receive the highest quality products and support per your requirements.

We strive to constantly improve upon our processes to better serve you in meeting your quality and productivity goals.

Our quality objectives are measurable and consistent and are an integral part of our overall quality process.

SEE OUR QUALITY FOR YOURSELF!



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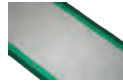


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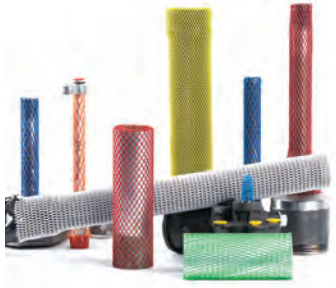
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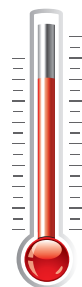


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MASKING

PRODUCTS

At Echo Engineering, we offer high and low-temperature standard masking solutions for your manufacturing and finishing needs. Our solutions consist of caps, plugs, pressure-sensitive tapes, and die cuts. With nearly 10,000 products in our catalog, you're likely to find a product that suits your needs. If one of our standard products doesn't work for your application, our in-house engineers will work with you to create an effective masking solution.

Masking is the foundation of our business. We've built a reputation for developing reliable, durable masking solutions that are easy to install and remove, color-coded for easy identification, and designed for reusability.



GO CUSTOM



When one of our standard products does not meet your requirements, Echo's engineering team will work with you to create an innovative custom masking solution. Our custom masking designs increase efficiency and product quality by reducing masking labor and rework.

Call 888.echo.365 or turn to page 102 for more information on custom masking.



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MASKING PLUGS

Echo's standard line of plugs are developed to mask through holes and blind holes, both threaded and non-threaded. Designed with usability in mind, many of Echo's plugs have special features that increase efficiency, decrease masking time, and rework.

Echo's plugs are available in standard colors and sizes, which are detailed in each section. If you are interested in a color or size not listed, contact us and we'll work with you to come up with a custom masking solution.

MATERIALS:

SILICONE

600°F / 315°C

Recommended Uses:

- Powder Coating, E-coating, Plating, & Anodizing

Product Features:

- Easy to install & remove
- Offers excellent sealing ability
- Durable, reusable, & cost-effective
- Color coding available by special order

Materials:

- Specially formulated silicone for great reusability & reliability

EPDM

350°F / 177°C

Recommended Uses:

- Wet Painting, Plating, Anodizing, & Blasting

Product Features:

- Easy to install & remove
- Offers excellent sealing ability
- Durable, reusable, & cost-effective

Materials:

- Specially formulated EPDM for great reusability & reliability

LOW-DENSITY POLYETHYLENE

180°F / 82°C

Recommended Uses:

- Plating, Anodizing, & Spray-painting

Product Features:

- Self-tapping, creates leak-proof seal
- Recommended for threaded holes

For air-dry temperature applications, please see our protection line starting on page 70.



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Silicone Tapered Plugs

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

- Powder Coating, Plating, E-Coating, Anodizing, Wet Paint

APPLICATION:

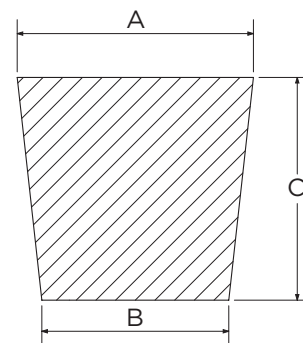
- Plugs both threaded & non-threaded holes
- Universal application
- Push & twist for tight seal

FEATURES:

- Tapered to fit multiple hole diameters
- Color coding available



Standard color is clear
Custom colors upon request



PART NUMBER	QTY	PLUG DIMENSIONS				LENGTH	
		A		B		C	
		in	mm	in	mm	in	mm
01-000098-04SIL	500	0.080	2.03	0.015	0.38	2.000	50.80
01-000099-04SIL	1000	0.100	3.18	0.031	0.79	1.000	25.40
01-000099-S4SIL	1000	0.125	3.18	0.031	0.79	0.625	15.88
01-000100-04SIL	1000	0.125	3.18	0.062	1.57	0.625	15.88
01-000101-S4SIL	1000	0.200	5.08	0.062	1.57	0.500	12.70
01-000101-M4SIL	1000	0.187	4.75	0.062	1.57	0.625	15.88
01-000101-04SIL	1000	0.200	5.08	0.062	1.57	0.750	19.05
01-000101-L4SIL	1000	0.280	7.11	0.062	1.57	1.500	38.10
01-000102-04SIL	1000	0.250	6.35	0.125	3.18	0.750	19.05
01-000102-L4SIL	1000	0.250	6.35	0.125	3.18	1.000	25.40
01-000103-04SIL	1000	0.344	8.74	0.187	4.75	0.625	15.88
01-000103-L4SIL	1000	0.344	8.74	0.187	4.75	1.000	25.40
01-000104-04SIL	100	0.375	9.35	0.250	6.35	0.750	19.05
01-000104-L4SIL	100	0.437	11.10	0.250	6.35	1.000	25.40
01-000105-S4SIL	100	0.460	11.68	0.340	8.63	0.750	19.05
01-000105-04SIL	100	0.500	12.70	0.313	7.95	0.813	20.65
01-000105-M4SIL	100	0.375	9.35	0.125	3.18	1.250	31.75
01-000105-L4SIL	100	0.500	12.70	0.125	3.18	2.000	50.80
01-000106-04SIL	100	0.594	15.09	0.406	10.31	1.000	25.40
01-000107-04SIL	100	0.656	16.66	0.500	12.70	1.000	25.40
01-000108-04SIL	100	0.750	19.05	0.563	14.30	1.000	25.40
01-000109-04SIL	100	0.781	19.84	0.625	15.88	1.000	25.40
01-000110-04SIL	100	0.938	23.83	0.718	18.24	1.000	25.40
01-000111-04SIL	100	1.000	25.40	0.750	19.05	1.000	25.40
01-000112-04SIL	100	1.063	27.00	0.906	23.01	1.000	25.40
01-000113-04SIL	100	1.109	28.17	0.959	24.36	1.000	25.40
01-000114-04SIL	100	1.250	31.75	1.031	26.19	1.000	25.40
01-000115-04SIL	100	1.344	34.14	1.125	28.58	1.000	25.40
01-000116-04SIL	100	1.438	36.53	1.125	28.58	1.000	26.90
01-000117-04SIL	50	1.500	38.10	1.187	30.15	1.000	26.40
01-000118-04SIL	50	1.625	41.28	1.313	33.35	1.000	26.50
01-000119-04SIL	50	1.688	42.88	1.406	35.71	1.000	25.40
01-000120-04SIL	50	1.750	44.45	1.469	37.31	1.000	25.40
01-000121-04SIL	50	1.813	46.05	1.500	38.10	1.000	25.40
01-000122-04SIL	50	1.969	50.01	1.625	41.28	1.000	25.40
01-000123-04SIL	50	2.078	52.78	1.750	44.45	1.000	25.40
01-000124-04SIL	10	2.203	55.96	1.875	47.63	1.000	26.90
01-000125-04SIL	10	2.469	62.71	2.000	50.80	1.000	25.40
01-000126-04SIL	10	2.500	63.50	2.125	53.98	1.000	26.40
01-000127-04SIL	10	2.688	68.28	2.281	57.94	1.000	26.50
01-000128-04SIL	10	2.969	75.41	2.438	61.93	1.375	34.93
01-000129-04SIL	10	3.500	88.90	3.000	76.20	1.500	38.10
01-000130-04SIL	10	4.000	103.20	3.250	82.55	1.500	39.10
01-000131-04SIL	10	5.000	129.00	3.650	88.60	2.000	52.30

Silicone Hollow Tapered Plugs

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

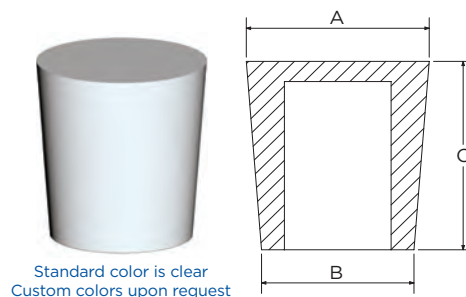
- Powder Coating, Plating, E-Coating, Anodizing, Wet Paint

APPLICATION:

- Use for plugging both threaded & non-threaded holes
- Use plug for universal application
- Push & twist for tight seal

FEATURES:

- Tapered to fit multiple hole diameters
- Hollow center for easy installation & reduced costs



PART NUMBER	QTY	PLUG DIMENSIONS				LENGTH	
		A		B		C	
		in	mm	in	mm	in	mm
01-HPO0112-04SIL	100	1.062	26.97	0.906	23.01	1.000	25.40
01-HPO0114-04SIL	100	1.250	31.75	1.031	26.18	1.000	25.40
01-HPO0116-04SIL	100	1.437	36.50	1.187	30.15	1.000	25.40
01-HPO0118-04SIL	100	1.625	41.27	1.312	33.32	1.000	25.40
01-HPO0120-04SIL	100	1.750	44.45	1.469	37.31	1.000	25.40
01-HPO0122-04SIL	50	1.937	49.20	1.625	41.27	1.000	25.40
01-HPO0124-04SIL	50	2.203	55.95	1.875	47.62	1.000	25.40
01-HPO0125-04SIL	25	2.468	62.69	2.000	50.80	1.000	25.40
01-HPO0126-04SIL	25	2.500	63.50	2.125	53.98	1.000	25.40
01-HPO0127-04SIL	10	2.688	68.28	2.281	57.94	1.000	25.40
01-HPO0128-04SIL	10	2.953	75.01	2.44	61.98	1.393	35.38

Silicone Multi-Masks

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

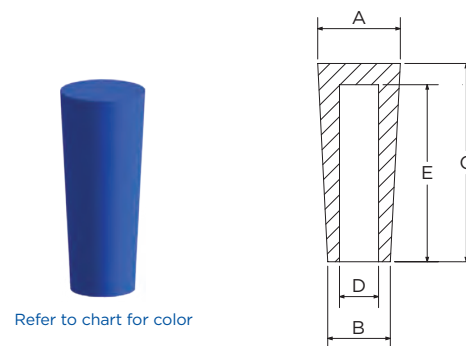
- Powder Coating, Plating, E-Coating, Anodizing, Wet Paint

APPLICATION:

- Universal plug to mask threaded & blind holes
- May also be used as a cap to mask studs & tube ends

FEATURES:

- Tapered to fit a variety of hole diameters
- Multipurpose applications
- Color coded



PART NUMBER	QTY	PLUG DIMENSIONS				LENGTH		CAP DIMENSIONS				COLOR
		A		B		C		D		E		
		in	mm	in	mm	in	mm	in	mm	in	mm	
01-SHPC103-00062	1000	0.340	8.64	0.180	4.57	1.120	26.90	0.062	1.57	1.000	25.40	CLEAR
01-SHPC104-00093	500	0.380	9.65	0.240	6.10	1.120	26.80	0.093	2.36	1.000	25.40	RED
01-SHPC104-00125	500	0.440	11.18	0.240	6.10	1.120	26.80	0.125	3.18	1.000	25.40	BLUE
01-SHPC105-00156	250	0.500	12.70	0.320	8.13	1.120	27.00	0.156	3.96	1.000	25.40	PINK
01-SHPC105-00172	250	0.500	12.70	0.320	8.13	1.120	26.50	0.172	4.37	1.000	25.40	YELLOW
01-SHPC105-00187	250	0.500	12.70	0.320	8.13	1.120	26.90	0.187	4.75	1.000	25.40	GREEN
01-SHPC106-00218	250	0.600	15.24	0.420	10.67	1.120	26.50	0.218	5.54	1.000	25.40	CLEAR
01-SHPC106-00234	250	0.600	15.24	0.420	10.67	1.120	26.80	0.234	5.94	1.000	25.40	RED
01-SHPC106-00250	250	0.600	15.24	0.420	10.67	1.120	26.50	0.250	6.35	1.000	25.40	BLUE
01-SHPC106-00281	250	0.600	15.24	0.420	10.67	1.120	26.50	0.281	7.14	1.000	25.40	PINK
01-SHPC107-00312	100	0.660	16.76	0.500	12.70	1.120	27.00	0.312	7.92	1.000	25.40	YELLOW
01-SHPC107-00375	100	0.660	16.76	0.500	12.70	1.120	26.50	0.375	9.53	1.000	25.40	GREEN

Silicone Non-Vented Tapered Plugs

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

- Powder Coating, Wet Paint

APPLICATION:

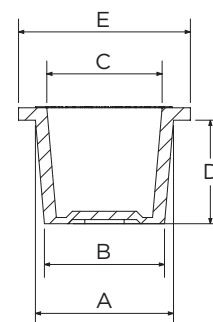
- Use when looking for a high temperature alternative to standard plastic plugs (Similar to TP Series)

FEATURES:

- Made from a flexible material, which allows for snug fit
- Tapered to fit multiple hole diameters
- Hollow design allows for easy insertion



Standard color is clear
Custom colors upon request



PART NUMBER	QTY	PLUG DIMENSIONS				CAP DIMENSIONS		LENGTH		FLANGE DIAMETER	
		A		B		C		D		E	
		in	mm	in	mm	in	mm	in	mm	in	mm
01-012X018-04SIL	1000	0.182	4.62	0.116	2.95	0.120	3.05	0.380	9.65	0.330	8.38
01-017X024-04SIL	1000	0.240	6.10	0.173	4.39	0.130	3.30	0.380	9.65	0.400	10.16
01-024X030-04SIL	1000	0.295	7.49	0.240	6.10	0.183	4.65	0.380	9.65	0.460	11.68
01-030X037-04SIL	1000	0.365	9.27	0.299	7.59	0.255	6.48	0.380	9.65	0.520	13.21
01-036X042-04SIL	1000	0.418	10.62	0.361	9.17	0.307	7.80	0.380	9.65	0.580	14.73
01-042X049-04SIL	500	0.485	12.32	0.419	10.64	0.375	9.53	0.380	9.65	0.650	16.51
01-047X054-04SIL	500	0.536	13.61	0.471	11.96	0.425	10.80	0.440	11.18	0.710	18.03
01-053X061-04SIL	500	0.608	15.44	0.532	13.51	0.498	12.65	0.440	11.18	0.770	19.56
01-058X067-04SIL	500	0.667	16.94	0.580	14.73	0.557	14.15	0.500	12.70	0.830	21.08
01-064X073-04SIL	500	0.727	18.47	0.640	16.26	0.617	15.67	0.500	12.70	0.900	22.86
01-069X079-04SIL	500	0.788	20.02	0.690	17.53	0.678	17.22	0.560	14.22	0.960	24.38
01-075X085-04SIL	500	0.848	21.54	0.750	19.05	0.738	18.75	0.560	14.22	1.020	25.91
01-080X091-04SIL	500	0.911	23.14	0.802	20.37	0.801	20.35	0.630	16.00	1.080	27.43
01-087X098-04SIL	250	0.975	24.77	0.866	22.00	0.865	21.97	0.630	16.00	1.150	29.21
01-096X109-04SIL	250	1.090	27.69	0.964	24.49	0.980	24.89	0.750	19.05	1.270	32.26
01-109X122-04SIL	250	1.215	30.86	1.094	27.79	1.104	28.04	0.750	19.05	1.430	36.32
01-122X136-04SIL	250	1.355	34.42	1.224	31.09	1.245	31.62	0.750	19.05	1.520	38.61
01-131X147-04SIL	250	1.465	37.21	1.312	33.32	1.355	34.42	0.880	22.35	1.650	41.91
01-145X160-04SIL	100	1.600	40.64	1.447	36.75	1.490	37.85	0.880	22.35	1.770	44.96
01-156X168-04SIL	100	1.682	42.72	1.560	39.62	1.515	38.48	0.750	19.05	1.900	48.26
01-175X188-04SIL	100	1.880	47.75	1.750	44.45	1.770	44.96	0.750	19.05	2.020	51.31
01-178X195-04SIL	100	1.950	49.53	1.780	45.21	1.840	46.74	1.000	25.40	2.150	54.61
01-190X208-04SIL	100	2.076	52.73	1.900	48.26	1.966	49.94	1.000	25.40	2.270	57.66
01-204X221-04SIL	50	2.210	56.13	2.035	51.69	2.100	53.34	1.000	25.40	2.360	59.94
01-226X243-04SIL	50	2.430	61.72	2.255	57.28	2.320	58.93	1.000	25.40	2.580	65.53
01-258X275-04SIL	50	2.753	69.93	2.581	65.56	2.643	67.13	0.970	24.64	2.850	72.39
01-277X294-04SIL	50	2.940	74.68	2.765	70.23	2.830	71.88	1.000	25.40	3.090	78.49

Silicone Vented Tapered Plugs

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

- Powder Coating

APPLICATION:

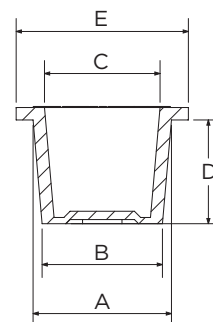
- Best used to prevent plug blow outs
- Use to plug threaded & non-threaded holes

FEATURES:

- Single slit on top to allow air pressure escape during finishing process
- Tapered to fit multiple hole diameters
- Hollow center for easy installation & reduced costs
- May be used as either cap or plug



Standard color is clear
Custom colors upon request



PART NUMBER	QTY	PLUG DIMENSIONS				CAP DIMENSIONS		LENGTH		FLANGE DIAMETER	
		A		B		C		D		E	
		in	mm	in	mm	in	mm	in	mm	in	mm
01-042X049-V4SIL	500	0.485	12.32	0.419	10.64	0.375	9.53	0.380	9.65	0.650	16.51
01-047X054-V4SIL	500	0.536	13.61	0.471	11.96	0.425	10.80	0.440	11.18	0.710	18.03
01-053X061-V4SIL	500	0.608	15.44	0.532	13.51	0.498	12.65	0.440	11.18	0.770	19.56
01-058X067-V4SIL	500	0.667	16.94	0.580	14.73	0.557	14.15	0.500	12.70	0.830	21.08
01-064X073-V4SIL	500	0.727	18.47	0.640	16.26	0.617	15.67	0.500	12.70	0.900	22.86
01-069X079-V4SIL	500	0.788	20.02	0.690	17.53	0.678	17.22	0.560	14.22	0.960	24.38
01-075X085-V4SIL	500	0.848	21.54	0.750	19.05	0.738	18.75	0.560	14.22	1.020	25.91
01-080X091-V4SIL	500	0.911	23.14	0.802	20.37	0.801	20.35	0.630	16.00	1.080	27.43
01-087X098-V4SIL	250	0.975	24.77	0.866	22.00	0.865	21.97	0.630	16.00	1.150	29.21
01-096X109-V4SIL	250	1.090	27.69	0.964	24.49	0.980	24.89	0.750	19.05	1.270	32.26
01-109X122-V4SIL	250	1.215	30.86	1.094	27.79	1.104	28.04	0.750	19.05	1.430	36.32
01-122X136-V4SIL	250	1.355	34.42	1.224	31.09	1.245	31.62	0.750	19.05	1.520	38.61
01-131X147-V4SIL	250	1.465	37.21	1.312	33.32	1.355	34.42	0.880	22.35	1.650	41.91
01-145X160-V4SIL	100	1.600	40.64	1.447	36.75	1.490	37.85	0.880	22.35	1.770	44.96
01-156X168-V4SIL	100	1.682	42.72	1.560	39.62	1.515	38.48	0.750	19.05	1.900	48.26
01-175X188-V4SIL	100	1.880	47.75	1.750	44.45	1.770	44.96	0.750	19.05	2.020	51.31
01-178X195-V4SIL	100	1.950	49.53	1.780	45.21	1.840	46.74	1.000	25.40	2.150	54.61
01-190X208-V4SIL	100	2.076	52.73	1.900	48.26	1.966	49.94	1.000	25.40	2.270	57.66
01-204X221-V4SIL	50	2.210	56.13	2.035	51.69	2.100	53.34	1.000	25.40	2.360	59.94
01-226X243-V4SIL	50	2.430	61.72	2.255	57.28	2.320	58.93	1.000	25.40	2.580	65.53
01-258X275-V4SIL	50	2.753	69.93	2.581	65.56	2.643	67.13	0.970	24.64	2.850	72.39
01-277X294-V4SIL	50	2.940	74.68	2.765	70.23	2.830	71.88	1.000	25.40	3.090	78.49



Silicone Tapered Plugs with Handles

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

- Powder Coating, E-Coating, Plating, Anodizing, Wet Paint

APPLICATION:

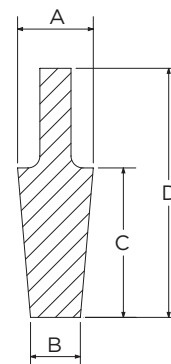
- Use plug for smaller holes, and when handle is necessary for easy removal

FEATURES:

- Similar to the Multi-Mask Plug with the addition of the handle for faster application & removal process
- Tapered to fit multiple hole diameters
- Use for plugging both threaded & non-threaded holes
- Color coded



Refer to chart for color



TAPERED PLUGS WITH HANDLES

PART NUMBER	QTY	PLUG DIMENSIONS				LENGTH				COLOR
		A		B		C		D		
		in	mm	in	mm	in	mm	in	mm	
01-HDL0101-P4SIL	1000	0.185	4.70	0.060	1.52	0.650	16.51	1.130	28.70	PINK
01-HDL0102-B4SIL	1000	0.260	6.60	0.130	3.30	0.750	19.05	1.250	31.75	BLACK

HOLLOW TAPERED PLUGS WITH HANDLES

PART NUMBER	QTY	PLUG DIMENSIONS				LENGTH				COLOR
		A		B		C		D		
		in	mm	in	mm	in	mm	in	mm	
01-HDL0103-O4SIL	1000	0.340	8.64	0.180	4.57	1.120	27.00	1.600	39.00	CLEAR
01-HDL0104-B4SIL	500	0.440	11.18	0.240	6.10	1.120	27.00	1.600	39.00	BLUE
01-HDL0105-Y4SIL	250	0.500	12.70	0.320	8.13	1.120	27.00	1.600	39.00	YELLOW
01-HDL0106-O4SIL	250	0.600	15.24	0.420	10.67	1.120	27.00	1.600	39.00	CLEAR
01-HDL0107-G4SIL	100	0.660	16.76	0.500	12.70	1.120	27.00	1.600	39.00	GREEN

ACCELERATE THE DESIGN PROCESS BY VALIDATING FIT AND FORM BEFORE INVESTING IN TOOLING

Our 3D printing and scanning capabilities give you the assurance you need to test for fit, form, and function before you commit to full-production costs.

Your Benefits Include:

- Samples ready in a few days vs a few weeks
- True ABS plastic or rubber-like material for testing fit or form
- Prototype testing prior to production tool investment
- Multiple designs can be compared quickly
- Acceleration of design process

3D Printer Capabilities:

- Multiple colors available
- Plastic jet printing of ABS material
- Print layer thickness: 10 mil/0.01"; 250 microns/0.25mm
- Most solid model file formats can be accepted (SolidWorks is native)
- Engineering design available, if needed



Call 888-echo-365 to discuss accelerating your design process with 3D printing and scanning.

Silicone Pull Plugs

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

- Powder Coating, E-Coating, Plating, Anodizing

APPLICATION:

- Use plug to mask through holes
- Use for plugging both threaded & non-threaded through holes

FEATURES:

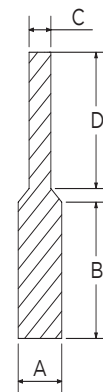
- Reusable

TIPS:

- Order slightly larger diameter size than hole size to provide a tight seal
- To protect holes with lead-in chamfer, we recommend using Chamfer Pull Plug instead of Pull Plug



Standard color is clear
Custom colors upon request



PART NUMBER	QTY	PLUG DIMENSIONS				PULL DIMENSIONS			
		A		B		C		D	
		in	mm	in	mm	in	mm	in	mm
01-0020050-04SIL	500	0.050	1.27	0.500	12.70	0.025	0.63	0.500	12.70
01-0020062-04SIL	500	0.062	1.57	0.500	12.70	0.040	1.02	0.500	12.70
01-0020068-04SIL	500	0.068	1.73	0.500	12.70	0.040	1.02	0.500	12.70
01-0020080-04SIL	500	0.080	2.03	1.000	25.40	0.062	1.87	1.000	25.40
01-0020093-04SIL	500	0.093	2.36	1.000	25.40	0.062	1.87	1.000	25.40
01-0020109-04SIL	500	0.109	2.77	1.000	25.40	0.062	1.87	1.000	23.50
01-0020120-04SIL	500	0.120	3.00	1.000	25.40	0.080	2.03	1.000	24.70
01-0020130-04SIL	500	0.130	3.30	1.000	25.40	0.093	2.35	1.000	23.00
01-0020145-04SIL	500	0.145	3.68	1.250	31.75	0.093	2.35	1.250	30.75
01-0020157-04SIL	500	0.157	3.99	1.250	31.75	0.093	2.35	1.250	30.00
01-0020175-04SIL	500	0.175	4.44	1.250	31.75	0.125	3.18	1.250	30.75
01-0020190-04SIL	500	0.190	4.83	1.250	31.75	0.125	3.18	1.250	29.50
01-0020218-04SIL	500	0.218	5.54	1.250	31.75	0.125	3.18	1.250	29.50
01-0020235-04SIL	500	0.235	5.97	1.250	31.75	0.125	3.18	1.250	31.75
01-0020250-04SIL	500	0.250	6.35	1.250	31.75	0.125	3.18	1.250	28.50
01-0020265-04SIL	500	0.265	6.67	1.250	28.00	0.125	3.18	1.250	25.50
01-0020281-04SIL	500	0.281	7.14	1.250	31.75	0.125	3.18	1.250	29.00
01-0020312-04SIL	500	0.312	7.92	1.250	31.75	0.187	4.75	1.250	29.00
01-0020350-04SIL	250	0.350	8.89	1.250	31.75	0.125	3.18	1.250	28.40
01-0020375-04SIL	250	0.375	9.53	1.250	31.75	0.187	4.75	1.250	29.50
01-0020405-04SIL	250	0.405	10.28	1.250	31.75	0.250	6.35	1.250	26.40
01-0020437-04SIL	250	0.437	11.10	1.250	31.75	0.250	6.35	1.250	29.50
01-0020470-04SIL	250	0.470	11.93	1.250	31.75	0.250	6.35	1.250	28.00
01-0020500-04SIL	250	0.500	12.70	1.250	31.75	0.250	6.35	1.250	27.00
01-0020516-04SIL	250	0.516	13.11	1.250	31.75	0.250	6.35	1.250	27.00
01-0020530-04SIL	250	0.530	13.46	1.250	31.75	0.250	6.35	1.250	31.75
01-0020612-04SIL	100	0.612	15.54	1.250	38.00	0.250	6.35	1.250	31.75
01-0020641-04SIL	100	0.641	16.28	1.500	38.10	0.250	6.35	1.500	38.10
01-0020700-04SIL	100	0.700	17.78	1.500	38.10	0.250	6.35	1.500	29.00
01-0020770-04SIL	100	0.770	19.56	1.500	38.10	0.250	6.35	1.500	30.00
01-0020812-04SIL	100	0.812	20.62	1.500	38.10	0.375	9.40	1.250	33.00
01-0020896-04SIL	100	0.896	22.76	1.500	38.10	0.250	6.35	1.500	38.10
01-0021020-04SIL	100	1.020	25.91	1.500	38.10	0.25	6.35	1.500	38.10

Silicone Chamfer Pull Plugs

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

- Powder Coating, E-Coating, Plating, Anodizing, Wet Paint

APPLICATION:

- Ideal for masking leading threads & chamfers

FEATURES:

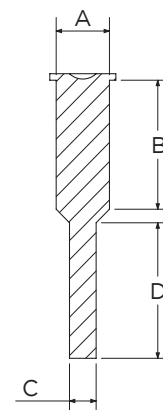
- Lip on top of plug
- Color coded
- 40 Duro

TIPS:

- Order slightly larger than hole size for a tight seal



Refer to chart for color



PART NUMBER	QTY	PLUG DIMENSIONS				PULL DIMENSIONS				COLOR
		A		B		C		D		
		in	mm	in	mm	in	mm	in	mm	
01-CP20175-R4SIL	500	0.175	4.45	1.000	25.40	0.120	3.05	1.000	25.40	RED
01-CP20218-B4SIL	500	0.218	5.59	1.000	25.40	0.120	3.05	1.000	25.40	BLUE
01-CP20281-Y4SIL	500	0.281	7.11	1.000	25.40	0.160	4.06	1.000	25.40	YELLOW
01-CP20335-O4SIL	500	0.335	8.64	1.000	25.40	0.160	4.06	1.000	25.40	ORANGE
01-CP20350-R4SIL	500	0.350	8.89	1.000	25.40	0.160	4.06	1.000	25.40	RED
01-CP20400-C4SIL	500	0.400	10.16	1.000	25.40	0.240	6.10	1.000	25.40	CLEAR
01-CP20437-P4SIL	250	0.437	11.18	1.000	25.40	0.240	6.10	1.000	25.40	PURPLE
01-CP20516-G4SIL	250	0.516	13.21	1.000	25.40	0.260	6.60	1.000	25.40	GREY

Silicone Leading Thread Boss Plugs

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

- Powder Coating, E-Coating, Plating, Anodizing, Wet Paint

APPLICATION:

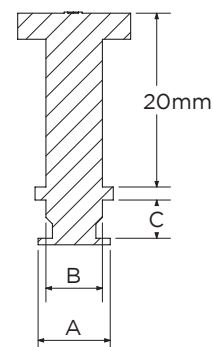
- Use to mask leading threads
- Use to mask blind holes

FEATURES:

- Pull handle enables easy removal
- Thread size listed on handle for easy reference
- Shape of handle also reflects thread size



Refer to chart for color



PART NUMBER	QTY	PLUG DIMENSIONS				LENGTH		COLOR
		A		B		C		
		in	mm	in	mm	in	mm	
01-LTB00M6-Y4SIL	500	0.244	6.20	0.177	4.50	0.170	4.35	YELLOW
01-LTB00M8-G4SIL	500	0.354	9.00	0.256	6.50	0.173	4.40	GREEN
01-LTB0M10-R4SIL	250	0.443	11.25	0.325	8.25	0.200	5.08	RED
01-LTB0M12-O4SIL	250	0.512	13.00	0.394	10.00	0.217	5.50	ORANGE
01-LTB0313-P4SIL	500	0.343	8.70	0.250	6.35	0.176	4.48	PINK
01-LTB0375-B4SIL	250	0.417	10.60	0.307	7.80	0.193	4.90	BLUE
01-LTB0438-G4SIL	250	0.484	12.30	0.358	9.10	0.240	6.10	GREEN

Silicone Leading Exit Pull Plugs

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

- Powder Coating, E-Coating, Plating, Anodizing, Wet Paint

APPLICATION:

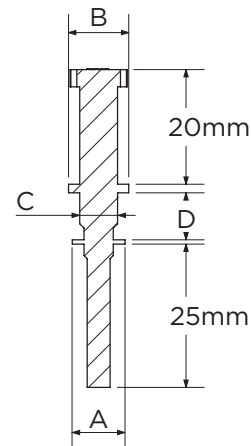
- Use for masking both the leading & exit threads

FEATURES:

- Pull tabs on both ends enable easy installation & removal
- Thread size listed on handle for easy reference
- Shape of handle reflects thread size
- Color coded



Refer to chart for color



PART NUMBER	QTY	PLUG DIMENSIONS				LENGTH				COLOR
		A		B		C		D		
		in	mm	in	mm	in	mm	in	mm	
01-LET20M6-Y4SIL	500	0.283	7.20	0.315	8.00	0.197	5.00	0.260	6.60	YELLOW
01-LET20M8-G4SIL	500	0.362	9.20	0.413	10.50	0.260	6.60	0.323	8.20	GREEN
01-LET2M10-R4SIL	250	0.425	10.80	0.512	13.00	0.331	8.40	0.358	9.10	RED
01-LET2M12-O4SIL	250	0.520	13.20	0.591	15.00	0.394	10.00	0.433	11.00	ORANGE
01-LET2313-P4SIL	500	0.343	8.70	0.343	8.70	0.250	6.35	0.246	6.25	PINK
01-LET2375-B4SIL	250	0.417	10.60	0.417	10.60	0.307	7.80	0.303	7.70	BLUE
01-LET2438-G4SIL	250	0.484	12.30	0.484	12.30	0.358	9.10	0.346	8.80	GREEN

Silicone Step Plug

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

- Powder Coating, E-Coating, Plating, Anodizing, Wet Paint

APPLICATION:

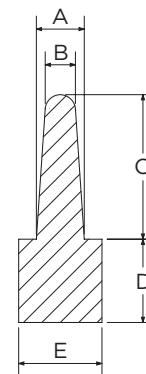
- Use to mask the grounding area around threaded & non-threaded holes
- Good for masking the countersink area and the hole

FEATURES:

- Tapered to fit multiple hole diameters
- Color coded



Refer to chart for color



PART NUMBER	QTY	PLUG DIMENSIONS				LENGTH				DIAMETER		COLOR
		A		B		C		D		E		
		in	mm	in	mm	in	mm	in	mm	in	mm	
01-STEP0M3-B4SIL	500	0.118	3.00	0.093	2.36	0.512	13.00	0.276	7.01	0.276	7.01	BLUE
01-STEP0M4-G4SIL	500	0.200	5.08	0.120	3.05	0.750	19.05	0.250	6.35	0.320	8.13	GREEN
01-STEP0M5-Y4SIL	500	0.230	5.84	0.145	3.68	0.640	16.26	0.360	9.14	0.360	9.14	YELLOW
01-STEP0M6-B4SIL	250	0.253	6.43	0.188	4.78	0.694	17.63	0.400	10.16	0.400	10.16	BLACK
01-STEP0M8-W4SIL	250	0.324	8.23	0.234	5.94	0.682	17.32	0.384	9.75	0.384	9.75	WHITE



Silicone Leading Plugs

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

- Powder Coating

APPLICATION:

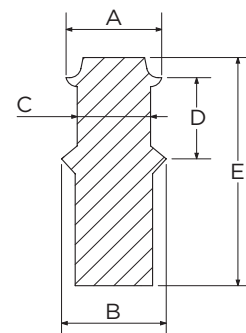
- Use to mask leading & exit threads
- Use to mask countersink & blind holes

FEATURES:

- Pull handle enables easy removal



Standard color is clear
Custom colors upon request



PART NUMBER	QTY	PLUG DIMENSIONS						LENGTH			
		A		B		C		D		E	
		in	mm	in	mm	in	mm	in	mm	in	mm
01-LT000M8-04SIL	1000	0.320	8.13	0.380	9.65	0.260	6.60	0.330	8.38	0.980	24.89
01-LT00M10-04SIL	500	0.420	10.67	0.460	11.68	0.340	8.64	0.370	9.40	1.030	26.16
01-LT00M12-04SIL	250	0.500	12.70	0.520	13.21	0.400	10.16	0.440	11.18	1.230	31.24

Silicone Leading Pull Plugs

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

- Powder Coating, Plating, E-Coating, Anodizing, Wet Paint

APPLICATION:

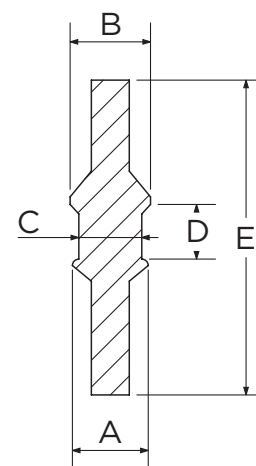
- Use for masking weld nuts with need of additional protection for leading & exit threads

FEATURES:

- Pull handles on both ends enable easy application & removal



Standard color is clear
Custom colors upon request



PART NUMBER	QTY	PLUG DIMENSIONS						LENGTH			
		A		B		C		D		E	
		in	mm	in	mm	in	mm	in	mm	in	mm
01-LT200M3-04SIL	500	0.158	4.01	0.190	4.83	0.130	3.30	0.250	6.35	1.480	37.60
01-LT200M4-04SIL	500	0.200	5.08	0.280	7.11	0.160	4.06	0.280	7.11	1.600	40.64
01-LT200M6-04SIL	500	0.260	6.60	0.340	8.64	0.220	5.59	0.300	7.62	1.880	47.75
01-LT200M8-04SIL	250	0.340	8.64	0.400	10.16	0.280	7.11	0.330	8.38	2.050	52.07
01-LT20M10-04SIL	250	0.440	11.18	0.480	12.19	0.360	9.14	0.380	9.65	1.920	48.77
01-LT20M12-04SIL	100	0.500	12.70	0.540	13.72	0.420	10.67	0.440	11.18	2.130	54.10
01-LT20M14-04SIL	100	0.660	17.27	0.680	17.27	0.560	14.22	0.580	14.73	2.330	59.18
01-LT20M16-04SIL	100	0.640	16.26	0.670	17.02	0.560	14.22	0.510	12.95	2.493	63.33

Silicone Weld Nut Plugs

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

- Powder Coating, Plating, E-Coating, Anodizing, Wet Paint

APPLICATION:

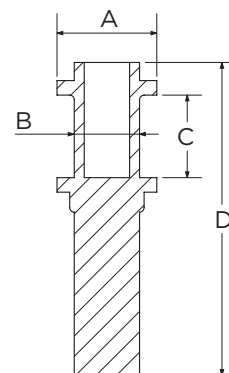
- Use for masking weld nuts, chamfers, and leading/exit threads

FEATURES:

- Designed for common metric threads
- Color coded



Refer to chart for color



PART NUMBER	QTY	PLUG DIMENSIONS				LENGTH				COLOR
		A		B		C		D		
		in	mm	in	mm	in	mm	in	mm	
01-WNP00M6-G4SIL	1000	0.300	7.70	0.190	4.90	0.260	6.70	1.280	32.60	GREEN
01-WNP00M8-R4SIL	1000	0.370	9.30	0.260	6.60	0.330	8.50	1.330	33.90	RED
01-WNP0M10-G4SIL	500	0.430	11.00	0.320	8.20	0.360	9.10	1.360	34.50	GREEN
01-WNP0M12-P4SIL	250	0.510	13.00	0.390	10.00	0.490	12.40	1.640	44.35	PURPLE
01-WNP0M16-W4SIL	250	0.660	16.80	0.520	13.30	0.570	14.40	1.870	50.00	WHITE
01-WNP0M20-B4SIL	100	0.810	20.50	0.650	16.50	0.750	19.00	2.150	57.70	BLUE

Silicone Weld Nut Pull Plugs

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

- Powder Coating, Plating, E-Coating, Anodizing, Wet Paint

APPLICATION:

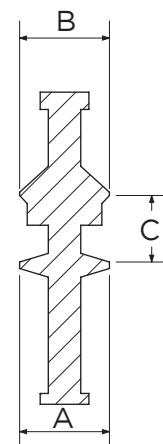
- Use for masking weld nuts with need of additional protection for leading and exit threads
- May be pushed or pulled for installation

FEATURES:

- Designed for common metric threads
- Pull tabs on both ends for easy installation & removal



Refer to chart for color



PART NUMBER	QTY	PLUG DIMENSIONS				LENGTH		COLOR
		A		B		C		
		in	mm	in	mm	in	mm	
01-WNPP0M6-B4SIL	1000	0.240	6.20	0.240	6.20	0.180	4.40	BLUE
01-WNPP0M8-Y4SIL	1000	0.330	8.26	0.320	8.20	0.240	5.35	YELLOW
01-WNPPM10-G4SIL	500	0.410	10.46	0.410	10.46	0.240	6.15	GREEN
01-WNPPM12-R4SIL	500	0.530	13.51	0.500	12.70	0.240	6.15	RED
01-WNPPM16-G4SIL	250	0.660	16.79	0.660	16.79	0.240	11.90	GREEN

Silicone Flange Pull Plugs

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

- Powder Coating, Plating, E-Coating, Anodizing

APPLICATION:

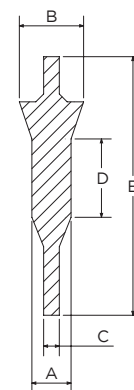
- Use as a countersink pull plug
- Use to mask leading threads & chamfers

FEATURES:

- Pull handles on both ends enable easy application & removal



Standard color is clear
Custom colors upon request



PART NUMBER	QTY	PLUG DIMENSIONS						LENGTH			
		A		B		C		D		E	
		in	mm	in	mm	in	mm	in	mm	in	mm
01-FL20220-04SIL	500	0.220	5.59	0.380	9.65	0.120	3.05	1.000	25.40	2.880	73.16
01-FL20280-04SIL	250	0.280	7.11	0.500	13.90	0.200	5.08	1.000	25.40	2.880	73.16
01-FL20360-04SIL	250	0.360	9.14	0.820	20.83	0.200	5.08	1.000	25.40	3.300	83.82
01-FL20440-04SIL	100	0.440	11.18	0.820	20.83	0.200	5.08	1.000	25.40	3.300	83.82
01-FL20500-04SIL	100	0.500	12.70	0.820	20.83	0.200	5.08	1.000	25.40	3.300	83.82

Silicone Flangless Plugs

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

- Powder Coating, E-Coating, Plating, Anodizing, Wet Paint

APPLICATION:

- Use to mask threaded holes (including leading thread) without masking the surrounding area

FEATURES:

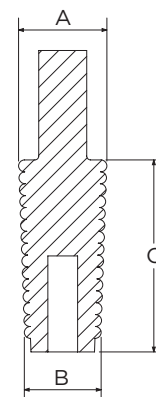
- Tapered design & hollow core allow multiple sizes to be masked
- Ribbed design locks into threads
- Pull handle for easy removal
- Color coded

TIPS:

- Twist for installation and removal



Refer to chart for color



PART NUMBER	QTY	PLUG DIMENSIONS				LENGTH		COLOR
		A		B		C		
		in	mm	in	mm	in	mm	
01-UFP0250-C4SIL	500	0.236	6.00	0.157	4.00	1.000	25.40	CLEAR
01-UFP0312-B4SIL	500	0.315	8.00	0.236	6.00	1.000	25.40	BLACK
01-UFP0406-Y4SIL	500	0.394	10.00	0.315	8.00	1.000	25.40	YELLOW
01-UFP0468-C4SIL	500	0.472	12.00	0.394	10.00	1.000	25.40	CLEAR
01-UFP0562-B4SIL	250	0.551	14.00	0.472	12.00	1.000	25.40	BLUE
01-UFP0625-P4SIL	250	0.630	16.00	0.551	14.00	1.000	25.40	PURPLE
01-UFP0718-R4SIL	100	0.709	18.01	0.630	16.00	1.000	25.40	RED
01-UFP0787-G4SIL	100	0.787	20.00	0.709	18.01	1.000	25.40	GREEN
01-UFP0866-G4SIL	100	0.866	22.00	0.787	20.00	1.000	25.40	GREY
01-UFP0945-C4SIL	100	0.945	24.00	0.866	22.00	1.000	25.40	CLEAR
01-UFP1024-B4SIL	100	1.024	26.00	0.945	24.00	1.000	25.40	BLACK
01-UFP1102-G4SIL	100	1.102	28.00	1.024	26.00	1.000	25.40	GREEN

Silicone Flange Plugs

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

- Powder Coating, Plating, E-Coating, Anodizing, Wet Paint

APPLICATION:

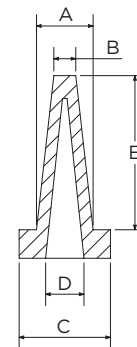
- Masks threaded & non-threaded holes while also providing a grounding area

FEATURES:

- Hollow for a light conforming application
- Color coding available
- Dual-purpose use
- Eliminates need for multiple stages of masking



Standard color is clear
Custom colors upon request



PART NUMBER	QTY	PLUG DIMENSIONS				OUTSIDE DIA.		INSIDE DIA.		LENGTH	
		A		B		C		D		E	
		in	mm	in	mm	in	mm	in	mm	in	mm
01-FP00001-04SIL	500	0.250	6.35	0.080	2.03	0.500	12.70	0.156	3.96	0.925	23.50
01-FP00002-04SIL	500	0.312	7.95	0.125	3.18	0.500	12.70	0.244	5.25	0.850	21.59
01-FP00003-04SIL	500	0.400	10.10	0.150	3.81	0.625	15.88	0.234	5.94	0.925	23.50
01-FP00004-04SIL	250	0.547	13.89	0.150	3.81	0.750	19.05	0.312	7.92	1.175	29.84
01-FP00005-04SIL	250	0.680	17.27	0.250	6.35	1.000	25.40	0.360	9.14	1.375	34.92
01-FP00006-04SIL	100	0.750	19.05	0.275	6.98	1.125	28.58	0.410	10.41	1.625	41.27
01-FP00007-04SIL	100	0.850	21.59	0.312	7.95	1.250	31.76	0.480	12.19	2.000	50.80

Silicone Thread Plugs

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

- Powder Coating, Plating, E-Coating, Anodizing

APPLICATION:

- Use to mask the leading thread of a threaded hole
- Shallow design for masking blind holes

FEATURES:

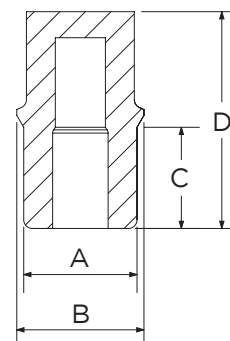
- Pull handle & hollow design allows for easy application & removal

TIPS:

- Push and twist to create tight seal



Refer to chart for color



PART NUMBER	QTY	PLUG DIMENSIONS				LENGTH				COLOR
		A		B		C		D		
		in	mm	in	mm	in	mm	in	mm	
01-THRD250-Y4SIL	500	0.218	5.54	0.260	6.60	0.200	5.08	0.450	11.43	YELLOW
01-THRD313-G4SIL	500	0.278	7.06	0.320	8.13	0.200	5.08	0.500	12.70	GREEN
01-THRD375-W4SIL	500	0.340	8.64	0.420	10.67	0.260	6.60	0.610	15.49	WHITE
01-THRD438-P4SIL	250	0.392	9.96	0.440	11.18	0.350	8.89	0.750	19.05	PINK
01-THRD500-O4SIL	250	0.451	11.46	0.510	12.95	0.350	8.89	0.750	19.05	CLEAR
01-THRDOM6-O4SIL	500	0.208	5.28	0.248	6.30	0.197	5.00	0.551	14.00	CLEAR
01-THRDOM8-B4SIL	500	0.283	7.19	0.331	8.41	0.197	5.00	0.482	12.24	BLUE
01-THRDM10-P4SIL	250	0.358	9.09	0.409	10.39	0.276	7.01	0.630	16.00	PINK
01-THRDM12-R4SIL	250	0.426	10.82	0.489	12.42	0.346	8.79	0.792	20.12	RED
01-THRDM16-G4SIL	100	0.570	14.48	0.670	17.02	0.450	11.43	0.910	23.11	GREEN
01-THRDM20-Y4SIL	100	0.724	18.39	0.811	20.60	0.512	13.00	1.122	28.50	YELLOW

Silicone Washer Plugs

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

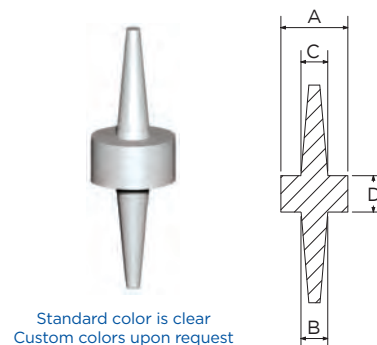
- Powder Coating, Plating, E-Coating, Anodizing, Wet Paint

APPLICATION:

- Use plug to mask the grounding area around threaded & non-threaded holes
- Use for counterbores

FEATURES:

- One plug can be used to fit two hole sizes
- Tapered for easy installation



PART NUMBER	QTY	DIAMETER		PLUG DIMENSIONS				LENGTH	
		A		B		C		D	
		in	mm	in	mm	in	mm	in	mm
01-WP00010-04SIL	1000	0.250	6.35	0.103	2.62	0.135	3.43	0.200	5.08
01-WP00020-04SIL	1000	0.312	7.92	0.135	3.43	0.155	3.94	0.200	5.08
01-WP00030-04SIL	1000	0.312	7.92	0.126	3.20	0.235	5.97	0.200	5.08
01-WP00040-04SIL	1000	0.375	9.60	0.130	3.30	0.155	3.94	0.200	5.08
01-WP00045-04SIL	1000	0.375	9.60	0.198	5.03	0.275	6.99	0.200	5.08
01-WP00050-04SIL	500	0.500	12.70	0.127	3.23	0.186	4.72	0.200	5.08
01-WP00060-04SIL	500	0.500	12.70	0.238	6.05	0.250	6.35	0.200	5.08
01-WP00070-04SIL	500	0.625	15.88	0.135	3.43	0.260	6.60	0.200	5.08
01-WP000M3-04SIL	1000	0.276	7.01	0.110	2.80	0.146	3.71	0.200	5.08
01-WP000M4-04SIL	1000	0.354	8.10	0.142	3.61	0.185	4.70	0.200	5.08
01-WP000M6-04SIL	1000	0.492	12.50	0.209	5.31	0.264	6.73	0.200	5.08
01-WP000M8-04SIL	500	0.669	16.01	0.280	7.11	0.343	8.71	0.200	5.08
01-WP00M10-04SIL	500	0.827	21.01	0.378	9.60	0.421	10.69	0.200	5.08
01-WP00M12-04SIL	500	0.945	24.00	0.429	10.90	0.500	12.70	0.200	5.08

Silicone Washer Pull Plugs

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

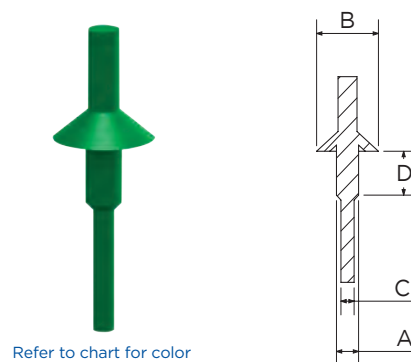
- Powder Coating, Plating, E-Coating, Anodizing

APPLICATION:

- Use plug for coverage on counter sink holes
- Use to mask both threaded & non-threaded holes

FEATURES:

- Recommended to give an excellent grounding area with through holes
- Eliminates need for two-stage masking
- Color coded



PART NUMBER	QTY	PLUG DIMENSIONS				LENGTH		COLOR		
		A		B		D				
		in	mm	in	mm	in	mm			
01-WP200M4-G4SIL	500	0.140	3.56	0.394	10.01	0.080	2.03	0.390	9.91	GREEN
01-WP200M5-C4SIL	500	0.176	4.47	0.394	10.01	0.100	2.54	0.390	9.91	CLEAR
01-WP200M6-W4SIL	500	0.211	5.36	0.591	15.01	0.120	3.05	0.390	9.91	WHITE
01-WP20LM6-W4SIL	500	0.200	5.08	0.787	19.99	0.120	3.05	0.400	10.16	WHITE
01-WP200M8-G4SIL	250	0.283	7.19	0.591	15.01	0.161	4.09	0.390	9.91	GREY
01-WP20M10-Y4SIL	250	0.375	9.53	0.787	19.99	0.214	5.44	0.390	9.91	YELLOW
01-WP20M12-P4SIL	100	0.428	10.87	0.787	19.99	0.244	6.20	0.390	9.91	PINK
01-WP20812-R4SIL	100	0.342	8.67	0.812	20.62	0.190	4.83	0.390	9.91	RED
01-WP20920-W4SIL	100	0.400	10.16	0.920	23.37	0.228	5.79	0.390	9.91	WHITE
01-WP21062-B4SIL	100	0.459	11.66	1.062	26.97	0.262	6.65	0.390	9.91	BLUE

LDPE Self-Threading Plugs

Temp Rating: 180° F/82° C

RECOMMENDED PROCESSES:

- Plating, Anodizing, Wet Painting

APPLICATION:

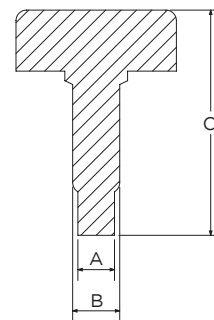
- Insert plug in twisting motion to create a custom mold to threads

FEATURES:

- Self-tapping, creates a leak-proof seal
- Chemical Resistance
- One-Time Use
- Ideal plug to fit into metric



Standard color is clear
Custom colors upon request



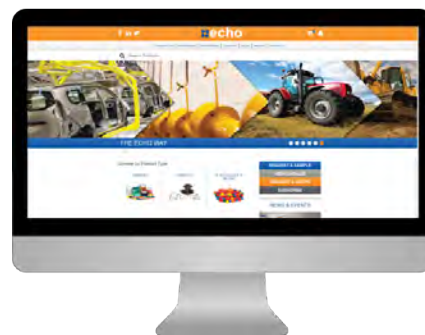
PART NUMBER	QTY	PLUG DIMENSIONS				LENGTH	
		A		B		C	
		in	mm	in	mm	in	mm
01-STP0002-OLDPE	500	0.062	1.57	0.082	2.10	0.800	20.32
01-STP0003-OLDPE	500	0.080	2.00	0.100	2.50	0.900	22.86
01-STP0004-OLDPE	500	0.085	2.20	0.106	2.70	0.900	22.86
01-STP0005-OLDPE	500	0.095	2.40	0.120	3.00	0.900	22.86
01-STP0006-OLDPE	500	0.105	2.70	0.131	3.30	0.950	24.13
01-STP0007-OLDPE	500	0.136	3.50	0.156	4.00	0.950	24.13
01-STP0008-OLDPE	500	0.143	3.60	0.171	4.30	1.070	27.18
01-STP0010-OLDPE	250	0.150	3.80	0.186	4.70	1.080	27.43
01-STP0012-OLDPE	250	0.180	4.60	0.212	5.40	1.200	30.48
01-STP0250-OLDPE	250	0.210	5.30	0.250	6.90	1.280	32.51
01-STP0312-OLDPE	250	0.295	7.50	0.340	8.64	1.150	29.21
01-STP0375-OLDPE	250	0.348	8.80	0.400	10.16	1.200	30.48
01-STP0500-OLDPE	250	0.400	10.20	0.470	11.93	1.290	32.77

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EPDM Tapered Plugs

Temp Rating: 350° F/177° C

RECOMMENDED PROCESSES:

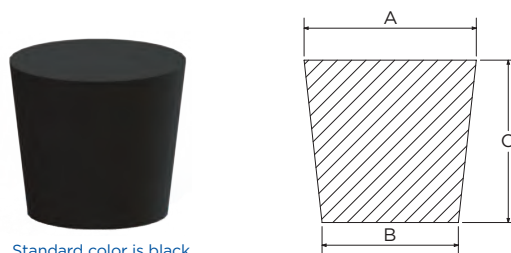
- Sand Blasting, Plating, Anodizing, Wet Paint

APPLICATION:

- Plugs both threaded & non-threaded holes
- Universal application
- Push & twist for tight seal
- Not recommended for long exposure to high temperatures

FEATURES:

- Tapered to fit multiple hole diameters
- Compressible material for efficient sealing
- Chemical resistant
- 40 Duro



Standard color is black

PART NUMBER	QTY	PLUG DIMENSIONS				LENGTH	
		A		B		C	
		in	mm	in	mm	in	mm
01-000098-06EPD	500	0.080	2.03	0.015	0.38	2.000	50.80
01-000099-06EPD	1000	0.100	2.54	0.031	0.79	1.000	25.40
01-000099-S6EPD	1000	0.125	3.18	0.031	0.79	0.625	15.88
01-000100-06EPD	1000	0.125	3.18	0.062	1.57	0.625	15.88
01-000101-S6EPD	1000	0.200	5.08	0.062	1.57	0.500	12.70
01-000101-M6EPD	1000	0.187	4.75	0.062	1.57	0.625	15.88
01-000101-06EPD	1000	0.200	5.08	0.062	1.57	0.750	19.05
01-000102-06EPD	1000	0.250	6.35	0.125	3.18	0.750	19.05
01-000102-L6EPD	1000	0.250	6.35	0.125	3.18	1.000	25.40
01-000103-06EPD	1000	0.344	8.74	0.187	4.75	0.625	15.88
01-000103-L6EPD	1000	0.344	8.74	0.187	4.75	1.000	25.40
01-000104-06EPD	100	0.375	9.35	0.250	6.35	0.750	19.05
01-000104-L6EPD	100	0.437	11.10	0.250	6.35	1.000	25.40
01-000105-06EPD	100	0.500	12.70	0.313	7.95	0.813	20.65
01-000106-06EPD	100	0.594	15.09	0.406	10.31	1.000	25.40
01-000107-06EPD	100	0.656	16.66	0.500	12.70	1.000	25.40
01-000108-06EPD	100	0.750	19.05	0.563	14.30	1.000	25.40
01-000109-06EPD	100	0.781	19.84	0.625	15.88	1.000	25.40
01-000110-06EPD	100	0.938	23.83	0.718	18.24	1.000	25.40
01-000111-06EPD	100	1.000	25.40	0.750	19.05	1.000	25.40
01-000112-06EPD	100	1.063	27.00	0.906	23.01	1.000	25.40
01-000113-06EPD	100	1.109	28.17	0.959	24.36	1.000	25.40
01-000114-06EPD	100	1.250	31.75	1.031	26.19	1.000	25.40
01-000115-06EPD	100	1.344	34.14	1.125	28.58	1.000	25.40
01-000116-06EPD	100	1.438	36.53	1.125	28.58	1.000	25.40
01-000117-06EPD	50	1.500	38.10	1.187	30.15	1.000	25.40
01-000118-06EPD	50	1.625	41.28	1.313	33.35	1.000	25.40
01-000119-06EPD	50	1.688	42.88	1.406	35.71	1.000	25.40
01-000120-06EPD	50	1.750	44.45	1.469	37.31	1.000	25.40
01-000121-06EPD	50	1.813	46.05	1.500	38.10	1.000	25.40
01-000122-06EPD	50	1.969	50.01	1.625	41.28	1.000	25.40
01-000123-06EPD	50	2.078	52.78	1.750	44.45	1.000	25.40
01-000124-06EPD	10	2.203	55.96	1.875	47.63	1.000	25.40
01-000125-06EPD	10	2.469	62.71	2.000	50.80	1.000	25.40
01-000126-06EPD	10	2.500	63.50	2.125	53.98	1.000	25.40
01-000127-06EPD	10	2.688	68.28	2.281	57.94	1.000	25.40
01-000128-06EPD	10	2.969	75.41	2.438	61.93	1.375	34.93
01-000129-06EPD	10	3.500	88.90	3.000	76.20	1.500	38.10
01-000130-06EPD	10	4.000	101.60	3.250	82.55	2.000	40.20
01-000131-06EPD	10	5.000	127.00	3.500	88.90	2.000	50.80

EPDM Pull Plugs

Temp Rating: 350° F/177° C

RECOMMENDED PROCESSES:

- Anodizing, Wet Paint, Plating

APPLICATION:

- Use plug to mask through holes
- Use for plugging both threaded and non-threaded through holes

FEATURES:

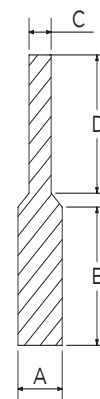
- Reusable
- Chemical resistant

TIPS:

- Order slightly larger diameter size than hole size to provide a tight seal



Standard color is black



PART NUMBER	QTY	PLUG DIMENSIONS				PULL DIMENSIONS			
		A		B		C		D	
		in	mm	in	mm	in	mm	in	mm
01-0020050-06EPD	500	0.050	1.27	0.500	12.70	0.025	0.63	0.500	12.70
01-0020062-06EPD	500	0.062	1.57	0.500	12.70	0.040	1.02	0.500	12.70
01-0020068-06EPD	500	0.068	1.73	0.500	12.70	0.040	1.02	0.500	12.70
01-0020080-06EPD	500	0.080	2.03	1.000	25.40	0.062	1.57	1.000	25.40
01-0020093-06EPD	500	0.093	2.36	1.000	25.40	0.062	1.57	1.000	25.40
01-0020109-06EPD	500	0.109	2.77	1.000	25.40	0.062	1.57	1.000	25.40
01-0020120-06EPD	500	0.120	3.00	1.000	25.40	0.080	2.03	1.000	25.40
01-0020130-06EPD	500	0.130	3.30	1.000	25.40	0.093	2.35	1.000	25.40
01-0020145-06EPD	500	0.145	3.68	1.250	31.75	0.093	2.35	1.250	31.75
01-0020157-06EPD	500	0.157	3.99	1.250	31.75	0.093	2.35	1.250	31.75
01-0020175-06EPD	500	0.175	4.44	1.250	31.75	0.125	3.18	1.250	31.75
01-0020190-06EPD	500	0.190	4.83	1.250	31.75	0.125	3.18	1.250	31.75
01-0020218-06EPD	500	0.218	5.54	1.250	31.75	0.125	3.18	1.250	31.75
01-0020235-06EPD	500	0.235	5.97	1.250	31.75	0.125	3.18	1.250	28.70
01-0020250-06EPD	500	0.250	6.35	1.250	31.75	0.125	3.18	1.250	29.00
01-0020265-06EPD	500	0.265	6.67	1.250	28.60	0.125	3.18	1.250	25.50
01-0020281-06EPD	500	0.281	7.14	1.250	31.75	0.125	3.18	1.250	29.00
01-0020312-06EPD	500	0.312	7.92	1.250	31.75	0.187	4.75	1.250	29.00
01-0020350-06EPD	250	0.350	8.89	1.250	31.75	0.187	4.75	1.250	29.00
01-0020375-06EPD	250	0.375	9.53	1.250	31.75	0.187	4.75	1.250	30.00
01-0020405-06EPD	250	0.405	10.28	1.250	31.75	0.250	6.35	1.250	25.20
01-0020437-06EPD	250	0.437	11.10	1.250	31.75	0.250	6.35	1.250	30.00
01-0020470-06EPD	250	0.470	11.93	1.250	31.75	0.250	6.35	1.250	28.00
01-0020500-06EPD	250	0.500	12.70	1.250	31.75	0.250	6.35	1.250	31.75
01-0020516-06EPD	250	0.516	13.11	1.250	31.75	0.250	6.35	1.250	28.00
01-0020530-06EPD	250	0.530	13.46	1.250	31.75	0.250	6.35	1.250	31.75
01-0020612-06EPD	100	0.612	15.54	1.250	38.10	0.250	6.35	1.250	31.75
01-0020641-06EPD	100	0.641	16.28	1.500	38.10	0.250	6.35	1.500	38.10
01-0020700-06EPD	100	0.700	17.90	1.500	38.10	0.250	6.35	1.500	30.00
01-0020770-06EPD	100	0.770	19.56	1.500	38.10	0.250	6.35	1.500	29.60
01-0020896-06EPD	100	0.896	22.76	1.500	38.10	0.250	9.35	1.500	38.10
01-0021020-06EPD	100	1.020	25.91	1.500	38.10	0.250	9.35	1.500	25.00

For more information, please visit echoinnovates.com

MASKING CAPS

Echo's standard line of caps are developed to mask both threaded and non-threaded studs. Standard variations are available for masking grounding areas and for easy removal. All caps can also be used as plugs.

Echo's standard caps are available in clear silicone, colored silicone, EPDM, and high temperature vinyl. Custom options are available for atypical diameters, lengths, and venting purposes. If one of our standard options does not fit your needs, contact us, and we will work with you to develop a custom solution.

MATERIALS:

SILICONE

600°F / 315°C

Recommended Uses:

- Powder coating, E-coating, Plating, & Anodizing

Product Features:

- Easy to install & remove
- Offers excellent sealing ability
- Durable, reusable, & cost-effective
- Color coding available by special order

Materials:

- Specially formulated silicone for great reusability & reliability

HIGH TEMP VINYL

350°F / 177°C

Recommended Uses:

- Painting, Plating, Anodizing, & Blasting

Product Features:

- Offers excellent sealing ability
- Durable, reusable, & cost-effective
- Color coding available by special order

For air dry temperature applications, please see our protection line starting on page 70.

EPDM

350°F / 177°C

Recommended Uses:

- Wet painting, Plating, Anodizing, & Blasting

Product Features:

- Easy to install & remove
- Offers excellent sealing ability
- Durable, reusable, & cost-effective

Materials:

- Specially formulated EPDM for great reusability & reliability

TIPS

- Used as a cap: Order a slightly smaller size than the stud diameter
- Used as a plug: order slightly larger than the hole diameter
- Slightly longer cap length may allow easy removal process



SECTION CONTENTS:

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FLANGE CAPS	31
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Silicone Caps

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

- Powder Coating, E-Coating, Plating, Anodizing, Wet Paint

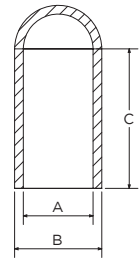
APPLICATION:

- Recommended to mask studs and tube ends — both threaded & non-threaded

FEATURES

- Can be inverted and used as a plug
- Soft and flexible, able to conform to irregular shapes
- Hollow design

PART NUMBER	QTY	CAP DIMENSIONS		PLUG DIMENSIONS		LENGTH	
		A		B		C	
		in	mm	in	mm	in	mm
49-0000062-00750	1000	0.062	1.57	0.182	4.62	0.750	19.05
49-0000070-01000	1000	0.070	1.78	0.190	4.83	1.000	25.40
49-0000093-00750	1000	0.093	2.40	0.213	5.41	0.750	19.05
49-0000100-01000	1000	0.100	2.54	0.220	5.59	1.000	18.70
49-0000109-00750	1000	0.109	2.77	0.229	5.82	0.750	19.05
49-0000109-01000	1000	0.109	2.77	0.229	5.82	1.000	25.40
49-0000125-00500	1000	0.125	3.17	0.245	6.22	0.500	12.70
49-0000125-01000	1000	0.125	3.17	0.245	6.22	1.000	25.40
49-0000137-00500	1000	0.137	3.48	0.257	6.53	0.500	12.70
49-0000137-01000	1000	0.137	3.48	0.257	6.53	1.000	25.40
49-0000148-01000	1000	0.148	3.76	0.268	6.81	1.000	25.40
49-0000156-00500	1000	0.156	4.00	0.276	7.01	0.500	12.70
49-0000156-01000	1000	0.156	4.00	0.276	7.01	1.000	25.40
49-0000172-00500	1000	0.172	4.36	0.292	7.42	0.500	12.70
49-0000172-01000	1000	0.172	4.36	0.292	7.42	1.000	25.40
49-0000187-00500	1000	0.187	4.75	0.307	7.80	0.500	12.70
49-0000187-01000	1000	0.187	4.75	0.307	7.80	1.000	25.40
49-0000218-01000	500	0.218	5.53	0.338	8.59	1.000	25.40
49-0000223-00500	500	0.223	5.66	0.343	8.71	0.500	12.70
49-0000223-01000	500	0.223	5.66	0.343	8.71	1.000	25.40
49-0000223-01500	500	0.223	5.66	0.343	8.71	1.500	38.10
49-0000234-01000	500	0.234	5.94	0.354	8.99	1.000	25.40
49-0000234-01500	500	0.234	5.94	0.354	8.99	1.500	38.10
49-0000250-01000	500	0.250	6.35	0.370	9.40	1.000	25.40
49-0000250-01500	500	0.250	6.35	0.370	9.40	1.500	38.10
49-0000281-00500	500	0.281	7.14	0.401	10.19	0.500	12.70
49-0000281-01000	500	0.281	7.14	0.401	10.19	1.000	25.40
49-0000295-01500	500	0.295	7.50	0.415	10.54	1.500	38.10
49-0000312-01000	500	0.312	7.92	0.432	10.97	1.000	25.40
49-0000312-01500	500	0.312	7.92	0.432	10.97	1.500	38.10
49-0000343-01000	500	0.343	8.71	0.463	11.76	1.000	25.40
49-0000355-01500	500	0.355	9.02	0.475	12.07	1.500	38.10
49-0000375-01000	500	0.375	9.52	0.495	12.57	1.000	25.40
49-0000375-01500	500	0.375	9.52	0.495	12.57	1.500	38.10



Standard color is clear
Custom colors upon request

TIPS:

- When using as a cap, order a slightly smaller size than the stud diameter
- When using as a plug, order slightly larger than the hole diameter
- Slightly longer cap length may allow easy removal process

PART NUMBER	QTY	CAP DIMENSIONS		PLUG DIMENSIONS		LENGTH	
		A		B		C	
		in	mm	in	mm	in	mm
49-0000406-01000	500	0.406	10.31	0.526	13.36	1.000	25.40
49-0000437-01000	500	0.437	11.10	0.557	14.15	1.000	25.40
49-0000456-01000	500	0.456	11.58	0.576	14.63	1.000	25.40
49-0000456-01500	500	0.456	11.58	0.576	14.63	1.500	38.10
49-0000480-01500	500	0.480	12.19	0.600	15.24	1.500	38.10
49-0000500-01500	500	0.500	12.70	0.620	15.75	1.500	38.10
49-0000535-03000	250	0.535	13.60	0.655	16.64	3.000	76.20
49-0000562-01500	250	0.562	14.27	0.682	17.32	1.500	38.10
49-0000600-01500	250	0.600	15.24	0.720	18.29	1.500	38.10
49-0000625-01500	250	0.625	15.87	0.745	18.92	1.500	38.10
49-0000625-02500	250	0.625	15.87	0.745	18.92	2.500	63.50
49-0000687-01500	250	0.687	17.45	0.807	20.50	1.500	38.10
49-0000730-01500	250	0.730	18.54	0.850	21.59	1.500	38.10
49-0000750-01500	250	0.750	19.05	0.870	22.10	1.500	38.10
49-0000750-02000	250	0.750	19.05	0.870	22.10	2.000	50.80
49-0000812-01500	250	0.812	20.62	0.932	23.67	1.500	38.10
49-0000875-01500	250	0.875	22.22	0.995	25.27	1.500	38.10
49-0000937-01500	250	0.937	23.80	1.057	26.85	1.500	38.10
49-0000970-04000	250	0.970	24.63	1.090	27.69	4.000	101.60
49-0001000-01500	250	1.000	25.40	1.120	28.45	1.500	38.10
49-0001062-01500	100	1.062	27.00	1.182	30.02	1.500	38.10
49-0001125-01500	100	1.125	28.57	1.245	31.62	1.500	38.10
49-0001187-01500	100	1.187	30.15	1.307	33.20	1.500	38.10
49-0001250-01500	100	1.250	31.75	1.370	34.80	1.500	38.10
49-0001375-01500	100	1.375	34.92	1.495	37.97	1.500	38.10
49-0001500-01500	100	1.500	38.10	1.620	41.15	1.500	38.10
49-0001625-01500	100	1.625	41.27	1.745	44.32	1.500	38.10
49-0001750-01500	100	1.750	44.45	1.870	47.50	1.500	38.10
49-0001875-01500	100	1.875	47.62	1.995	50.67	1.500	38.10
49-0002000-02000	100	2.000	50.80	2.120	53.85	2.000	50.80
49-0002500-01500	100	2.500	31.75	2.620	66.55	1.500	38.10
49-0003500-01500	100	3.500	88.90	3.620	91.95	1.500	38.10
49-0003500-03000	100	3.500	88.90	3.620	91.95	3.000	76.20
49-0004000-01750	100	4.000	101.60	4.120	104.65	1.750	44.45

Silicone Colored Caps

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

- Powder Coating, E-Coating, Plating, Anodizing, Wet Paint

APPLICATION:

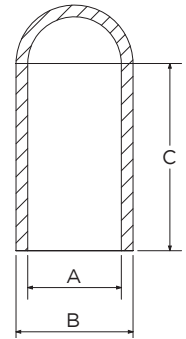
- Recommended to mask studs and tube ends — both threaded & non-threaded
- Invert to use as a plug

FEATURES:

- Soft and flexible, able to conform to irregular shapes
- Hollow design
- Color coded



Refer to chart for color



PART NUMBER	QTY	CAP DIMENSIONS		PLUG DIMENSIONS		LENGTH		COLOR
		A		B		C		
		in	mm	in	mm	in	mm	
47-0000093-00750	1000	0.093	2.40	0.213	5.41	0.750	19.05	WHITE
47-0000100-01000	1000	0.100	2.54	0.220	5.59	1.000	25.40	GREEN
47-0000109-00750	1000	0.109	2.77	0.229	5.82	0.750	19.05	GREY
47-0000125-00500	1000	0.125	3.17	0.245	6.22	0.500	12.70	BLUE
47-0000125-01000	1000	0.125	3.17	0.245	6.22	1.000	25.40	BLACK
47-0000137-01000	1000	0.137	3.48	0.257	6.53	1.000	25.40	WHITE
47-0000148-01000	1000	0.148	3.76	0.268	6.81	1.000	25.40	PINK
47-0000156-00500	1000	0.156	4.00	0.276	7.01	0.500	12.70	GREEN
47-0000156-01000	1000	0.156	4.00	0.276	7.01	1.000	25.40	YELLOW
47-0000172-00500	1000	0.172	4.36	0.292	7.42	0.500	12.70	GREY
47-0000172-01000	1000	0.172	4.36	0.292	7.42	1.000	25.40	BLUE
47-0000172-01500	1000	0.172	4.36	0.292	7.42	1.500	38.10	GREY
47-0000187-00500	1000	0.187	4.75	0.307	7.80	0.500	12.70	WHITE
47-0000218-01000	500	0.218	5.53	0.338	8.59	1.000	25.40	BLACK
47-0000223-01500	500	0.223	5.66	0.343	8.71	1.500	38.10	PINK
47-0000234-01000	500	0.234	5.94	0.354	8.99	1.000	25.40	GREEN
47-0000234-01500	500	0.234	5.94	0.354	8.99	1.500	38.10	YELLOW
47-0000250-01000	500	0.250	6.35	0.370	9.40	1.000	25.40	GREY
47-0000281-01000	500	0.281	7.14	0.401	10.19	1.000	25.40	BLUE
47-0000295-01500	500	0.295	7.50	0.415	10.54	1.500	38.10	PINK
47-0000312-01000	500	0.312	7.92	0.432	10.97	1.000	25.40	WHITE
47-0000312-01500	500	0.312	7.92	0.432	10.97	1.500	38.10	PINK
47-0000343-01000	500	0.343	8.71	0.463	11.76	1.000	25.40	BLACK
47-0000355-01500	500	0.355	9.02	0.475	12.07	1.500	38.10	GREEN
47-0000375-01000	500	0.375	9.52	0.495	12.57	1.000	25.40	YELLOW
47-0000375-01500	500	0.375	9.52	0.495	12.57	1.500	38.10	GREY
47-0000406-01000	500	0.406	10.31	0.526	13.36	1.000	25.40	BLUE
47-0000437-01000	500	0.437	11.10	0.557	14.15	1.000	25.40	BLACK
47-0000456-01000	500	0.456	11.58	0.576	14.63	1.000	25.40	WHITE
47-0000480-01500	500	0.480	12.19	0.600	15.24	1.500	38.10	PINK
47-0000500-01500	500	0.500	12.70	0.620	15.75	1.500	38.10	GREEN

Silicone Flange Cap/Plug

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

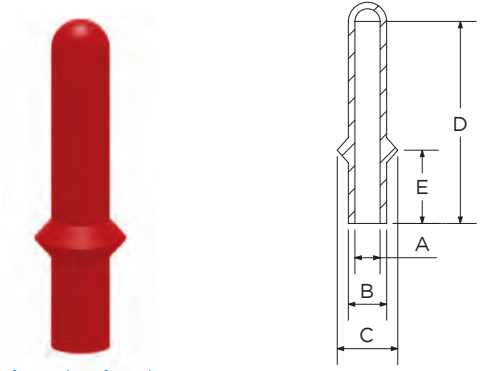
- Powder Coating, E-Coating, Plating, Anodizing, Wet Paint

APPLICATION:

- Masks off hole while flange masks first thread
- Can be used as plug or cap
- Recommended to plug threaded & non-threaded holes

FEATURES:

- Flange is designed to protect the leading thread if used as a plug
- Reusable
- Extra long body
- Color coded



Refer to chart for color

PART NUMBER	QTY	CAP DIMENSIONS		PLUG DIMENSIONS		FLANGE DIAMETER		LENGTH				COLOR
		A		B		C		D		E		
		in	mm	in	mm	in	mm	in	mm	in	mm	
49-FPC00M8-Y4SIL	250	0.200	5.00	0.300	7.60	0.470	12.00	1.570	40.00	0.700	15.00	YELLOW
49-FPC0M10-P4SIL	250	0.260	6.15	0.350	9.00	0.570	14.40	1.790	45.50	0.770	16.50	PINK
49-FPC0M12-C4SIL	250	0.310	8.00	0.430	10.80	0.600	15.20	1.810	46.00	0.730	16.50	CLEAR
49-FPC0M14-G4SIL	250	0.410	10.50	0.520	13.20	0.710	18.00	1.890	48.00	0.790	17.00	GREY

Silicone Flange Caps

Temp Rating: 600° F/315° C

RECOMMENDED PROCESSES:

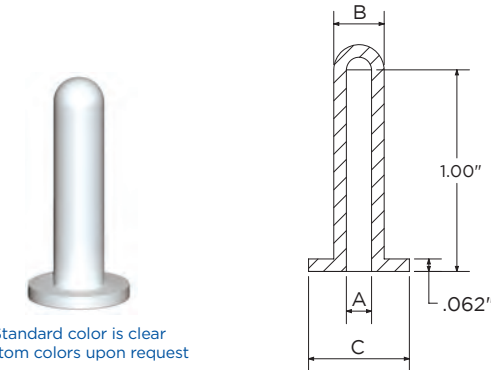
- Powder Coating, E-Coating, Plating, Anodizing, Wet Paint

APPLICATION:

- Use plug to mask stud and protect grounding area
- May also be used to plug threaded & non-threaded holes

FEATURES:

- Can be inverted and used as a plug
- Soft and flexible, able to conform to irregular shapes
- Hollow design



Standard color is clear
 Custom colors upon request

PART NUMBER	QTY	CAP DIMENSIONS		PLUG DIMENSIONS		FLANGE DIAMETER	
		A		B		C	
		in	mm	in	mm	in	mm
49-FC00125-00500	100	0.125	3.18	0.260	6.60	0.500	12.70
49-FC00156-00500	100	0.156	3.96	0.320	8.12	0.500	12.70
49-FC00172-00500	100	0.172	4.36	0.385	9.77	0.500	12.70



ENSURE THE RIGHT FIT. ORDER SAMPLES TODAY!
 Order now at echosupply.com or by phone: 888.echo.365

EPDM Caps

Temp Rating: 350° F/177° C

RECOMMENDED PROCESSES:

- Wet Paint, Plating, Anodizing, Blasting

APPLICATION:

- Use plug to mask studs & tube ends for both threaded/non-threaded
- Can be inverted and used as a plug

FEATURES:

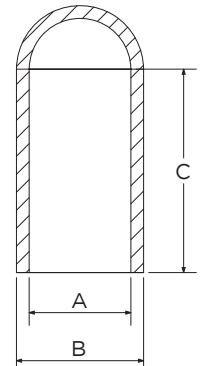
- Soft and flexible, able to conform to irregular shapes
- Chemical resistant

TIPS:

- When used as a cap, order a size slightly smaller than the stud diameter
- When used as a plug, order a size slightly larger than the hole diameter



Standard color is black



PART NUMBER	QTY	CAP DIMENSIONS		PLUG DIMENSIONS		LENGTH	
		A		B		C	
		in	mm	in	mm	in	mm
48-000093-00750	1000	0.093	2.40	0.213	5.41	0.750	19.05
48-0000109-00750	1000	0.109	2.77	0.229	5.82	0.750	19.05
48-0000125-01000	1000	0.125	3.17	0.245	6.22	1.000	25.40
48-0000137-01000	1000	0.137	3.48	0.257	6.53	1.000	25.40
48-0000156-01000	1000	0.156	4.00	0.276	7.01	1.000	25.40
48-0000172-01000	1000	0.172	4.36	0.292	7.42	1.000	25.40
48-0000187-01000	1000	0.187	4.75	0.307	7.80	1.000	25.40
48-0000218-01000	500	0.218	5.53	0.338	8.59	1.000	25.40
48-0000223-01500	500	0.223	5.66	0.343	8.71	1.500	38.10
48-0000234-00500	500	0.234	5.94	0.354	8.99	0.500	12.70
48-0000234-01000	500	0.234	5.94	0.354	8.99	1.000	25.40
48-0000250-01000	500	0.250	6.35	0.370	9.40	1.000	25.40
48-0000281-00625	500	0.281	7.14	0.401	10.19	0.625	15.87
48-0000281-01000	500	0.281	7.14	0.401	10.19	1.000	25.40
48-0000295-01500	500	0.295	7.50	0.415	10.54	1.500	38.10
48-0000312-01000	500	0.312	7.92	0.432	10.97	1.000	25.40
48-0000355-01500	500	0.355	9.02	0.475	12.07	1.500	38.10
48-0000375-01000	500	0.375	9.52	0.495	12.57	1.000	25.40
48-0000406-01000	500	0.406	10.31	0.526	13.36	1.000	25.40
48-0000437-01000	500	0.437	11.10	0.557	14.15	1.000	25.40
48-0000456-01500	500	0.456	11.58	0.576	14.63	1.500	38.10
48-0000500-01500	500	0.500	12.70	0.620	15.75	1.500	38.10
48-0000535-01500	500	0.535	13.60	0.655	16.64	1.500	38.10
48-0000562-01500	250	0.562	14.27	0.682	17.32	1.500	38.10
48-0000625-01500	250	0.625	15.87	0.745	18.92	1.500	38.10
48-0000730-01500	250	0.730	18.54	0.850	21.59	1.500	38.10
48-0000750-01500	250	0.750	19.05	0.870	22.10	1.500	38.10
48-0000812-01500	250	0.812	20.62	0.932	23.67	1.500	38.10
48-0000937-01500	250	0.937	23.80	1.057	26.85	1.500	38.10
48-0000970-04000	250	0.970	24.63	1.090	27.69	4.000	101.60
48-0001000-01500	250	1.000	25.40	1.120	28.45	1.500	38.10
48-0001125-01500	100	1.125	28.57	1.245	31.62	1.500	38.10
48-0001500-01500	100	1.500	38.10	1.620	41.15	1.500	38.10

High Temp Vinyl Caps

Temp Rating: 350° F/177° C

RECOMMENDED PROCESSES:

- Powder Coating, E-Coating, Wet Paint

APPLICATION:

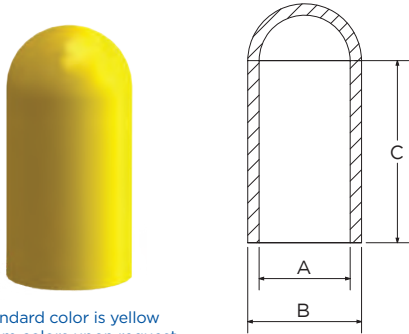
- Use plug to mask studs and tube ends for both threaded and non-threaded
- Can be inverted and used as a plug

FEATURES:

- Durable and reusable, yet cost effective enough to be disposable

TIPS:

- When used as a cap, order a size slightly smaller than the stud diameter
- When used as a plug, order a size slightly larger than the hole diameter



Standard color is yellow
Custom colors upon request

FOR LOW-TEMP VINYL OPTIONS, TURN TO PAGE 94

PART NUMBER	QTY	CAP DIMENSIONS		TYPICAL OD		LENGTH	
		A		B		C	
		in	mm	in	mm	in	mm
50-000062-00625	1000	0.062	1.57	0.142	3.61	0.625	15.88
50-000080-00625	1000	0.080	2.03	0.160	4.06	0.625	15.88
50-000093-00750	1000	0.093	2.36	0.173	4.39	0.750	19.05
50-000109-00750	1000	0.109	2.77	0.189	4.80	0.750	19.05
50-000125-01000	1000	0.125	3.18	0.205	5.21	1.000	25.40
50-000140-01000	1000	0.140	3.56	0.220	5.59	1.000	25.40
50-000156-01000	1000	0.156	3.96	0.236	5.99	1.000	25.40
50-000172-01000	1000	0.172	4.37	0.252	6.40	1.000	25.40
50-000187-01000	1000	0.187	4.75	0.267	6.78	1.000	25.40
50-000203-01000	1000	0.203	5.16	0.283	7.19	1.000	25.40
50-000218-01000	1000	0.218	5.54	0.298	7.57	1.000	25.40
50-000234-01000	1000	0.234	5.94	0.314	7.98	1.000	25.40
50-000250-01000	1000	0.250	6.35	0.330	8.38	1.000	25.40
50-000281-01000	1000	0.281	7.14	0.361	9.17	1.000	25.40
50-000312-01000	1000	0.312	7.92	0.392	9.96	1.000	25.40
50-000343-01000	1000	0.343	8.71	0.423	10.74	1.000	25.40
50-000375-01000	1000	0.375	9.53	0.455	11.56	1.000	25.40
50-000406-01000	1000	0.406	10.31	0.486	12.34	1.000	25.40
50-000437-01000	1000	0.437	11.10	0.517	13.13	1.000	25.40
50-000500-01000	1000	0.500	12.70	0.580	14.73	1.000	25.40
50-000562-01000	1000	0.562	14.70	0.642	16.31	1.000	25.40
50-000625-01000	1000	0.625	16.56	0.705	17.91	1.000	25.40
50-000687-01000	1000	0.687	17.45	0.767	19.48	1.000	25.40
50-000750-01000	1000	0.750	19.05	0.830	21.08	1.000	25.40
50-000812-01000	1000	0.812	20.62	0.892	22.66	1.000	25.40
50-000875-01000	1000	0.875	22.22	0.955	24.26	1.000	25.40
50-000937-01000	1000	0.937	23.78	1.017	25.83	1.000	25.40
50-001000-01000	1000	1.000	25.40	1.080	27.43	1.000	25.40
50-001062-01000	500	1.062	26.97	1.142	29.01	1.000	25.40
50-001125-01000	500	1.125	28.57	1.205	30.61	1.000	25.40
50-001187-01000	500	1.187	30.15	1.267	32.18	1.000	25.40
50-001250-01000	500	1.250	31.75	1.330	33.78	1.000	25.40
50-001375-01000	500	1.375	34.92	1.455	36.96	1.000	25.40
50-001500-01000	500	1.500	38.10	1.580	40.13	1.000	25.40
50-001625-01000	500	1.625	41.27	1.705	43.31	1.000	25.40
50-001750-01000	500	1.750	44.45	1.830	46.48	1.000	25.40
50-001875-01000	500	1.875	47.62	1.955	49.66	1.000	25.40

TAPES

Echo carries an extensive line of masking tapes which are available to cover surfaces not capable of being masked by a plug or cap. Our masking tapes are utilized in a variety of applications with varying temperature requirements such as powder coating, e-coating, plating, wet painting, or for electrical insulation.

Echo's standard tapes are detailed in the following sections. If one of our standard options does not fit your application, we have many other products available. Contact us and we will work with you to come up with a custom solution.

MATERIALS:

POLYESTER

400°F / 204°C

Recommended Uses:

- Powder coating, E-coating, & Anodizing

Product Features:

- Clean removal
- Industry standard
- Excellent line definition

HIGH TEMP CREPE

325°F /162°C

Recommended Uses:

- Low temperature powder coating and liquid coating

Product Features:

- Clean Removal
- Excellent conformability to irregular surfaces & exceptional cornering
- Resistance to paint flaking

ALUMINUM FOIL

325°F /162°C

Recommended Uses:

- Plating, Shielding, & Paint Stripping

Product Features:

- Excellent conformability to irregular surfaces
- High reflectivity provides effective heat & light interference

POLYIMIDE

500°F /260°C

Recommended Uses:

- Powder coating, soldering, extended high temperature paint cures, & PC boards

Product Features:

- Clean Removal
- Flame Retardant
- Offers excellent electrical insulation

VINYL

175°F /99°C

Recommended Uses:

- Hard Chrome Plating, Electroplating, Anodizing, Abrasive Blasting, & Painting

Product Features:

- Excellent solvent & chemical resistance
- No adhesive residue

GLASS CLOTH

500°F /260°C

Recommended Uses:

- Powder coating & extended high temp paint cures

Product Features:

- Clean Removal
- Flame retardant
- Resistant to high-pressure blasting
- Abrasion resistant

LEAD FOIL

225°F /107°C

Recommended Uses:

- Plating, Electroplating, Anodizing, & Paint Stripping

Product Features:

- Electromagnetic & radio frequency shield
- Excellent conformability to irregular surfaces



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Green Poly Tape

Temp Rating: 400° F/204° C

RECOMMENDED PROCESSES:

- Powder Coating, E-Coating, Anodizing

APPLICATION:

- Apply tape to clean surface for high-temp processes

FEATURES:

- Industry standard for general purpose powder coating applications
- Excellent line definition
- **Total thickness:** 3.5 mil (2 mil polyester film with 1.5 mil of green silicone adhesive)



PART NUMBER	ROLLS / CASE	WIDTH		LENGTH
		in	mm	yd
24-06GR215-00125	144	0.125	3.17	72
24-06GR215-00187	144	0.187	4.76	72
24-06GR215-00250	144	0.250	6.35	72
24-06GR215-00312	96	0.312	7.94	72
24-06GR215-00375	96	0.375	9.52	72
24-06GR215-00437	72	0.437	11.11	72
24-06GR215-00500	72	0.500	12.70	72
24-06GR215-00562	64	0.562	14.29	72
24-06GR215-00625	60	0.625	15.88	72
24-06GR215-00687	48	0.687	17.46	72
24-06GR215-00750	48	0.750	19.05	72
24-06GR215-00812	40	0.812	20.63	72
24-06GR215-00875	40	0.875	22.23	72
24-06GR215-00937	36	0.937	23.81	72
24-06GR215-01000	36	1.000	25.40	72
24-06GR215-01125	32	1.125	28.58	72
24-06GR215-01250	32	1.250	31.75	72
24-06GR215-01300	32	1.300	33.02	72
24-06GR215-01375	24	1.375	34.93	72
24-06GR215-01500	24	1.500	38.10	72
24-06GR215-01625	24	1.625	41.28	72
24-06GR215-01750	24	1.750	44.45	72
24-06GR215-01875	24	1.875	47.63	72
24-06GR215-02000	24	2.000	50.80	72
24-06GR215-02250	12	2.250	57.15	72
24-06GR215-02500	12	2.500	63.50	72
24-06GR215-02750	12	2.750	69.85	72
24-06GR215-03000	12	3.000	76.20	72
24-06GR215-03250	8	3.250	82.55	72
24-06GR215-03500	8	3.500	88.90	72
24-06GR215-04000	8	4.000	101.60	72
24-06GR215-04500	8	4.500	114.30	72
24-06GR215-05000	8	5.000	127.00	72
24-06GR215-05500	8	5.500	139.70	72
24-06GR215-06000	8	6.000	152.40	72
24-06GR215-07000	4	7.000	177.80	72
24-06GR215-08000	4	8.000	203.20	72
24-06GR215-09000	4	9.000	228.60	72
24-06GR215-10000	4	10.00	254.00	72
24-06GR215-12000	4	12.00	304.80	72
24-06GR215-18000	2	18.00	457.20	72

ADDITIONAL TAPE OPTIONS AVAILABLE UPON REQUEST

Contact us at 888.echo.365 to discuss your specific needs.

Edge Lined Poly Tape

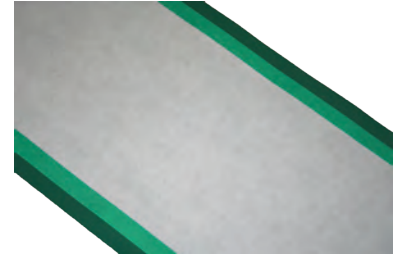
Temp Rating: 400° F/204° C

RECOMMENDED PROCESSES:

- Powder Coating

FEATURES:

- Easy application to large surfaces
- Eliminates large areas of adhesive
- Excellent line definition



Lined Green Poly Tape

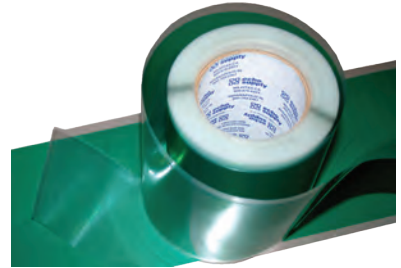
Temp Rating: 400° F/204° C

RECOMMENDED PROCESSES:

- Powder Coating, Anodizing

FEATURES:

- Easy application to large surfaces
- Allows custom shapes to be cut before adhesive is exposed
- Excellent line definition



Yellow Poly Tape

Temp Rating: 400° F/204° C

RECOMMENDED PROCESSES:

- Powder Coating

FEATURES:

- Rigidity makes this tape ideal for when you're applying thicker finishes
- Excellent line definition
- **Total thickness:** 6.5 mil (5 mil polyester film with 1.5 mil of silicone adhesive)



Don't see what you need? Let us know!

Echo offers a variety of specialty tapes not listed here.

Contact us at 888.echo.365 to discuss additional tapes, sizes, and color options.

Blue Poly Tape

Temp Rating: 400° F/204° C

RECOMMENDED PROCESSES:

- Powder Coating, E-Coating, Anodizing

APPLICATION:

- Apply tape on uneven or curved surfaces for surface protection during high-temp processes

FEATURES:

- Prevents Leakage
- Excellent for thin coatings
- **Total thickness:** 2.5 mil (1 mil polyester film with 1.5 mil of blue silicone adhesive)



PART NUMBER	ROLLS / CASE	WIDTH		LENGTH
		in	mm	yd
24-06BL115-00125	144	0.125	3.17	72
24-06BL115-00187	144	0.187	4.76	72
24-06BL115-00250	144	0.250	6.35	72
24-06BL115-00312	96	0.312	7.94	72
24-06BL115-00375	96	0.375	9.52	72
24-06BL115-00437	72	0.437	11.11	72
24-06BL115-00500	72	0.500	12.70	72
24-06BL115-00562	64	0.562	14.29	72
24-06BL115-00625	60	0.625	15.88	72
24-06BL115-00687	48	0.687	17.46	72
24-06BL115-00750	48	0.750	19.05	72
24-06BL115-00812	40	0.812	20.63	72
24-06BL115-00875	40	0.875	22.23	72
24-06BL115-00937	36	0.937	23.81	72
24-06BL115-01000	36	1.000	25.40	72
24-06BL115-01125	32	1.125	28.58	72
24-06BL115-01250	32	1.250	31.75	72
24-06BL115-01375	24	1.375	34.93	72
24-06BL115-01500	24	1.500	38.10	72
24-06BL115-01625	24	1.625	41.28	72
24-06BL115-01750	24	1.750	44.45	72
24-06BL115-01875	24	1.875	47.63	72
24-06BL115-02000	24	2.000	50.80	72
24-06BL115-02250	12	2.250	57.15	72
24-06BL115-02500	12	2.500	63.50	72
24-06BL115-02750	12	2.750	69.85	72
24-06BL115-03000	12	3.000	76.20	72
24-06BL115-03250	8	3.250	82.55	72
24-06BL115-03500	8	3.500	88.90	72
24-06BL115-04000	8	4.000	101.60	72
24-06BL115-04500	8	4.500	114.30	72
24-06BL115-05000	8	5.000	127.00	72
24-06BL115-05500	8	5.500	139.70	72
24-06BL115-06000	8	6.000	152.40	72
24-06BL115-07000	4	7.000	177.80	72
24-06BL115-08000	4	8.000	203.20	72
24-06BL115-09000	4	9.000	228.60	72
24-06BL115-10000	4	10.00	254.00	72
24-06BL115-12000	4	12.00	304.80	72
24-06BL115-18000	2	18.00	457.20	72

Red Poly Plating Tape

Temp Rating: 350° F/177° C

RECOMMENDED PROCESSES:

- Plating, Anodizing, E-Coating

APPLICATION:

- Use tape when potential leakage is a concern
- Tape may be used to mask off printed wiring boards during solder stripping and precious metal plating of fingers

FEATURES:

- Double adhesive used to reduce undercutting and leaks
- **Total thickness:** 4 mil (1 mil polyester film with 3 mil of red silicone adhesive)



PART NUMBER	ROLLS / CASE	WIDTH		LENGTH
		in	mm	yd
24-06RD130-00250	144	0.250	6.35	72
24-06RD130-00375	96	0.375	9.52	72
24-06RD130-00500	72	0.500	12.70	72
24-06RD130-00625	48	0.625	15.88	72
24-06RD130-00750	48	0.750	19.05	72
24-06RD130-01000	36	1.000	25.40	72
24-06RD130-01500	24	1.500	38.10	72
24-06RD130-02000	24	2.000	50.80	72
24-06RD130-03000	12	3.000	76.20	72
24-06RD130-04000	8	4.000	101.60	72
24-06RD130-05000	8	5.000	127.00	72
24-06RD130-06000	8	6.000	152.40	72

Rusty Red Hi-Temp Poly Tape

Temp Rating: 425° F/218° C

RECOMMENDED USE:

- Powder Coating, E-Coating

APPLICATION:

- Use tape as an economical choice for temperature resistance requirement greater than green polyester tape

FEATURES:

- A good alternative where the high heat properties of polyimide or glass cloth are unnecessary
- **Total thickness:** 3.8 mils (2 mil polyester film with 1.8 mils of rusty silicone adhesive)



PART NUMBER	ROLLS / CASE	WIDTH		LENGTH
		in	mm	yd
24-ULTRUST-00250	144	0.250	6.35	72
24-ULTRUST-00375	96	0.375	9.52	72
24-ULTRUST-00500	72	0.500	12.70	72
24-ULTRUST-00625	48	0.625	15.88	72
24-ULTRUST-00750	48	0.750	19.05	72
24-ULTRUST-01000	36	1.000	25.40	72
24-ULTRUST-01500	24	1.500	38.10	72
24-ULTRUST-02000	24	2.000	50.80	72
24-ULTRUST-03000	12	3.000	76.20	72
24-ULTRUST-04000	8	4.000	101.60	72
24-ULTRUST-05000	8	5.000	127.00	72
24-ULTRUST-06000	8	6.000	152.40	72

Polyimide Tape

Temp Rating: 500° F/260° C

RECOMMENDED PROCESSES:

- Powder Coating, E-Coating, Wave Soldering, Circuit Board Insulation

APPLICATION:

- Can be used for extended high temperature paint cures, baking between plating cycles, masking on PC boards, and many other high temperature applications.

FEATURES:

- Chemical resistant
- Electrical insulation
- **Total thickness:** 2.5 mil (1 mil film with 1.5 mil of silicone adhesive)

*Low electrostatic discharge options are available. Please call 888-echo-365 for details



PART NUMBER	ROLLS / CASE	WIDTH		LENGTH
		in	mm	yd
37-KS00115-00125	72	0.125	3.17	36
37-KS00115-00250	36	0.250	6.35	36
37-KS00115-00375	24	0.375	9.52	36
37-KS00115-00500	18	0.500	12.70	36
37-KS00115-00625	15	0.625	15.88	36
37-KS00115-00750	12	0.750	19.05	36
37-KS00115-00875	12	0.875	22.23	36
37-KS00115-01000	12	1.000	25.40	36
37-KS00115-01250	8	1.250	31.75	36
37-KS00115-01500	6	1.500	38.10	36
37-KS00115-01750	6	1.750	44.45	36
37-KS00115-02000	6	2.000	50.80	36
37-KS00115-03000	4	3.000	76.20	36
37-KS00115-04000	4	4.000	101.60	36
37-KS00115-06000	2	6.000	152.40	36

2 Mil Polyimide Tape

Temp Rating: 500° F/260° C

RECOMMENDED PROCESSES:

- E-Coating, Wave Soldering, Circuit Board Insulation, Powder Coating

APPLICATION:

- Can be used for extended high temperature paint cures, baking between plating cycles, masking on PC boards, and many other high temperature applications.

FEATURES:

- Chemical resistant
- Electrical insulation
- **Total thickness:** 3.5 mil (2 mil film with 1.5 mil of silicone adhesive)



PART NUMBER	ROLLS / CASE	WIDTH		LENGTH
		in	mm	yd
37-KS00215-00250	36	0.250	6.35	36
37-KS00215-00375	24	0.375	9.52	36
37-KS00215-00500	18	0.500	12.70	36
37-KS00215-00750	12	0.750	19.05	36
37-KS00215-01000	12	1.000	25.40	36
37-KS00215-01500	6	1.500	38.10	36
37-KS00215-02000	6	2.000	50.80	36
37-KS00215-03000	4	3.000	76.20	36
37-KS00215-04000	4	4.000	101.60	36

Glass Cloth Tape

Temp Rating: 500° F/260° C

RECOMMENDED PROCESSES:

- Powder Coating, Shot Blasting, Thermal Spray, Plasma Spray

APPLICATION:

- Use tape for thick coatings requiring extended high temperature cure cycles

FEATURES:

- Non-corrosive
- High abrasive resistance
- Woven fiberglass backing is blasting and abrasion resistant
- **Total thickness:** 7.2 mil (5.2 mil cloth backing with 2 mil of silicone adhesive)



PART NUMBER	ROLLS / CASE	WIDTH		LENGTH
		in	mm	yd
19-GCS0000-00125	36	0.125	3.17	36
19-GCS0000-00250	36	0.250	6.35	36
19-GCS0000-00375	24	0.375	9.52	36
19-GCS0000-00500	18	0.500	12.70	36
19-GCS0000-00625	15	0.625	15.88	36
19-GCS0000-00750	12	0.750	19.05	36
19-GCS0000-00875	12	0.875	22.23	36
19-GCS0000-01000	12	1.000	25.40	36
19-GCS0000-01250	9	1.250	31.75	36
19-GCS0000-01500	6	1.500	38.10	36
19-GCS0000-01750	6	1.750	44.45	36
19-GCS0000-02000	6	2.000	50.80	36
19-GCS0000-02500	4	2.500	63.50	36
19-GCS0000-03000	4	3.000	76.20	36
19-GCS0000-04000	4	4.000	101.60	36
19-GCS0000-06000	2	6.000	152.40	36

Hi-Temp Crepe Tape

Temp Rating: 325° F/162° C

RECOMMENDED PROCESS:

- Low Temperature Powder Coating, Liquid Spray Applications

APPLICATION:

- Apply pressure-sensitive tape to surface for low-temp paint processes

FEATURES:

- Masking tape designed for clean removal from a variety of surfaces
- Thick crepe backing with high temperature rubber adhesive
- **Total thickness:** 7.3 mil (including adhesive and carrier)



PART NUMBER	ROLLS / CASE	WIDTH		LENGTH
		in	mm	yd
21-AM0PG21-00250	144	0.250	6.35	60
21-AM0PG21-00312	96	0.312	7.94	60
21-AM0PG21-00375	96	0.375	9.52	60
21-AM0PG21-00500	72	0.500	12.70	60
21-AM0PG21-00625	60	0.625	15.88	60
21-AM0PG21-00750	48	0.750	19.05	60
21-AM0PG21-01000	36	1.000	25.40	60
21-AM0PG21-01500	24	1.500	38.10	60
21-AM0PG21-02000	24	2.000	50.80	60
21-AM0PG21-02500	16	2.500	63.50	60
21-AM0PG21-03000	12	3.000	76.20	60
21-AM0PG21-03500	10	3.500	88.90	60
21-AM0PG21-04000	8	4.000	101.60	60
21-AM0PG21-05000	8	5.000	127.00	60
21-AM0PG21-06000	8	6.000	152.40	60

Adhesive Vinyl Tape

Temp Rating: 175° F/79° C

RECOMMENDED PROCESS:

- Plating, Electroplating, Anodizing, Abrasive Blasting, Wet Paint

APPLICATION:

- Use tape for soft PVC backing
- Apply tape for low-temperature finishing process

FEATURES:

- Use for color coding and decorating
- Provides effective vapor and moisture barrier
- **Total thickness:** 6 mils (4.73 mil vinyl film with 1.26 mils of rubber adhesive)

ADDITIONAL COLORS AVAILABLE UPON REQUEST - Call 888.echo.365 to discuss.



PART NUMBER	ROLLS / CASE	WIDTH		LENGTH
		in	mm	yd
23-YELLOW0-00250	72	0.250	6.35	36
23-YELLOW0-00500	36	0.500	12.70	36
23-YELLOW0-00750	24	0.750	19.05	36
23-YELLOW0-01000	24	1.000	25.40	36
23-YELLOW0-01500	16	1.500	38.10	36
23-YELLOW0-02000	16	2.000	50.80	36

Non-Adhesive Vinyl Tape

Temp Rating: 175° F/79° C

RECOMMENDED USE:

- Plating, Anodizing, Electroplating, Abrasive Blasting, Wet Paint

APPLICATION:

- Use tape to mask off wiring harnesses
- Overlap tape to create a liquid tight seal around racks and parts

FEATURES:

- Easy placement and removal
- Clings to surfaces and corners without adhesive
- Strong chemical resistance
- No residue
- **Total thickness:** 3.5 mil - 4.0 mil

ADDITIONAL COLORS AVAILABLE UPON REQUEST - Call 888.echo.365 to discuss.



PART NUMBER	ROLLS / CASE	WIDTH		LENGTH
		in	mm	yd
23-YLW00DV-00500	36	0.500	12.70	183
23-YLW00DV-00750	24	0.750	19.05	183
23-YLW00DV-01000	24	1.000	25.40	183
23-YLW00DV-01500	16	1.500	38.10	183
23-YLW00DV-02000	16	2.000	50.80	183

Lead Foil Tape

Temp Rating: 225° F/107° C

RECOMMENDED PROCESSES:

- Plating, Electroplating, Anodizing, Paint Stripping

APPLICATION:

- Use tape for electromagnetic and radio frequency shield

FEATURES:

- Adheres and conforms well to irregular surfaces
- Applicable for various types of surfaces
- **Tape thickness:** 6.3 mil (4 mil lead foil with 2.3 mil of rubber adhesive)



PART NUMBER	ROLLS / CASE	WIDTH		LENGTH
		in	mm	yd
26-3M00421-00500	18	0.500	12.70	36
26-3M00421-00750	12	0.750	19.05	36
26-3M00421-01000	9	1.000	25.40	36
26-3M00421-02000	6	2.000	50.80	36

Aluminum Foil Tape

Temp Rating: 325° F/162° C

RECOMMENDED PROCESSES:

- Plating, Shielding, Paint Stripping, Etching Application

APPLICATION:

- Cleaning and etching application
- Apply tape for waterproofing, air leakage protection, metal patching, and sound damping

FEATURES:

- Adheres and conforms well to irregular surfaces
- High reflectivity provides effective heat and light interference
- **Total thickness:** 5 mil (3 mil of high-strength, self-wound soft aluminum foil with 2 mil acrylic adhesive)



PART NUMBER	ROLLS / CASE	WIDTH		LENGTH
		in	mm	yd
26-SW00489-00500	72	0.500	12.70	60
26-SW00489-00750	48	0.750	19.05	60
26-SW00489-01000	36	1.000	25.40	60
26-SW00489-02000	24	2.000	50.80	60

DIE CUTS

Echo's standard die cuts are available to cover repetitive round, square, or rectangle areas. Our die cuts are utilized in a variety of applications with varying temperature requirements such as powder coating, e-coating, plating, and wet painting.

Along with our standard options, we have custom capabilities to offer nearly any shape or size in a variety of tapes. These die cuts can be made in roll form, single sheets for larger die cuts, or in kits allowing for quicker installation.

MATERIALS:

POLYESTER

400°F / 204°C

Recommended Uses:

- Powder coating, e-coating, & anodizing

Product Features:

- Clean removal
- Industry standard
- Excellent line definition

HIGH TEMP CREPE

325°F /162°C

Recommended Uses:

- Low temperature powder coating and liquid coating

Product Features:

- Clean removal
- Excellent conformability to irregular surfaces & exceptional cornering
- Resistance to paint flaking

ALUMINUM FOIL

325°F /162°C

Recommended Uses:

- Plating, shielding, & paint stripping

Product Features:

- Excellent conformability to irregular surfaces
- High reflectivity provides effective heat & light interference

POLYIMIDE

500°F /260°C

Recommended Uses:

- Powder coating, soldering, extended high temperature paint cures, & PC boards

Product Features:

- Clean removal
- Flame retardant
- Offers excellent electrical insulation

VINYL

175°F /99°C

Recommended Uses:

- Hard chrome plating, Electroplating, Anodizing, Abrasive blasting, & Painting

Product Features:

- Excellent solvent & chemical resistance
- No adhesive residue

GLASS CLOTH

500°F /260°C

Recommended Uses:

- Powder coating & extended high temp paint cures

Product Features:

- Removes cleanly
- Flame retardant
- Resistant to high-pressure blasting
- Abrasion resistant

LEAD FOIL

225°F /107°C

Recommended Uses:

- Plating, electroplating, anodizing, & paint stripping

Product Features:

- Electromagnetic & radio frequency shield
- Excellent conformability to irregular surfaces



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Green & Blue Poly Discs

Temp Rating: 400° F/204° C



GREEN POLY RECOMMENDED PROCESS:

- Powder Coating, E-Coating, Anodizing

GREEN POLY APPLICATION:

- Apply tape to mask off holes, circular machine surfaces, and grounding areas

GREEN POLY FEATURES:

- Industry standard tape for most powder coating applications
- **Total thickness:** 3.5 mil (2 mil polyester film with 1.5 mil of green silicone adhesive)

ADDITIONAL POLY DIE CUTS AVAILABLE - Call 888.echo.365 to discuss.

GREEN POLY PART NUMBER	BLUE POLY PART NUMBER	QTY / ROLL	DIAMETER	
			in	mm
14-2M00125-02000	14-1B00125-02000	2000	0.125	3.18
14-2M00156-02000	14-1B00156-02000	2000	0.156	3.96
14-2M00187-02000	14-1B00187-02000	2000	0.187	4.75
14-2M00218-02000	14-1B00218-02000	2000	0.218	5.54
14-2M00250-02000	14-1B00250-02000	2000	0.250	6.35
14-2M00281-02000	14-1B00281-02000	2000	0.281	7.14
14-2M00312-02000	14-1B00312-02000	2000	0.312	7.92
14-2M00375-02000	14-1B00375-02000	2000	0.375	9.53
14-2M00400-02000	14-1B00400-02000	2000	0.400	10.16
14-2M00437-02000	14-1B00437-02000	2000	0.437	11.10
14-2M00500-02000	14-1B00500-02000	2000	0.500	12.70
14-2M00562-02000	14-1B00562-02000	2000	0.562	14.27
14-2M00625-02000	14-1B00625-02000	2000	0.625	15.88
14-2M00687-01000	14-1B00687-01000	1000	0.687	17.45
14-2M00750-01000	14-1B00750-01000	1000	0.750	19.05
14-2M00812-01000	14-1B00812-01000	1000	0.812	20.62
14-2M00875-01000	14-1B00875-01000	1000	0.875	22.23
14-2M00937-01000	14-1B00937-01000	1000	0.937	23.80
14-2M01000-01000	14-1B01000-01000	1000	1.000	25.40
14-2M01062-00500	14-1B01062-00500	500	1.062	26.97
14-2M01125-00500	14-1B01125-00500	500	1.125	28.58
14-2M01187-00500	14-1B01187-00500	500	1.187	30.15
14-2M01250-00500	14-1B01250-00500	500	1.250	31.75
14-2M01312-00500	14-1B01312-00500	500	1.312	33.32
14-2M01375-00500	14-1B01375-00500	500	1.375	34.93
14-2M01437-00500	14-1B01437-00500	500	1.437	36.50
14-2M01500-00500	14-1B01500-00500	500	1.500	38.10
14-2M01562-00500	14-1B01562-00500	500	1.562	39.67



BLUE POLY RECOMMENDED PROCESS:

- Powder Coating, E-Coating, Anodizing

BLUE POLY APPLICATION:

- Apply discs on uneven or curved surfaces for high-temp processes
- Use on interior of parts
- Use to tape off holes, circular machine surfaces, and grounding areas

BLUE POLY FEATURES:

- Prevents leakage
- **Total thickness:** 2.5 mil (1 mil polyester film with 1.5 mil of blue silicone adhesive)

ADDITIONAL POLY DIE CUTS AVAILABLE - Call 888.echo.365 to discuss.

GREEN POLY PART NUMBER	BLUE POLY PART NUMBER	QTY / ROLL	DIAMETER	
			in	mm
14-2M01625-00500	14-1B01625-00500	500	1.625	41.28
14-2M01687-00500	14-1B01687-00500	500	1.687	42.85
14-2M01750-00500	14-1B01750-00500	500	1.750	44.45
14-2M01812-00500	14-1B01812-00500	500	1.812	46.02
14-2M01875-00500	14-1B01875-00500	500	1.875	47.63
14-2M01937-00500	14-1B01937-00500	500	1.937	49.20
14-2M02000-00500	14-1B02000-00500	500	2.000	50.80
14-2M02125-00500	14-1B02125-00500	500	2.125	53.98
14-2M02250-00500	14-1B02250-00500	500	2.250	57.15
14-2M02375-00250	14-1B02375-00250	250	2.375	60.33
14-2M02500-00250	14-1B02500-00250	250	2.500	63.50
14-2M02625-00250	14-1B02625-00250	250	2.625	66.68
14-2M02750-00250	14-1B02750-00250	250	2.750	69.85
14-2M02875-00250	14-1B02875-00250	250	2.875	73.03
14-2M03000-00250	14-1B03000-00250	250	3.000	76.20
14-2M03250-00250	14-1B03250-00250	250	3.250	82.55
14-2M03500-00250	14-1B03500-00250	250	3.500	88.90
14-2M03625-00250	14-1B03625-00250	250	3.625	92.08
14-2M03750-00250	14-1B03750-00250	250	3.750	95.25
14-2M04000-00250	14-1B04000-00250	250	4.000	101.60
14-2M04250-00250	14-1B04250-00250	250	4.250	107.95
14-2M04500-00250	14-1B04500-00250	250	4.500	114.30
14-2M04750-00100	14-1B04750-00100	100	4.750	120.65
14-2M05000-00100	14-1B05000-00100	100	5.000	127.00
14-2M05250-00100	14-1B05250-00100	100	5.250	133.35
14-2M05500-00100	14-1B05500-00100	100	5.500	139.70
14-2M05750-00100	14-1B05750-00100	100	5.750	146.05
14-2M06000-00100	14-1B06000-00100	100	6.000	152.40
14-2M06500-00100	14-1B06500-00100	100	6.500	165.10

Green Poly Pull Tab Discs

Temp Rating: 400° F/204° C

RECOMMENDED PROCESS:

- Powder Coating, E-Coating, Anodizing

APPLICATION:

- Apply disc to clean surface for high-temp finishing processes

FEATURES:

- Laminated centered pull tab for easy removal
- Eliminates need to dig razor blades or finger nails into the paint for removal



PART NUMBER	QTY / ROLL	DIAMETER	
		in	mm
14-PT00500-00500	500	0.500	12.70
14-PT00625-00500	500	0.625	15.88
14-PT00750-00500	500	0.750	19.05
14-PT00875-00500	500	0.875	22.23
14-PT01000-00500	500	1.000	25.40
14-PT01125-00500	500	1.125	28.58
14-PT01250-00500	500	1.250	31.75
14-PT01375-00500	500	1.375	34.93
14-PT01500-00500	500	1.500	38.10
14-PT01625-00500	500	1.625	41.28
14-PT01750-00250	250	1.750	44.45
14-PT01875-00250	250	1.875	47.63
14-PT02000-00250	250	2.000	50.80
14-PT02250-00250	250	2.250	57.15
14-PT02500-00250	250	2.500	63.50
14-PT02750-00100	100	2.750	69.85
14-PT03000-00100	100	3.000	76.20
14-PT03250-00100	100	3.250	82.55
14-PT03500-00100	100	3.500	88.90
14-PT03750-00100	100	3.750	95.25
14-PT04000-00100	100	4.000	101.60

Masking multiple holes of different shapes and sizes?

A custom die cut kit can help you streamline your processes!

Benefits:

- Improved efficiency and decreased labor times
- Better quality mask at the exact size and shape you need
- Maintain consistency when producing hundreds, or even thousands, of the same product
- Minimized number of masking pieces makes installation and removal instantly easier & quicker.

Contact us at 888-echo-365 to find out more about creating your custom die kit today!



Green Poly Squares, Rectangles, & Donuts

Temp Rating: 400° F/204° C

RECOMMENDED PROCESS:

- Powder Coating, E-Coating, Anodizing

APPLICATION:

- Choose appropriate geometric size and apply to clean surface

FEATURES:

- No shrinkage
- Eliminates hand trimming
- **Total thickness:** 3.5 mil (2 mil polyester film with 1.5 mil of green silicone adhesive)

ADDITIONAL POLY COLORS & SIZES AVAILABLE - Call 888.echo.365 to discuss.

SQUARES

PART NUMBER	QTY / ROLL	LENGTH		WIDTH	
		in	mm	in	mm
14-SQ00250-00000	1000	0.250	6.35	0.250	6.35
14-SQ00375-00000	1000	0.375	9.53	0.375	9.53
14-SQ00500-00000	1000	0.500	12.70	0.500	12.70
14-SQ00625-00000	1000	0.625	15.88	0.625	15.88
14-SQ00750-00000	1000	0.750	19.05	0.750	19.05
14-SQ01000-00000	1000	1.000	25.40	1.000	25.40
14-SQ01250-00000	500	1.250	31.75	1.250	31.75
14-SQ01500-00000	500	1.500	38.10	1.500	38.10
14-SQ02000-00000	500	2.000	50.80	2.000	50.80
14-SQ03000-00000	250	3.000	76.20	3.000	76.20

RECTANGLES

PART NUMBER	QTY / ROLL	LENGTH		WIDTH	
		in	mm	in	mm
14-RCT0250-00500	1000	0.250	6.35	0.500	12.70
14-RCT0250-00750	1000	0.250	6.35	0.750	19.05
14-RCT0250-01000	1000	0.250	6.35	1.000	25.40
14-RCT0500-00750	1000	0.500	12.70	0.750	19.05
14-RCT0500-01000	1000	0.500	12.70	1.000	25.40
14-RCT0500-01500	1000	0.500	12.70	1.500	38.10
14-RCT0750-01000	1000	0.750	19.05	1.000	25.40
14-RCT0750-01500	500	0.750	19.05	1.500	38.10
14-RCT0750-02000	500	0.750	19.05	2.000	50.80

DONUTS

PART NUMBER	QTY / ROLL	OUTSIDE DIAMETER		INSIDE DIAMETER	
		in	mm	in	mm
14-DNT0250-00062	1000	0.250	6.35	0.062	1.57
14-DNT0250-00125	1000	0.250	6.35	0.125	3.18
14-DNT0250-00187	1000	0.250	6.35	0.187	4.75
14-DNT0375-00125	1000	0.375	9.53	0.125	3.18
14-DNT0375-00187	1000	0.375	9.53	0.187	4.75
14-DNT0375-00250	1000	0.375	9.53	0.250	6.35
14-DNT0500-00125	1000	0.500	12.70	0.125	3.18
14-DNT0500-00156	1000	0.500	12.70	0.156	3.96
14-DNT0500-00187	1000	0.500	12.70	0.187	4.75
14-DNT0500-00250	1000	0.500	12.70	0.250	6.35
14-DNT0750-00250	1000	0.750	19.05	0.250	6.35
14-DNT0750-00375	1000	0.750	19.05	0.375	9.53
14-DNT0750-00500	1000	0.750	19.05	0.500	12.70

Glass Cloth & Polyimide Discs

Temp Rating: 500° F/260° C

POLYIMIDE RECOMMENDED PROCESSES:

- Powder Coating, E-Coating, Wave Soldering

POLYIMIDE APPLICATION:

- Apply disc on surface or printed circuit board for high temperature process
- Use for baking between plating cycles
- May be used for extended high temperature paint cures

POLYIMIDE FEATURES:

- Electrical insulation
- **Total thickness:** 2.5 mil (1 mil film with 1.5 mil of silicone adhesive)
- 2 mil polyimide film is also available
- **3.5 mil polyimide film also available (2 mil film with 1.5 mil of silicone adhesive)**



GLASS CLOTH PART NUMBER	POLYIMIDE PART NUMBER	QTY / ROLL	DIAMETER	
			in	mm
19-GC00125-02000	14-KA00125-02000	2000	0.125	3.18
19-GC00156-02000	14-KA00156-02000	2000	0.156	3.96
19-GC00187-02000	14-KA00187-02000	2000	0.187	4.75
19-GC00218-02000	14-KA00218-02000	2000	0.218	5.54
19-GC00250-02000	14-KA00250-02000	2000	0.250	6.35
19-GC00281-02000	14-KA00281-02000	2000	0.281	7.14
19-GC00312-02000	14-KA00312-02000	2000	0.312	7.92
19-GC00375-02000	14-KA00375-02000	2000	0.375	9.53
19-GC00400-02000	14-KA00400-02000	2000	0.400	10.16
19-GC00437-02000	14-KA00437-02000	2000	0.437	11.10
19-GC00500-02000	14-KA00500-02000	2000	0.500	12.70
19-GC00562-02000	14-KA00562-02000	2000	0.562	14.27
19-GC00625-02000	14-KA00625-02000	2000	0.625	15.88
19-GC00687-01000	14-KA00687-01000	1000	0.687	14.27
19-GC00750-01000	14-KA00750-01000	1000	0.750	19.05
19-GC00812-01000	14-KA00812-01000	1000	0.812	20.62
19-GC00875-01000	14-KA00875-01000	1000	0.875	22.23
19-GC00937-01000	14-KA00937-01000	1000	0.937	23.80
19-GC01000-01000	14-KA01000-01000	1000	1.000	25.40
19-GC01062-00500	14-KA01062-00500	500	1.062	26.97
19-GC01125-00500	14-KA01125-00500	500	1.125	28.58
19-GC01187-00500	14-KA01187-00500	500	1.187	30.15
19-GC01250-00500	14-KA01250-00500	500	1.250	31.75
19-GC01312-00500	14-KA01312-00500	500	1.312	33.32
19-GC01375-00500	14-KA01375-00500	500	1.375	34.93
19-GC01437-00500	14-KA01437-00500	500	1.437	36.50
19-GC01500-00500	14-KA01500-00500	500	1.500	38.10
19-GC01562-00500	14-KA01562-00500	500	1.562	39.67

GLASS CLOTH RECOMMENDED PROCESSES:

- Shot Blasting, Thermal Spray, Plasma Spray

APPLICATION:

- Apply disc on surface for resistance against solvents during intense finishing processes
- Use for thick coatings requiring extended high temperature cure cycles

GLASS CLOTH FEATURES:

- Abrasion resistant
- Flame retardant
- Non-corrosive
- Woven fiberglass backing is coated with silicone adhesive
- **Total thickness:** 7.2 mil (5.2 mil cloth backing with 2 mil of silicone adhesive)



GLASS CLOTH PART NUMBER	POLYIMIDE PART NUMBER	QTY / ROLL	DIAMETER	
			in	mm
19-GC01625-00500	14-KA01625-00500	500	1.625	41.28
19-GC01687-00500	14-KA01687-00500	500	1.687	42.85
19-GC01750-00500	14-KA01750-00500	500	1.750	44.45
19-GC01812-00500	14-KA01812-00500	500	1.812	46.02
19-GC01875-00500	14-KA01875-00500	500	1.875	47.63
19-GC01937-00500	14-KA01937-00500	500	1.937	49.20
19-GC02000-00500	14-KA02000-00500	500	2.000	50.80
19-GC02125-00500	14-KA02125-00500	500	2.125	53.98
19-GC02250-00250	14-KA02250-00250	250	2.250	57.15
19-GC02375-00250	14-KA02375-00250	250	2.375	60.33
19-GC02500-00250	14-KA02500-00250	250	2.500	63.50
19-GC02625-00250	14-KA02625-00250	250	2.625	66.68
19-GC02750-00250	14-KA02750-00250	250	2.750	69.85
19-GC02875-00250	14-KA02875-00250	250	2.875	73.03
19-GC03000-00250	14-KA03000-00250	250	3.000	76.20
19-GC03250-00250	14-KA03250-00250	250	3.250	82.55
19-GC03500-00250	14-KA03500-00250	250	3.500	88.90
19-GC03625-00250	14-KA03625-00250	250	3.625	92.08
19-GC03750-00250	14-KA03750-00250	250	3.750	95.25
19-GC04000-00250	14-KA04000-00250	250	4.000	101.60
19-GC04250-00250	14-KA04250-00250	250	4.250	107.95
19-GC04500-00250	14-KA04500-00250	250	4.500	114.30
19-GC04750-00250	14-KA04750-00250	250	4.750	120.65
19-GC05000-00100	14-KA05000-00100	100	5.000	127.00
19-GC05250-00100	14-KA05250-00100	100	5.250	133.35
19-GC05500-00100	14-KA05500-00100	100	5.500	139.70
19-GC05750-00100	14-KA05750-00100	100	5.750	146.05
19-GC06000-00100	14-KA06000-00100	100	6.000	152.40

Hi-Temp Crepe Discs

Temp Rating: 325° F/162° C

RECOMMENDED PROCESS:

- Low Temperature Powder Coating, Liquid Spray Applications

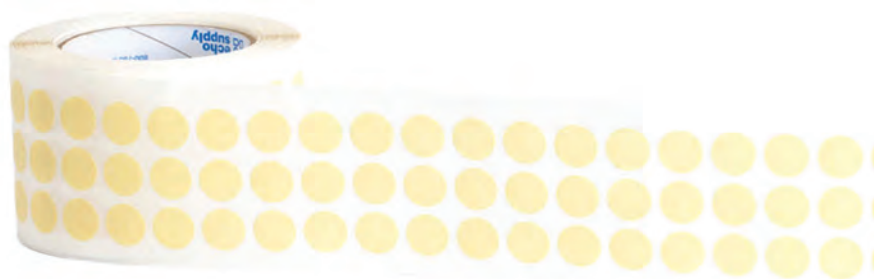
APPLICATION:

- Apply pressure-sensitive tape to surface for low-temp paint processes

FEATURES:

- Masking tape designed for clean removal from a variety of surfaces
- Thick crepe backing with high temperature rubber adhesive
- **Total thickness:** 7.3 mil (including adhesive and carrier)

PART NUMBER	QTY / ROLL	DIAMETER	
		in	mm
11-0000125-05000	5000	0.125	3.18
11-0000156-05000	5000	0.156	3.96
11-0000187-05000	5000	0.187	4.75
11-0000218-05000	5000	0.218	5.54
11-0000250-05000	5000	0.250	6.35
11-0000312-05000	5000	0.312	7.92
11-0000375-05000	5000	0.375	9.53
11-0000400-05000	5000	0.400	10.16
11-0000437-05000	5000	0.437	11.10
11-0000500-05000	5000	0.500	12.70
11-0000562-05000	5000	0.562	14.27
11-0000625-05000	5000	0.625	15.88
11-0000687-04000	4000	0.687	17.45
11-0000750-04000	4000	0.750	19.05
11-0000812-04000	4000	0.812	20.62
11-0000875-04000	4000	0.875	22.23
11-0000937-04000	4000	0.937	23.80
11-0001000-02000	2000	1.000	25.40
11-0001062-02000	2000	1.062	26.97
11-0001125-02000	2000	1.125	28.58
11-0001187-02000	2000	1.187	30.15
11-0001250-02000	2000	1.250	31.75
11-0001312-02000	2000	1.312	33.32
11-0001375-02000	2000	1.375	34.93
11-0001437-02000	2000	1.437	36.50
11-0001500-02000	2000	1.500	38.10
11-0001562-02000	2000	1.562	39.67
11-0001625-01000	1000	1.625	41.28



PART NUMBER	QTY / ROLL	DIAMETER	
		in	mm
11-0001687-01000	1000	1.687	42.85
11-0001750-01000	1000	1.750	44.45
11-0001812-01000	1000	1.812	46.02
11-0001875-01000	1000	1.875	47.63
11-0001937-01000	1000	1.937	49.20
11-0002000-00500	500	2.000	50.80
11-0002125-00500	500	2.125	53.98
11-0002250-00500	500	2.250	57.15
11-0002375-00500	500	2.375	60.33
11-0002500-00500	500	2.500	63.50
11-0002625-00500	500	2.625	66.68
11-0002750-00500	500	2.750	69.85
11-0002875-00500	500	2.875	73.03
11-0003000-00500	500	3.000	76.20
11-0003250-00500	500	3.250	82.55
11-0003500-00500	500	3.500	88.90
11-0003625-00500	500	3.625	92.08
11-0003750-00500	500	3.750	95.25
11-0004000-00250	250	4.000	101.60
11-0004250-00250	250	4.250	107.95
11-0004500-00250	250	4.500	114.30
11-0004750-00250	250	4.750	120.65
11-0005000-00250	250	5.000	127.00
11-0005250-00250	250	5.250	133.35
11-0005500-00250	250	5.500	139.70
11-0005750-00250	250	5.750	146.05
11-0006000-00250	250	6.000	152.40
11-0006500-00250	250	6.500	165.10

Hi-Temp Crepe Squares, Rectangles, Donuts

Temp Rating: 325° F/162° C

RECOMMENDED PROCESS:

- Low Temperature Powder Coating, Liquid Spray Applications

APPLICATION:

- Apply pressure-sensitive tape to surface for low-temp paint processes

FEATURES:

- Masking tape designed for clean removal from a variety of surfaces
- Eliminates hand trimming
- Thick crepe backing with high temperature rubber adhesive
- **Total thickness:** 7.3 mil (includes adhesive and carrier)



SQUARES

PART NUMBER	QTY / ROLL	LENGTH		WIDTH	
		in	mm	in	mm
11-SQ00250-00000	1000	0.250	6.35	0.250	6.35
11-SQ00375-00000	1000	0.375	9.53	0.375	9.53
11-SQ00500-00000	1000	0.500	12.70	0.500	12.70
11-SQ00625-00000	1000	0.625	15.88	0.625	15.88
11-SQ00750-00000	1000	0.750	19.05	0.750	19.05
11-SQ01000-00000	1000	1.000	25.40	1.000	25.40
11-SQ01250-00000	500	1.250	31.75	1.250	31.75
11-SQ01500-00000	500	1.500	38.10	1.500	38.10
11-SQ02000-00000	500	2.000	50.80	2.000	50.80
11-SQ03000-00000	250	3.000	76.20	3.000	76.20

RECTANGLES

PART NUMBER	QTY / ROLL	LENGTH		WIDTH	
		in	mm	in	mm
11-RCT0250-00500	1000	0.250	6.35	0.500	12.70
11-RCT0250-00750	1000	0.250	6.35	0.750	19.05
11-RCT0250-01000	1000	0.250	6.35	1.000	25.40
11-RCT0500-00750	1000	0.500	12.70	0.750	19.05
11-RCT0500-01000	1000	0.500	12.70	1.000	25.40
11-RCT0500-01500	1000	0.500	12.70	1.500	38.10
11-RCT0750-01000	1000	0.750	19.05	1.000	25.40
11-RCT0750-01500	500	0.750	19.05	1.500	38.10
11-RCT0750-02000	500	0.750	19.05	2.000	50.80

DONUTS

PART NUMBER	QTY / ROLL	OUTSIDE DIAMETER		INSIDE DIAMETER	
		in	mm	in	mm
11-DNT0250-00062	1000	0.250	6.35	0.062	1.57
11-DNT0250-00125	1000	0.250	6.35	0.125	3.18
11-DNT0250-00187	1000	0.250	6.35	0.187	4.75
11-DNT0375-00125	1000	0.375	9.53	0.125	3.18
11-DNT0375-00187	1000	0.375	9.53	0.187	4.75
11-DNT0375-00250	1000	0.375	9.53	0.250	6.35
11-DNT0500-00125	1000	0.500	12.70	0.125	3.18
11-DNT0500-00156	1000	0.500	12.70	0.156	3.96
11-DNT0500-00187	1000	0.500	12.70	0.187	4.75
11-DNT0500-00250	1000	0.500	12.70	0.250	6.35
11-DNT0750-00250	1000	0.750	19.05	0.250	6.35
11-DNT0750-00375	1000	0.750	19.05	0.375	9.53
11-DNT0750-00500	1000	0.750	19.05	0.500	12.70

Lead Foil Discs

Temp Rating: 225° F/162° C

RECOMMENDED PROCESSES:

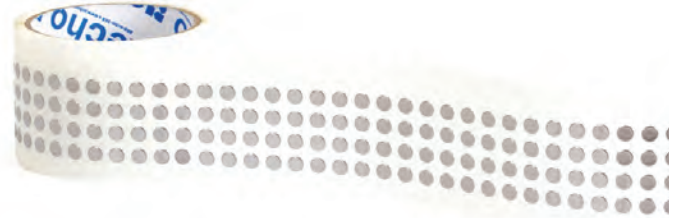
- Plating, Electroplating, Anodizing, and Paint Stripping

APPLICATION:

- Apply tape on surface for extremely harsh processes

FEATURES:

- Adheres and conforms well to irregular surfaces (indoors and outdoors)
- Provides good stop-off masking during plating, chemical milling, and paint stripping
- Electrically conductive
- Provides moisture-proof seal
- **Total thickness:** 6.3 mil (4.0 mil of lead foil with 2.3 mil of rubber adhesive)



PART NUMBER	QTY / ROLL	DIAMETER	
		in	mm
16-LF00125-02000	2000	0.125	3.18
16-LF00156-02000	2000	0.156	3.96
16-LF00187-02000	2000	0.187	4.75
16-LF00218-02000	2000	0.218	5.54
16-LF00250-02000	2000	0.250	6.35
16-LF00281-02000	2000	0.281	7.14
16-LF00312-02000	2000	0.312	7.92
16-LF00375-02000	2000	0.375	9.53
16-LF00400-02000	2000	0.400	10.16
16-LF00437-02000	2000	0.437	11.10
16-LF00500-02000	2000	0.500	12.70
16-LF00562-02000	2000	0.562	14.27
16-LF00625-02000	2000	0.625	15.88
16-LF00687-01000	1000	0.687	14.27
16-LF00750-01000	1000	0.750	19.05
16-LF00812-01000	1000	0.812	20.62
16-LF00875-01000	1000	0.875	22.23
16-LF00937-01000	1000	0.937	23.80
16-LF01000-01000	1000	1.000	25.40
16-LF01062-00500	500	1.062	26.97
16-LF01125-00500	500	1.125	28.58
16-LF01187-00500	500	1.187	30.15
16-LF01250-00500	500	1.250	31.75
16-LF01312-00500	500	1.312	33.32
16-LF01375-00500	500	1.375	34.93
16-LF01437-00500	500	1.437	36.50
16-LF01500-00500	500	1.500	38.10
16-LF01625-00500	500	1.625	41.28
16-LF01750-00500	500	1.750	44.45
16-LF01812-00500	500	1.812	46.02
16-LF01875-00500	500	1.875	47.63
16-LF02000-00500	500	2.000	50.80
16-LF03000-00250	250	3.000	76.20
16-LF04000-00250	250	4.000	101.60
16-LF05000-00100	100	5.000	127.00
16-LF06000-00100	100	6.000	152.40

Aluminum Foil Discs

Temp Rating: 325° F/162° C

RECOMMENDED PROCESSES:

- Plating, Shielding, Paint Stripping, Cleaning, Etching Application

APPLICATION:

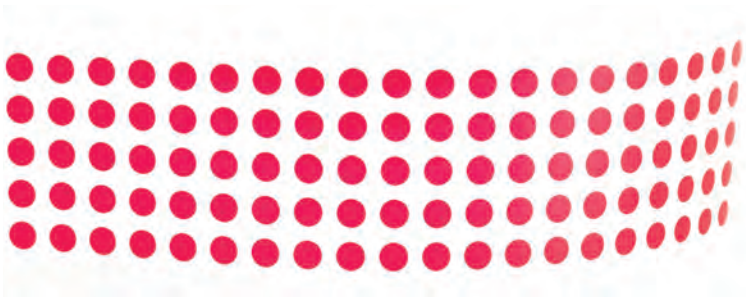
- Use for waterproof shield during extremely harsh processes

FEATURES:

- Adheres and conforms well to irregular surfaces
- Thermally conductive and resistant to chemicals
- Provides waterproofing, air leakage protection, metal patching, and sound damping
- **Total thickness:** 4.6 mil (2.8 mil of high-strength, self-wound aluminum foil with 1.8 mil of acrylic adhesive)

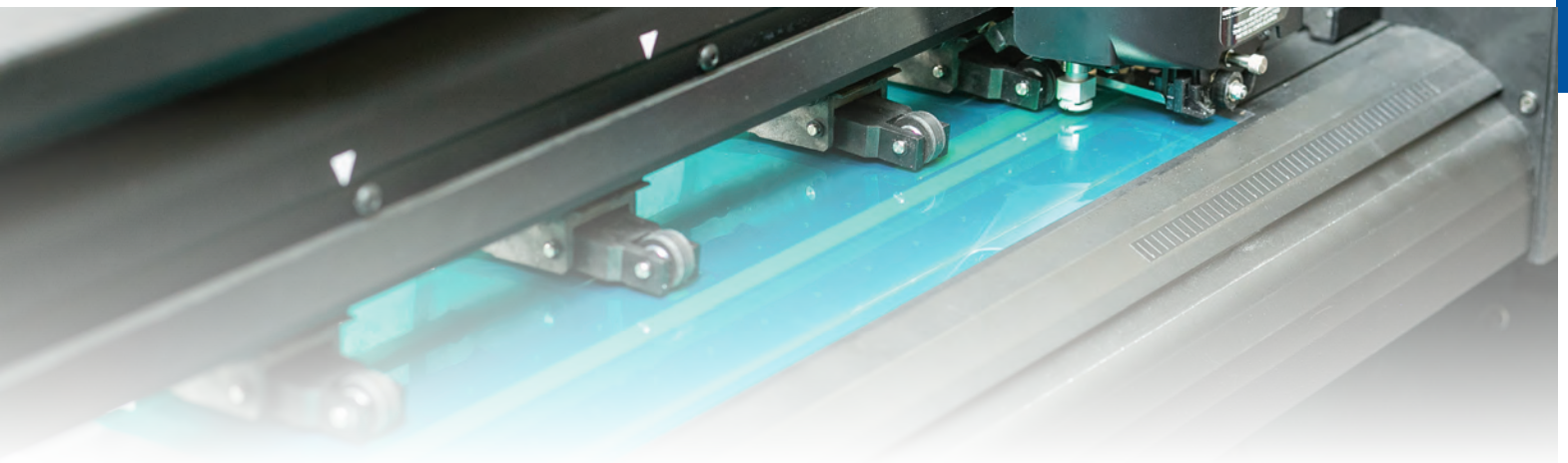


PART NUMBER	QTY / ROLL	DIAMETER	
		in	mm
16-AF00125-02000	2000	0.125	3.18
16-AF00156-02000	2000	0.156	3.96
16-AF00187-02000	2000	0.187	4.75
16-AF00218-02000	2000	0.218	5.54
16-AF00250-02000	2000	0.250	6.35
16-AF00281-02000	2000	0.281	7.14
16-AF00312-02000	2000	0.312	7.92
16-AF00375-02000	2000	0.375	9.53
16-AF00400-02000	2000	0.400	10.16
16-AF00437-02000	2000	0.437	11.10
16-AF00500-02000	2000	0.500	12.70
16-AF00562-02000	2000	0.562	14.27
16-AF00625-02000	2000	0.625	15.88
16-AF00687-01000	1000	0.687	14.27
16-AF00750-01000	1000	0.750	19.05
16-AF00812-01000	1000	0.812	20.62
16-AF00875-01000	1000	0.875	22.23
16-AF00937-01000	1000	0.937	23.80
16-AF01000-01000	1000	1.000	25.40
16-AF01125-00500	500	1.125	28.58
16-AF01187-00500	500	1.187	30.15
16-AF01250-00500	500	1.250	31.75
16-AF01312-00500	500	1.312	33.32
16-AF01375-00500	500	1.375	34.93
16-AF01437-00500	500	1.437	36.50
16-AF01500-00500	500	1.500	38.10
16-AF01625-00500	500	1.625	41.28
16-AF01750-00500	500	1.750	44.45
16-AF01812-00500	500	1.812	46.02
16-AF01875-00500	500	1.875	47.63
16-AF02000-00500	500	2.000	50.80
16-AF03000-00250	250	3.000	76.20
16-AF04000-00250	250	4.000	101.60
16-AF05000-00100	100	5.000	127.00
16-AF06000-00100	100	6.000	152.40



Don't see a certain tape in the die cut you need?

Standard die cuts are available in alternate colors upon request. Here at Echo, you can also create a custom die kit. See below for more information.



Receive reliable custom masking on a budget.

Our rapid custom die cutting capabilities enable you to accelerate the design process of creating custom masking tape shapes. Our samples are plotted and shipped within 24 hours, enabling you to quickly test and revise the design with minimized front end costs.

In addition to our ability to plot on a wide array of materials, we have the versatility of plotting custom die cuts that can include both printing and perforation.

Your production quantities can be run without the lead time and cost of tooling experienced with traditional die-cutting solutions.

Call us at 888-echo-365 to find out more about our rapid custom die cutting solutions.



MISC

Echo's miscellaneous products such as silicone tubing, cord, and sheeting are available when standard products do not fit your needs and time is of the essence.

We also offer several different kits that are great for providing quick turnaround samples and are convenient during your new project quoting process. Similar to our other products, we can customize our miscellaneous products to meet your specific needs. Contact us and we will work with you to come up with a custom option.



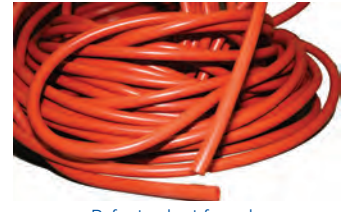
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Silicone Tubing

Temp Rating: 600° F/315° C



Refer to chart for color

RECOMMENDED PROCESSES:

- Powder Coating, E-Coating, Plating, Anodizing

APPLICATIONS:

- Use to cover threaded or non-threaded long studs, pins or shafts

FEATURES:

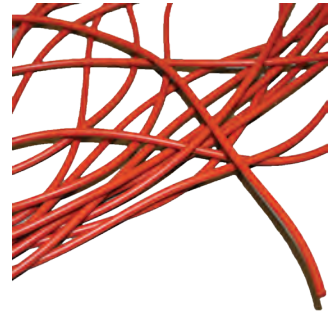
- May be used in conjunction with caps
- Cut to length
- Conforms to irregular shapes
- Designed to be cut to various sizes

PART NUMBER	1 COIL	INSIDE DIAMETER		OUTSIDE DIAMETER		COLOR
		in	mm	in	mm	
03-T000040-C4SIL	100 ft	0.040	1.02	0.160	4.06	CLEAR
03-T000062-C4SIL	100 ft	0.062	1.57	0.182	4.62	CLEAR
03-T000080-C4SIL	100 ft	0.080	2.03	0.200	5.08	CLEAR
03-T000093-C4SIL	100 ft	0.093	2.36	0.213	5.14	CLEAR
03-T000109-C4SIL	100 ft	0.109	2.77	0.229	5.82	CLEAR
03-T000125-C4SIL	100 ft	0.125	3.18	0.245	6.22	CLEAR
03-T000140-C4SIL	100 ft	0.140	3.56	0.260	6.60	CLEAR
03-T000156-C4SIL	100 ft	0.156	3.96	0.276	7.01	CLEAR
03-T000172-C4SIL	100 ft	0.172	4.37	0.292	7.42	CLEAR
03-T000187-C4SIL	100 ft	0.187	4.75	0.307	7.80	CLEAR
03-T000203-C4SIL	100 ft	0.203	5.16	0.323	8.20	CLEAR
03-T000218-C4SIL	100 ft	0.218	5.54	0.338	8.59	CLEAR
03-T000234-C4SIL	100 ft	0.234	5.94	0.354	8.99	CLEAR
03-T000250-C4SIL	100 ft	0.250	6.35	0.370	9.40	CLEAR
03-T000281-C4SIL	100 ft	0.281	7.14	0.401	10.19	CLEAR
03-T000312-C4SIL	100 ft	0.312	7.92	0.432	10.97	CLEAR
03-T000375-R4SIL	100 ft	0.375	9.53	0.495	12.57	RED
03-T000406-R4SIL	100 ft	0.406	10.31	0.526	13.36	RED
03-T000437-R4SIL	100 ft	0.437	11.10	0.557	14.15	RED
03-T000500-R4SIL	100 ft	0.500	12.70	0.620	15.75	RED
03-T000625-R4SIL	100 ft	0.625	15.88	0.745	18.92	RED
03-T000750-R4SIL	100 ft	0.750	19.05	0.870	22.10	RED
03-T000875-R4SIL	100 ft	0.875	22.23	0.995	25.27	RED
03-T000937-R4SIL	100 ft	0.937	23.80	1.057	26.85	RED
03-T001000-R4SIL	100 ft	1.000	25.40	1.120	28.45	RED
03-T001125-R4SIL	100 ft	1.125	28.58	1.245	31.62	RED
03-T001250-R4SIL	100 ft	1.250	31.75	1.370	34.80	RED
03-T001375-R4SIL	100 ft	1.375	34.93	1.495	37.97	RED
03-T001500-R4SIL	100 ft	1.500	38.10	1.620	41.15	RED
03-T001625-R4SIL	100 ft	1.625	41.28	1.745	44.32	RED
03-T001750-R4SIL	100 ft	1.750	44.45	1.870	47.50	RED
03-T001875-R4SIL	100 ft	1.875	47.63	1.995	50.67	RED
03-T002000-R4SIL	100 ft	2.000	50.80	2.120	53.85	RED

MISC

Silicone Cords

Temp Rating: 600° F/315° C



RECOMMENDED PROCESSES:

- Powder Coating, E-Coating, Plating, Anodizing

APPLICATION:

- Use for masking slotting holes, grooved, or irregular shapes, or for o-ring grooves

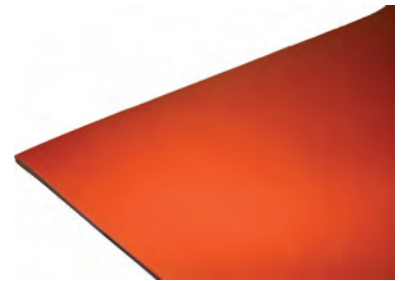
FEATURES:

- Flexible
- Reusable
- Cut to size
- Designed to conform to irregular shape openings

PART NUMBER	1 COIL	OUTSIDE DIAMETER	
		in	mm
03-C000070-04SIL	100 ft	0.070	1.78
03-C000093-04SIL	100 ft	0.093	2.36
03-C000103-04SIL	100 ft	0.103	2.62
03-C000125-04SIL	100 ft	0.125	3.18
03-C000139-04SIL	100 ft	0.139	3.53
03-C000156-04SIL	100 ft	0.156	3.96
03-C000187-04SIL	100 ft	0.187	4.75
03-C000210-04SIL	100 ft	0.210	5.33
03-C000250-04SIL	100 ft	0.250	6.35
03-C000275-04SIL	100 ft	0.275	6.99
03-C000312-04SIL	100 ft	0.312	7.92
03-C000375-04SIL	100 ft	0.375	8.89
03-C000437-04SIL	100 ft	0.437	11.01
03-C000500-04SIL	100 ft	0.500	12.70
03-C000562-04SIL	100 ft	0.562	14.27

Silicone Sheets

Temp Rating: 600° F/315° C



RECOMMENDED PROCESSES:

- Powder Coating, E-Coating, Plating, Anodizing

APPLICATIONS:

- Use to mask irregular shapes
- Use to make large gaskets

FEATURES:

- Saves labor time over traditional tape masking
- Can be re-used
- Designed to be cut to size

PART NUMBER	1 PIECE	THICKNESS	
		in	mm
03-0000031-04SIL	1 sq. yd	0.031	0.79
03-0000062-04SIL	1 sq. yd	0.062	1.57
03-0000093-04SIL	1 sq. yd	0.093	2.36
03-0000125-04SIL	1 sq. yd	0.125	3.18
03-0000187-04SIL	1 sq. yd	0.187	4.75
03-0000250-04SIL	1 sq. yd	0.250	6.35
03-0000500-04SIL	1 sq. yd	0.500	12.70

Masking Kits

PLUG AND CAP KITS

FEATURES:

- Durable, reusable, & affordable
- Ideal as a 'Starter Kit' for new coaters
- Labeled with part numbers & dimensions
- Excellent as a reference resource for buyers & shop managers
- Recommended for powder coating, e-coating, plating, anodizing, & blasting



TAPERED PLUG KIT

01-0000KIT-04SIL and 01-0000KIT-06EPD

- Available in silicone or EPDM
- Assortment of sizes ranging from .015" - 1.109"
- See pages 10 and 24 for product description

HOLLOW PLUG KIT

01-HP00000-00KIT

- Silicone
- Assortment of sizes ranging from .906" - 2.125"
- See pages 11 for product description

MULTI-MASK PLUG KIT

01-MULLEAD-00KIT

- Clear and colored silicone
- Assortment of sizes ranging from .062" - .375"
- See page 11 for product description

TAPERED PLUG W/ HANDLE & STEP PLUG KIT

01-WPFPKIT-04SIL

- Silicone
- Assortment of Tapered Plugs with Handles and Step Plugs ranging in sizes from .118" to .324"
- See pages 14 and 17 for product descriptions

WELD NUT PLUG KIT

01-WELDNUT-00KIT

- Silicone
- Assortment of Leading Boss Plugs, Leading/Exit Pull Plugs, and Weld Nut Plugs ranging in sizes from .177" to .650"
- See pages 16, 17, and 19 for product descriptions

PULL PLUG KIT

01-00200KIT-04SIL and 01-00200KIT-06EPD

- Available in silicone or EPDM
- Assortment of sizes ranging from .050" - 1.02"
- See pages 15 and 25 for product descriptions

LEADING THREAD PLUG KIT

01-LEADKIT-04SIL

- Silicone
- Assortment of Push, Pull, and Flange plugs ranging in sizes from .140" to .560"
- See pages 18 and 20 for product description

FLANGE PLUG KIT

01-00FPKIT-04SIL

- Silicone
- Assortment of sizes ranging from .250" - .850"
- See page 21 for product description

FLANGELESS PLUG KIT

01-UFPO000-00KIT

- Colored silicone
- Assortment of sizes ranging from .236" - 1.102"
- See page 20 for product description

FLANGE PLUGS/FLANGE CAPS/PLUGS

01-FLANGE0-00KIT

- Silicone
- Assortment of sizes ranging from .140" - .500"
- See pages 21 and 31 for product description

WASHER PLUG KIT

01-00WPKIT-04SIL

- Silicone
- Assortment of sizes ranging from .250" - .787"
- See page 22 for product description

SILICONE CAP KIT

Clear: 49-0000000-KIT

Colored: 47-0000000-KIT

- Available in clear or colored silicone
- Assortment of sizes ranging from .062" ID - 2.00" ID
- See pages 28 and 30 for product description

EPDM CAP KIT

48-0000000-00KIT

- Quality black EPDM caps
- Assortment of sizes ranging from .093" ID - 1.00" ID
- See page 32 for product description

HI-TEMP VINYL CAP KIT

Small Sizes: 50-0000KIT-00001

Large Sizes: 50-0000KIT-00002

- Quality high temperature vinyl caps
- Assortment of small sizes ranging from .062" ID - .250" ID
- Assortment of large sizes ranging from .281" ID - 2.00" ID
- See page 33 for product description

MISCELLANEOUS KIT

01-MISCO00-04KIT

- An assortment of Echo's non-standard silicone caps and plugs
- Silicone Tapered Plug, Vented Tapered Plug, Step Plug, Pull Plug, Chamfer Pull Plug, Leading Thread Boss Plug, Leading Exit Pull Plug, Leading Plug, Weld Nut Plug, Flange Pull Plug, Thread Plug, Flangeless, Flange Plug, Washer Plug, Washer Pull Plug, LDPE Self-Threading Plug, EPDM Tapered Plug, EPDM Pull Plug, Silicone Cap, Flange Cap, EPDM Cap

For more information, please visit echoinnovates.com



27-AUTOCUT-XL000
(pictured)

Tape Dispensers

- Wide variety for tape, label, and die cut
- Inexpensive hand-held and table-top varieties
- Heavy-duty, high-production output, industrial varieties
- Accommodate 1.5" and 3" cores
- Available for tape up to 6" wide x 144 yds long
- Call for details and product specifics



Custom Masking Solutions

PROVIDING REAL VALUE WITH CUSTOM MASKING

For more than 50 years, Echo has worked hand-in-hand with both large and small job shops, as well as world-class manufacturing facilities to provide innovative masking solutions.

At Echo, we understand that standard masking does not fit every application and we take pride in partnering with our customers to create solutions that make sense for their business. Our custom masking components have improved line efficiencies, decreased product rework, and a number of other bottom-line tangibles that provide real value to not only you but also your customers.

For more information, please turn to page 120 or call 888.echo.365


HANGING PRODUCTS


Echo offers hundreds of standard hooks and specializes in custom hook and rack design. Our custom hanging solutions ensure you have the durability you need for every type of capacity and finishing operation. Our engineering team is experienced in designing these custom solutions for customers' specific needs in powder coating, e-coating, wet painting, and several other types of finishing processes.


We also specialize in stocking arrangements to ensure just-in-time deliveries. Custom hooks and racks increase productivity, reduce racking labor, and provide better angles for coating.

- ▶ V Hooks ▶ C Hooks
- ▶ CV Hooks ▶ S Hooks
- ▶ Custom Hooks ▶ Racks

HOOK LOAD CAPACITY REFERENCE CHARTS

	C & CV HOOKS	
	DIAMETER	LOAD CAPACITY
	in	lbs
	0.044	2
	0.062	3
	0.076	4
	0.12	25
	0.18	60

	S HOOKS	
	DIAMETER	LOAD CAPACITY
	in	lbs
	0.044	2
	0.062	4
	0.076	8
	0.12	20
	0.18	50

	V HOOKS	
	DIAMETER	LOAD CAPACITY
	in	lbs
	0.044	4
	0.062	13
	0.076	20
	0.12	50
	0.18	80



V HOOKS

66

C HOOKS

66

CV HOOKS

67

S HOOKS

67



V Hooks

Temp Rating: 950° F/510° C

Manufactured From Spring Steel

RECOMMENDED PROCESSES:

- Powder Coating, E-Coating, Wet Paint

APPLICATION:

- V Hook is designed to minimize coat build up

FEATURES:

- Designed for parts to seat in the same position



PART NUMBER	QTY / BOX	STYLE	DIAMETER		LENGTH
			in		in
12-V000044-02000	1000	V		0.044	2
12-V000062-02000	1000	V		0.062	2
12-V000044-03000	1000	V		0.044	3
12-V000062-03000	1000	V		0.062	3
12-V000044-04000	1000	V		0.044	4
12-V000062-04000	1000	V		0.062	4
12-V000076-04000	1000	V		0.076	4
12-V000120-04000	1000	V		0.120	4
12-V000180-04000	1000	V		0.180	4
12-V000044-06000	1000	V		0.044	6
12-V000062-06000	1000	V		0.062	6
12-V000076-06000	1000	V		0.076	6
12-V000120-06000	1000	V		0.120	6
12-V000180-06000	1000	V		0.180	6
12-V000062-08000	1000	V		0.062	8
12-V000076-08000	1000	V		0.076	8
12-V000120-08000	1000	V		0.120	8
12-V000180-08000	1000	V		0.180	8

C Hooks

Temp Rating: 950° F/510° C

Manufactured From Spring Steel

RECOMMENDED PROCESSES:

- Use for Powder Coating, E-Coating, Wet Paint

APPLICATION:

- Ideal for wide parts with various thickness

FEATURES:

- Bend and gap face same direction



PART NUMBER	QTY / BOX	STYLE	DIAMETER		LENGTH
			in		in
12-C000044-02000	1000	C		0.044	2
12-C000062-02000	1000	C		0.062	2
12-C000044-03000	1000	C		0.044	3
12-C000062-03000	1000	C		0.062	3
12-C000044-04000	1000	C		0.044	4
12-C000062-04000	1000	C		0.062	4
12-C000076-04000	1000	C		0.076	4
12-C000120-04000	1000	C		0.120	4
12-C000180-04000	1000	C		0.180	4
12-C000044-06000	1000	C		0.044	6
12-C000062-06000	1000	C		0.062	6
12-C000076-06000	1000	C		0.076	6
12-C000120-06000	1000	C		0.120	6
12-C000180-06000	1000	C		0.180	6
12-C000062-08000	1000	C		0.062	8
12-C000076-08000	1000	C		0.076	8
12-C000120-08000	1000	C		0.120	8
12-C000180-08000	1000	C		0.180	8

CV Hooks

Temp Rating: 950° F/510° C

Manufactured From Spring Steel

RECOMMENDED PROCESSES:

- Use for Powder Coating, E-Coating, Wet Paint

APPLICATION:

- The C bend is wide enough to hold varying sizes and shapes while the V bend will hold the part at an angle that reduces coat build up

FEATURES:

- Crossbreed of C and V hooks



PART NUMBER	QTY / BOX	STYLE	DIAMETER	LENGTH
			in	in
12-CV00044-02000	1000	CV	0.044	2
12-CV00062-02000	1000	CV	0.062	2
12-CV00044-03000	1000	CV	0.044	3
12-CV00062-03000	1000	CV	0.062	3
12-CV00044-04000	1000	CV	0.044	4
12-CV00062-04000	1000	CV	0.062	4
12-CV00076-04000	1000	CV	0.076	4
12-CV00120-04000	1000	CV	0.120	4
12-CV00180-04000	1000	CV	0.180	4
12-CV00044-06000	1000	CV	0.044	6
12-CV00062-06000	1000	CV	0.062	6
12-CV00076-06000	1000	CV	0.076	6
12-CV00120-06000	1000	CV	0.120	6
12-CV00180-06000	1000	CV	0.180	6
12-CV00062-08000	1000	CV	0.062	8
12-CV00076-08000	1000	CV	0.076	8
12-CV00120-08000	1000	CV	0.120	8
12-CV00180-08000	1000	CV	0.180	8

S Hooks

Temp Rating: 950° F/510° C

Manufactured From Spring Steel

RECOMMENDED PROCESSES:

- Use for Powder Coating, E-Coating, Wet Paint

APPLICATION:

- Ideal for wide parts with various thickness, and is easy to load

FEATURES:

- Bend and gap are face opposite directions



PART NUMBER	QTY / BOX	STYLE	DIAMETER	LENGTH
			in	in
12-S000044-02000	1000	S	0.044	2
12-S000062-02000	1000	S	0.062	2
12-S000044-03000	1000	S	0.044	3
12-S000062-03000	1000	S	0.062	3
12-S000044-04000	1000	S	0.044	4
12-S000062-04000	1000	S	0.062	4
12-S000076-04000	1000	S	0.076	4
12-S000120-04000	1000	S	0.120	4
12-S000180-04000	1000	S	0.180	4
12-S000044-06000	1000	S	0.044	6
12-S000062-06000	1000	S	0.062	6
12-S000076-06000	1000	S	0.076	6
12-S000120-06000	1000	S	0.120	6
12-S000180-06000	1000	S	0.180	6
12-S000062-08000	1000	S	0.062	8
12-S000076-08000	1000	S	0.076	8
12-S000120-08000	1000	S	0.120	8
12-S000180-08000	1000	S	0.180	8

PROTECTION

PRODUCTS

Echo has developed thousands of protection products, both standard and custom. We stock the following catalog items: plugs, threaded plugs, caps, netting, and low-temperature vinyl caps that you will see detailed on the following pages. At Echo, we also understand that standard products do not fit every application, which is why we have built core competencies around custom solutions.

Call us today at 888-echo-365 to discuss your specific needs.



PLUGS

72

THREADED PLUGS

86

CAPS

100

NETTING

114



PROTECTION PLUGS

Echo's line of plugs has been developed to provide protection from dirt, dust, and debris during multiple phases of the manufacturing processes. These plastic plugs are ideal for shipping and storage purposes, but may also protect holes and studs during low temperature paint processes.

Each plug is available in a standard color and sizes are indicated in each section. If you are interested in a color or size not listed, just contact us and we will work with you to come up with a custom option.

MATERIALS:

LOW-DENSITY POLYETHYLENE

180°F / 82°C

Recommended Uses:

- Plugs both threaded and non-threaded holes
- Caps both threaded and non-threaded parts
- Protects threads & surfaces during low temperature paint processes, storage, & shipping

Product Features:

- Tapered design allows for use as plug or cap
- Additional rib on inside (ID) of plug for easier removal
- May be used and removed multiple times



SECTION CONTENTS:

TP SERIES - TAPERED PLUGS	72
WP SERIES - WIDE FLANGE TAPERED PLUGS	78
SP SERIES - SIDE PULL TAPERED PLUGS	80
CP SERIES - CENTER PULL TAPERED PLUGS	82



TP Series

Tapered Plugs

Material: Low-Density Polyethylene

Temp Rating: 180° F/82° C

RECOMMENDED PROCESSES:

- Low Temp Finishing Processes, Shipping, Storage

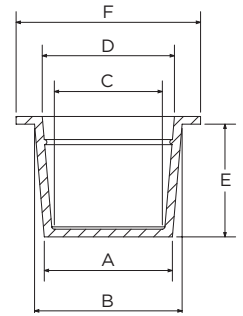
APPLICATION:

- Use plug to keep unwanted contaminants out of valves, tubes, pipes, etc.

Applicable Specifications: MIL-C-5501/7 (MIL-C-52078), NAS 834



Standard color is red
Custom colors upon request



Fitting Selection Charts for TP Series

The following charts are designed to assist you in choosing the appropriate tapered plug for your desired application. If you're not sure which plug fits your application, give us a call at 888-echo-365.

USED AS A PLUG



TUBE AND HYDRAULIC FITTINGS

FITTING SIZE	TUBING DIAMETER	THREAD SIZE	PART NUMBER
-2	1/8	5/16-24	TP-030X037-ORDLD
-3	3/16	3/8-24	TP-036X043-ORDLD
-4	1/4	7/16-20	TP-042X049-ORDLD
-5	5/16	1/2-20	TP-047X055-ORDLD
-6	3/8	9/16-18	TP-053X061-ORDLD
-7	3/8	5/8-18	TP-064X073-ORDLD
-8	1/2	3/4-16	TP-075X085-ORDLD
-10	5/8	7/8-14	TP-092X104-ORDLD
-12	3/4	1-1/16-12	TP-118X128-ORDLD
-16	1	1-5/16-12	TP-151X160-ORDLD
-20	1-1/4	1-5/8-12	TP-175X188-ORDLD
-24	1-1/2	1-7/8-12	TP-207X224-ORDLD
-28	1-3/4	2-1/4-12	TP-230X247-ORDLD
-32	2	2-1/2-12	TP-240X260-ORDLD

INT. THREADED NPT FITTINGS

NPT SIZE	PART NUMBER
1/8	TP-033X040-ORDLD
1/4	TP-042X049-ORDLD
3/8	TP-055X063-ORDLD
1/2	TP-069X079-ORDLD
3/4	TP-092X104-ORDLD
1	TP-109X122-ORDLD
1-1/4	TP-151X161-ORDLD
1-1/2	TP-178X181-ORDLD
2	TP-223X226-ORDLD
2-1/2	TP-264X279-ORDLD
3	TP-333X346-ORDLD
3-1/2	TP-379X392-ORDLD
4	TP-427X443-ORDLD
5	TP-533X549-ORDLD
6	TP-640X656-ORDLD

USED AS A CAP

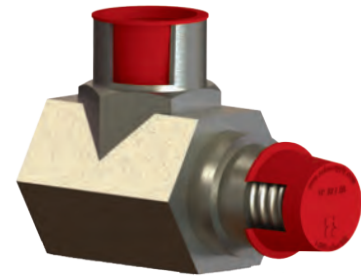


TUBE AND HYDRAULIC FITTINGS

FITTING SIZE	TUBING DIAMETER	THREAD SIZE	PART NUMBER
-2	1/8	5/16-24	TP-030X037-ORDLD
-3	3/16	3/8-24	TP-039X046-ORDLD
-4	1/4	7/16-20	TP-045X051-ORDLD
-5	5/16	1/2-20	TP-047X055-ORDLD
-6	3/8	9/16-18	TP-055X063-ORDLD
-	3/8	5/8-18	TP-058X067-ORDLD
-8	1/2	3/4-16	TP-073X082-ORDLD
-10	5/8	7/8-14	TP-082X093-ORDLD
-12	3/4	1-1/16-12	TP-100X115-ORDLD
-16	1	1-5/16-12	TP-124X136-ORDLD
-20	1-1/4	1-5/8-12	TP-156X168-ORDLD
-24	1-1/2	1-7/8-12	TP-178X195-ORDLD
-28	1-3/4	2-1/4-12	TP-214X231-ORDLD
-32	2	2-1/2-12	TP-240X260-ORDLD

EXT. THREADED NPT FITTINGS

NPT SIZE	PART NUMBER
1/8	TP-042X049-ORDLD
1/4	TP-053X061-ORDLD
3/8	TP-068X076-ORDLD
1/2	TP-080X091-ORDLD
3/4	TP-100X115-ORDLD
1	TP-124X136-ORDLD
1-1/4	TP-156X168-ORDLD
1-1/2	TP-178X195-ORDLD
2	TP-230X247-ORDLD
2-1/2	TP-276X299-ORDLD
3	TP-327X356-ORDLD
3-1/2	TP-379X392-ORDLD
4	TP-437X462-ORDLD
5	TP-533X549-ORDLD
6	TP-640X656-ORDLD

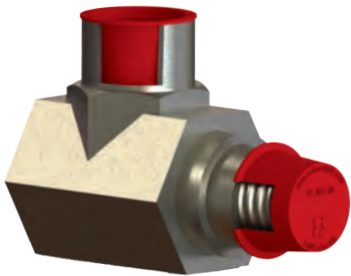


FEATURES:

- Tapered design allows for use as a plug or cap for multiple sizes
- Protects hole, stud, or thread against paint, moisture, dust, etc.

Applicable Specifications: MIL-C-5501/7 (MIL-C-52078), NAS 834

PART NUMBER	QTY	PLUG DIMENSIONS				CAP DIMENSIONS				LENGTH		FLANGE DIA.	
		A		B		C		D		E		F	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
TP-012X018-ORDLD	5000	0.116	2.95	0.182	4.62	0.053	1.35	0.120	3.05	0.380	9.65	0.310	7.87
TP-012X018-OMINI	1000												
TP-015X021-ORDLD	5000	0.145	3.68	0.205	5.21	0.079	2.01	0.150	3.81	0.380	9.65	0.410	10.41
TP-015X021-OMINI	1000												
TP-017X024-ORDLD	5000	0.173	4.39	0.240	6.10	0.111	2.82	0.177	4.50	0.380	9.65	0.380	9.65
TP-017X024-OMINI	1000												
TP-018X026-ORDLD	5000	0.184	4.67	0.255	6.48	0.113	2.87	0.172	4.37	0.380	9.65	0.380	9.65
TP-018X026-OMINI	1000												
TP-021X027-ORDLD	5000	0.209	5.31	0.269	6.83	0.150	3.81	0.210	5.33	0.340	8.64	0.380	9.65
TP-021X027-OMINI	1000												
TP-021X028-OMINI	1000	0.21	5.33	0.275	6.99	0.146	3.71	0.211	5.36	0.34	8.64	0.45	11.43
TP-024X030-ORDLD	5000	0.236	5.99	0.302	7.67	0.174	4.42	0.240	6.10	0.380	9.65	0.440	11.18
TP-027X034-ORDLD	5000												
TP-027X034-OMINI	1000	0.267	6.78	0.335	8.51	0.205	5.21	0.273	6.93	0.380	9.65	0.470	11.94
TP-030X037-ORDLD	5000	0.299	7.59	0.365	9.27	0.235	5.97	0.302	7.67	0.380	9.65	0.500	12.70
TP-030X037-OMINI	1000												
TP-033X040-ORDLD	5000	0.330	8.38	0.396	10.06	0.267	6.78	0.333	8.46	0.380	9.65	0.530	13.46
TP-033X040-OMINI	1000												
TP-036X043-ORDLD	5000	0.361	9.17	0.427	10.85	0.298	7.57	0.365	9.27	0.380	9.65	0.560	14.22
TP-039X046-ORDLD	5000												
TP-039X046-OMINI	1000	0.390	9.91	0.456	11.58	0.327	8.31	0.394	10.01	0.380	9.65	0.590	14.99
TP-042X049-ORDLD	5000	0.419	10.64	0.485	12.32	0.356	9.04	0.422	10.72	0.380	9.65	0.630	16.00
TP-042X049-OMINI	1000												
TP-045X051-ORDLD	5000	0.447	11.35	0.513	13.03	0.385	9.78	0.451	11.46	0.380	9.65	0.660	16.76
TP-045X051-OMINI	1000												
TP-047X055-ORDLD	5000	0.471	11.96	0.547	13.89	0.409	10.39	0.485	12.32	0.440	11.18	0.690	17.53
TP-047X055-OMINI	1000												
TP-050X058-ORDLD	5000	0.500	12.70	0.576	14.63	0.440	11.18	0.516	13.11	0.440	11.18	0.720	18.29
TP-050X058-OMINI	1000												
TP-053X056-ORDLD	5000	0.533	13.54	0.562	14.27	0.477	12.12	0.506	12.85	0.220	5.59	0.680	17.27
TP-053X056-OMINI	1000												
TP-053X061-ORDLD	5000	0.532	13.51	0.608	15.44	0.468	11.89	0.545	13.84	0.440	11.18	0.750	19.05
TP-053X061-OMINI	1000												



FEATURES:

- Tapered design allows for use as a plug or cap for multiple sizes
- Protects hole, stud, or thread against paint, moisture, dust, etc.

Applicable Specifications: MIL-C-5501/7 (MIL-C-52078), NAS 834

PART NUMBER	QTY	PLUG DIMENSIONS				CAP DIMENSIONS				LENGTH		FLANGE DIA.	
		A		B		C		D		E		F	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
TP-427X443-ORDLD	250	4.270	108.46	4.430	112.52	4.180	106.17	4.340	110.24	0.880	22.35	4.880	123.95
TP-427X443-OMINI	50												
TP-437X462-ORDLD	250	4.370	111.00	4.620	117.35	4.290	108.97	4.540	115.32	1.000	25.40	5.000	127.00
TP-437X462-OMINI	50												
TP-499X520-ORDLD	250	4.990	126.75	5.200	132.08	4.920	124.97	5.100	129.54	1.000	25.40	5.630	143.00
TP-499X520-OMINI	50												
TP-533X549-ORDLD	250	5.330	135.38	5.490	139.45	5.210	132.33	5.370	136.40	0.880	22.35	5.880	149.35
TP-533X549-OMINI	50												
TP-557X575-ORDLD	250	5.570	141.48	5.750	146.05	5.490	139.45	5.670	144.02	1.000	25.40	6.190	157.23
TP-557X575-OMINI	50												
TP-570X587-ORDLD	250	5.700	144.78	5.870	149.10	5.610	142.49	5.790	147.07	0.980	24.89	6.250	158.75
TP-570X587-OMINI	50												
TP-601X618-OMINI	50	6.01	152.65	6.18	156.97	5.92	150.37	6.1	154.94	1	25.4	6.62	168.15
TP-640X656-ORDLD	100	6.400	162.56	6.560	166.62	6.330	160.78	6.490	164.85	0.870	22.10	6.940	176.28
TP-640X656-OMINI	20												
TP-661X671-ORDLD	100	6.610	167.89	6.710	170.43	6.530	165.86	6.630	168.40	1.500	38.10	7.190	182.63
TP-661X671-OMINI	20												



ENSURE THE RIGHT FIT, REQUEST A SAMPLE TODAY

Call 888.echo.365 to request samples or send a request through the website at echoinnovates.com.





FEATURES:

- Tapered design allows for use as a plug or cap for multiple sizes
- Wider/thicker flange provides extra support and prevents plug from being pushed through the hole
- Flange provides additional protection around the hole during low heat painting applications

Applicable Specifications: NAS 816

PART NUMBER	QTY	PLUG DIMENSIONS				CAP DIMENSIONS				LENGTH		FLANGE DIAMETER		FLANGE THICK	
		A		B		C		D		E		F		G	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
WP-098X111-OYWLD	2500	0.984	24.99	1.105	28.07	0.919	23.34	1.040	26.42	0.660	16.76	1.440	36.58	0.090	2.29
WP-098X111-OMINI	500														
WP-115X128-OYWLD	2500	1.150	29.21	1.284	32.61	1.108	28.14	1.217	30.91	0.660	16.76	1.560	39.62	0.090	2.29
WP-115X128-OMINI	500														
WP-124X138-OYWLD	2500	1.237	31.42	1.382	35.10	1.167	29.64	1.288	32.72	0.660	16.76	1.680	42.67	0.090	2.29
WP-124X138-OMINI	500														
WP-131X147-OYWLD	1000	1.312	33.32	1.465	37.21	1.249	31.72	1.364	34.65	0.810	20.57	1.840	46.74	0.120	3.05
WP-131X147-OMINI	200														
WP-142X151-OYWLD	1000	1.420	36.07	1.510	38.35	1.350	34.29	1.445	36.70	0.690	17.53	1.750	44.45	0.120	3.05
WP-142X151-OMINI	200														
WP-145X160-OYWLD	1000	1.452	36.88	1.603	40.72	1.377	34.98	1.528	38.81	0.630	16.00	1.940	49.28	0.120	3.05
WP-145X160-OMINI	200														
WP-158X171-OYWLD	1000	1.580	40.13	1.714	43.54	1.515	38.48	1.649	41.88	0.630	16.00	2.060	52.32	0.120	3.05
WP-158X171-OMINI	200														
WP-173X189-OYWLD	1000	1.730	43.94	1.887	47.93	1.650	41.91	1.807	45.90	0.630	16.00	2.310	58.67	0.120	3.05
WP-173X189-OMINI	200														
WP-181X198-OYWLD	500	1.810	45.97	1.975	50.17	1.731	43.97	1.916	48.67	0.750	19.05	2.380	60.45	0.120	3.05
WP-181X198-OMINI	100														
WP-185X202-OYWLD	500	1.850	46.99	2.020	51.31	1.788	45.42	1.958	49.73	1.000	25.40	2.440	61.98	0.120	3.05
WP-185X202-OMINI	100														
WP-193X206-OYWLD	500	1.927	48.95	2.058	52.27	1.857	47.17	1.988	50.50	0.630	16.00	2.380	60.45	0.120	3.05
WP-193X206-OMINI	100														
WP-207X224-OYWLD	250	2.067	52.50	2.243	56.97	2.005	50.93	2.197	55.80	1.120	28.45	2.690	68.33	0.120	3.05
WP-207X224-OMINI	50														
WP-214X231-OYWLD	250	2.136	54.25	2.312	58.72	2.074	52.68	2.265	57.53	1.120	28.45	2.750	69.85	0.120	3.05
WP-214X231-OMINI	50														
WP-230X246-OYWLD	250	2.298	58.37	2.464	62.59	2.235	56.77	2.416	61.37	1.120	28.45	2.880	73.15	0.120	3.05
WP-230X246-OMINI	50														
WP-240X260-OMINI	50	2.395	60.83	2.602	66.09	2.333	59.26	2.54	64.52	1.13	28.7	3	76.2	0.120	3.05
WP-248X273-OYWLD	250	2.475	62.87	2.725	69.22	2.405	61.09	2.650	67.31	0.910	23.11	3.160	80.26	0.120	3.05
WP-248X273-OMINI	50														
WP-264X276-OYWLD	250	2.638	67.01	2.759	70.08	2.568	65.23	2.716	68.99	0.690	17.53	3.220	81.79	0.120	3.05
WP-264X276-OMINI	50														
WP-299X325-OYWLD	250	2.990	75.95	3.250	82.55	2.920	74.17	3.180	80.77	1.000	25.40	3.750	95.25	0.120	3.05
WP-299X325-OMINI	50														
WP-300X315-OYWLD	250	2.995	76.07	3.150	80.01	2.925	74.30	3.080	78.23	0.750	19.05	3.590	91.19	0.120	3.05
WP-300X315-OMINI	50														
WP-323X356-OYWLD	250	3.225	81.92	3.562	90.47	3.155	80.14	3.517	89.33	1.120	28.45	4.000	101.60	0.120	3.05
WP-332X346-OYWLD	250	3.324	84.43	3.458	87.83	3.244	82.40	3.398	86.31	0.870	22.10	3.880	98.55	0.120	3.05

SP Series

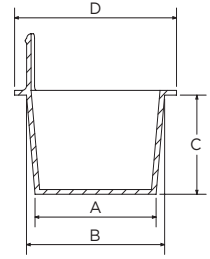
Side Pull Plugs

Material: Low-Density Polyethylene

Temp Rating: 180° F/82° C



Standard color is red
Custom colors upon request



RECOMMENDED PROCESSES:

- Low Temp Finishing Processes, Shipping, Storage

APPLICATION:

- Use for tight areas to protect holes from paint, damage, and debris
- Recommended used only as plug

PART NUMBER	QTY	PLUG DIMENSIONS				LENGTH		FLANGE DIA.	
		A		B		C		D	
		in	mm	in	mm	in	mm	in	mm
SP-024X030-ORDLD	5000	0.236	5.99	0.302	7.671	0.380	9.65	0.440	11.18
SP-024X030-OMINI	1000								
SP-027X034-ORDLD	5000	0.267	6.78	0.335	8.509	0.380	9.65	0.470	11.94
SP-027X034-OMINI	1000								
SP-030X037-ORDLD	5000	0.299	7.59	0.365	9.271	0.380	9.65	0.500	12.70
SP-030X037-OMINI	1000								
SP-033X040-ORDLD	5000	0.330	8.38	0.396	10.058	0.380	9.65	0.530	13.46
SP-033X040-OMINI	1000								
SP-036X043-ORDLD	5000	0.361	9.17	0.427	10.846	0.380	9.65	0.560	14.22
SP-036X043-OMINI	1000								
SP-039X046-ORDLD	5000	0.390	9.91	0.456	11.582	0.380	9.65	0.590	14.99
SP-039X046-OMINI	1000								
SP-042X049-ORDLD	5000	0.419	10.64	0.485	12.319	0.380	9.65	0.630	16.00
SP-042X049-OMINI	1000								
SP-045X051-ORDLD	5000	0.447	11.35	0.513	13.030	0.380	9.65	0.660	16.76
SP-045X051-OMINI	1000								
SP-047X055-ORDLD	5000	0.471	11.96	0.547	13.894	0.440	11.18	0.690	17.53
SP-047X055-OMINI	1000								
SP-050X058-ORDLD	5000	0.500	12.70	0.576	14.630	0.440	11.18	0.720	18.29
SP-050X058-OMINI	1000								
SP-053X061-ORDLD	5000	0.532	13.51	0.608	15.443	0.440	11.18	0.750	19.05
SP-053X061-OMINI	1000								
SP-055X063-ORDLD	5000	0.550	13.97	0.631	16.027	0.470	11.94	0.750	19.05
SP-055X063-OMINI	1000								
SP-058X067-ORDLD	5000	0.580	14.73	0.667	16.942	0.500	12.70	0.810	20.57
SP-058X067-OMINI	1000								
SP-061X070-ORDLD	5000	0.610	15.49	0.695	17.653	0.500	12.70	0.840	21.34
SP-061X070-OMINI	1000								
SP-064X073-ORDLD	5000	0.640	16.26	0.727	18.466	0.500	12.70	0.880	22.35
SP-064X073-OMINI	1000								
SP-068X076-ORDLD	5000	0.675	17.15	0.755	19.177	0.500	12.70	0.880	22.35
SP-068X076-OMINI	1000								
SP-069X079-ORDLD	5000	0.690	17.53	0.788	20.015	0.560	14.22	0.940	23.88
SP-069X079-OMINI	1000								
SP-073X082-ORDLD	5000	0.725	18.42	0.823	20.904	0.560	14.22	0.970	24.64
SP-073X082-OMINI	1000								



FEATURES:

- Tapered design allows for use as a plug for multiple sizes
- Features side pull tab for easier removal
- Plugs have rib on handle to help add friction for removal

PART NUMBER	QTY	PLUG DIMENSIONS				LENGTH		FLANGE DIA.	
		A		B		C		D	
		in	mm	in	mm	in	mm	in	mm
SP-075X085-ORDLD	5000	0.750	19.05	0.848	21.539	0.560	14.22	1.000	25.40
SP-075X085-OMINI	1000								
SP-080X091-ORDLD	5000	0.802	20.37	0.911	23.139	0.630	16.00	1.060	26.92
SP-080X091-OMINI	1000								
SP-082X093-ORDLD	5000	0.815	20.70	0.930	23.622	0.630	16.00	1.090	27.69
SP-082X093-OMINI	1000								
SP-087X098-ORDLD	5000	0.866	22.00	0.975	24.765	0.630	16.00	1.130	28.70
SP-087X098-OMINI	1000								
SP-092X104-ORDLD	5000	0.915	23.24	1.040	26.416	0.690	17.53	1.160	29.46
SP-092X104-OMINI	1000								
SP-096X109-ORDLD	2500	0.964	24.49	1.090	27.686	0.750	19.05	1.250	31.75
SP-096X109-OMINI	500								
SP-100X115-ORDLD	2500	0.995	25.27	1.145	29.083	0.750	19.05	1.310	33.27
SP-100X115-OMINI	500								
SP-109X122-ORDLD	2500	1.094	27.79	1.215	30.861	0.750	19.05	1.410	35.81
SP-109X122-OMINI	500								
SP-118X128-ORDLD	2500	1.175	29.85	1.284	32.614	0.630	16.00	1.440	36.58
SP-118X128-OMINI	500								
SP-124X136-ORDLD	2500	1.235	31.37	1.360	34.544	0.810	20.57	1.500	38.10
SP-124X136-OMINI	500								
SP-131X147-ORDLD	2500	1.312	33.32	1.465	37.211	0.880	22.35	1.630	41.40
SP-131X147-OMINI	500								
SP-145X160-ORDLD	1000	1.447	36.75	1.600	40.640	0.880	22.35	1.750	44.45
SP-145X160-OMINI	200								
SP-156X168-ORDLD	1000	1.560	39.62	1.682	42.723	0.750	19.05	1.880	47.75
SP-163X175-ORDLD	1000								
SP-163X175-ORDLD	1000	1.630	41.40	1.750	44.450	0.750	19.05	1.940	49.28
SP-163X175-OMINI	200								
SP-175X188-ORDLD	1000	1.750	44.45	1.880	47.752	0.750	19.05	2.000	50.80
SP-175X188-OMINI	200								
SP-178X195-ORDLD	1000	1.780	45.21	1.950	49.530	1.000	25.40	2.130	54.10
SP-178X195-OMINI	200								
SP-184X200-ORDLD	1000	1.844	46.84	2.000	50.800	1.000	25.40	2.130	54.10
SP-184X200-OMINI	200								
SP-190X208-ORDLD	1000	1.900	48.26	2.076	52.730	1.000	25.40	2.250	57.15
SP-190X208-OMINI	200								

CP Series

Center Pull Plugs

Material: Low-Density Polyethylene

Temp Rating: 180° F/82° C

RECOMMENDED USE:

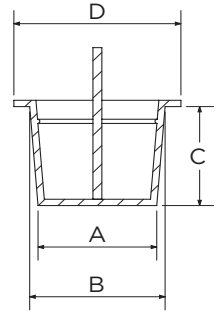
- Low Temp Finishing Processes, Shipping, Storage

APPLICATION:

- Use to protect standard threads from paint, damage, and debris



Standard color is red
Custom colors upon request



PART NUMBER	QTY	PLUG DIMENSIONS				LENGTH		FLANGE DIA.	
		A		B		C		D	
		in	mm	in	mm	in	mm	in	mm
CP-021X027-0MINI	1000	0.209	5.31	0.269	6.83	0.34	8.64	0.38	9.65
CP-024X030-ORDLD	5000	0.236	5.99	0.302	7.67	0.380	9.65	0.440	11.18
CP-024X030-0MINI	1000								
CP-027X034-ORDLD	5000	0.267	6.78	0.335	8.51	0.380	9.65	0.470	11.94
CP-027X034-0MINI	1000								
CP-030X037-ORDLD	5000	0.299	7.59	0.365	9.27	0.380	9.65	0.500	12.70
CP-030X037-0MINI	1000								
CP-033X040-ORDLD	5000	0.330	8.38	0.396	10.06	0.380	9.65	0.530	13.46
CP-036X043-ORDLD	5000								
CP-036X043-0MINI	1000	0.361	9.17	0.427	10.85	0.380	9.65	0.560	14.22
CP-039X046-ORDLD	5000	0.390	9.91	0.456	11.58	0.380	9.65	0.590	14.99
CP-042X049-ORDLD	5000								
CP-042X049-0MINI	1000	0.419	10.64	0.485	12.32	0.380	9.65	0.630	16.00
CP-047X052-ORDLD	5000	0.465	11.81	0.524	13.31	0.410	10.41	0.760	19.30
CP-047X052-0MINI	1000								
CP-047X055-ORDLD	5000	0.471	11.96	0.547	13.89	0.440	11.18	0.690	17.53
CP-047X055-0MINI	1000								
CP-050X058-ORDLD	5000	0.500	12.70	0.576	14.63	0.440	11.18	0.720	18.29
CP-050X058-0MINI	1000								
CP-053X061-ORDLD	5000	0.533	13.54	0.608	15.44	0.470	11.94	0.750	19.05
CP-053X061-0MINI	1000								
CP-055X063-ORDLD	5000	0.550	13.97	0.631	16.03	0.470	11.94	0.750	19.05
CP-055X063-0MINI	1000								
CP-058X069-ORDLD	5000	0.580	14.73	0.688	17.48	0.530	13.46	0.840	21.34
CP-058X069-0MINI	1000								
CP-061X070-ORDLD	5000	0.610	15.49	0.695	17.65	0.500	12.70	0.840	21.34
CP-061X070-0MINI	1000								
CP-064X073-ORDLD	5000	0.640	16.26	0.727	18.47	0.500	12.70	0.880	22.35
CP-064X073-0MINI	1000								
CP-068X076-ORDLD	5000	0.675	17.15	0.755	19.18	0.500	12.70	0.880	22.35
CP-068X076-0MINI	1000								



FEATURES:

- Tapered
- Designed with center pull tab in the middle to ease installation and removal

PART NUMBER	QTY	PLUG DIMENSIONS				LENGTH		FLANGE DIA.	
		A		B		C		D	
		in	mm	in	mm	in	mm	in	mm
CP-069X079-ORDLD	5000	0.690	17.53	0.788	20.02	0.560	14.22	0.940	23.88
CP-073X082-OMINI	1000	0.725	18.42	0.823	20.9	0.56	14.22	1	25.4
CP-075X085-ORDLD	5000	0.750	19.05	0.848	21.54	0.560	14.22	1.000	25.40
CP-075X085-OMINI	1000								
CP-080X091-ORDLD	5000	0.802	20.37	0.911	23.14	0.630	16.00	1.060	26.92
CP-080X091-OMINI	1000								
CP-087X098-ORDLD	5000	0.866	22.00	0.975	24.77	0.630	16.00	1.130	28.70
CP-087X098-OMINI	1000								
CP-092X104-ORDLD	5000	0.915	23.24	1.040	26.42	0.690	17.53	1.160	29.46
CP-092X104-OMINI	1000								
CP-096X109-ORDLD	2500	0.964	24.49	1.090	27.69	0.750	19.05	1.250	31.75
CP-096X109-OMINI	500								
CP-109X122-ORDLD	2500	1.094	27.79	1.215	30.86	0.750	19.05	1.410	35.81
CP-109X122-OMINI	500								
CP-115X127-OMINI	500	1.15	29.21	1.274	32.36	0.5	12.7	1.55	39.37
CP-124X136-ORDLD	2500	1.235	31.37	1.360	34.54	0.750	19.05	1.530	38.86
CP-124X136-OMINI	500								
CP-131X147-ORDLD	2500	1.312	33.32	1.465	37.21	0.880	22.35	1.630	41.40
CP-131X147-OMINI	500								
CP-134X153-ORDLD	1000	1.344	34.14	1.527	38.79	0.880	22.35	1.750	44.45
CP-134X153-OMINI	200								
CP-145X160-ORDLD	1000	1.451	36.86	1.601	40.67	0.750	19.05	1.750	44.45
CP-145X160-OMINI	200								
CP-156X164-ORDLD	1000	1.563	39.70	1.636	41.55	0.750	19.05	1.910	48.51
CP-156X164-OMINI	200								
CP-163X175-ORDLD	1000	1.630	41.40	1.750	44.45	0.750	19.05	1.940	49.28
CP-176X194-ORDLD	1000	1.760	44.70	1.938	49.23	1.000	25.40	2.160	54.86
CP-176X194-OMINI	200								

THREADED PLUGS

Echo's line of threaded plugs are developed to meet virtually any need from general to application-specific protection solutions for standard, metric, SAE, and BSP threads. The following pages describe each of these in detail.

Each threaded plug is available in a standard color and sizes are indicated in each section. If you are interested in a color or size not listed, contact us to discuss a custom protection option.

MATERIALS:

HIGH-DENSITY POLYETHYLENE

215°F / 101°C

LOW-DENSITY POLYETHYLENE

180°F / 82°C

NYLON

325°F / 162°C

Recommended Uses for All Three Materials:

- Available for standard, Metric, and BSP threads
- Protect threaded components from damage, dust, and moisture during production, storage, and shipping
- Protect threads and surfaces during low-temperature paint processes

Product Features on All Threaded Plugs:

- Multiple head designs for manual, socket, or screwdriver installation
- Many styles available for both general and specific applications



SECTION CONTENTS:

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GT Series - UN Std

General Purpose Threaded Plugs

Material: High-Density Polyethylene

Temp Rating: 210° F/101° C

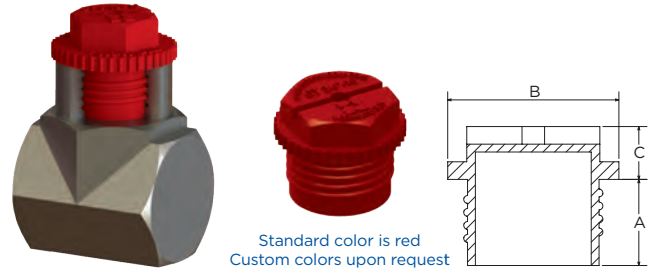
RECOMMENDED USE:

- Low-Temp Finishing Processes, Shipping, Storage

APPLICATION:

- Use plug to protect threads of pipes, valves, tubes from contaminants

Applicable Specifications: MIL-C-52078, MIL-C-5501/2, MIL-C-5501/10, NAS 838



FEATURES:

- Hex Head with screw driving slot for installing
- Serrated flange to help tighten & remove by hand

PART NUMBER	QTY	THREAD SIZE	DEPTH		FLANGE		HEIGHT		6 PT SOCKET
			in	mm	in	mm	in	mm	
GT-044X020-ORDHD	5000	7/16-20	0.300	7.62	0.680	17.27	0.28	7.11	7/16"
GT-044X020-OMINI	1000								
GT-050X020-ORDHD	5000	1/2-20	0.360	9.14	0.740	18.80	0.28	7.11	1/2"
GT-056X018-ORDHD	2500	9/16-18	0.350	8.89	0.810	20.57	0.28	7.11	1/2"
GT-056X018-OMINI	500								
GT-063X018-ORDHD	2500	5/8-18	0.340	8.64	0.740	18.80	0.26	6.60	9/16"
GT-063X018-OMINI	500								
GT-075X016-ORDHD	2500	3/4-16	0.440	11.18	0.890	22.61	0.27	6.86	11/16"
GT-075X016-OMINI	500								
GT-088X014-ORDHD	2500	7/8-14	0.500	12.70	1.020	25.91	0.33	8.38	3/4"
GT-088X014-OMINI	500								
GT-106X012-ORDHD	1000	1 1/16-12	0.620	15.75	1.470	37.34	0.28	7.11	7/8"
GT-106X012-OMINI	200								



GT Series - Metric

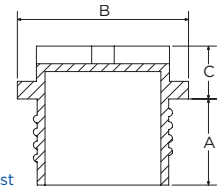
General Purpose Threaded Plugs

Material: High-Density Polyethylene

Temp Rating: 210° F/101° C



Standard color is blue
Custom colors upon request



RECOMMENDED USE:

- Low-Temp Finishing Processes, Shipping, Storage

APPLICATION:

- Use plug to protect threads of pipes, valves, tubes from contaminants

FEATURES:

- Rounded Flange
- Socket head with screwdriver slot

PART NUMBER	QTY	THREAD SIZE	DEPTH		FLANGE		HEIGHT		6 PT SOCKET
			A		B		C		
			in	mm	in	mm	in	mm	
GT-M12X150-OBLHD	5000	M12 X 1.5	0.350	8.89	0.830	21.08	0.29	7.37	M10
GT-M12X150-OMINI	1000								
GT-M14X150-OBLHD	5000	M14 X 1.5	0.350	8.89	0.830	21.08	0.29	7.37	M13
GT-M14X150-OMINI	1000								
GT-M16X150-OBLHD	5000	M16 X 1.5	0.390	9.91	0.910	23.11	0.33	8.38	M15
GT-M16X150-OMINI	100								
GT-M18X150-OBLHD	5000	M18 X 1.5	0.390	9.91	0.910	23.11	0.33	8.38	M17
GT-M18X150-OMINI	1000								
GT-M20X150-OBLHD	2500	M20 X 1.5	0.470	11.94	1.100	27.94	0.33	8.38	M19
GT-M20X150-OMINI	500								

GT Series - BSP

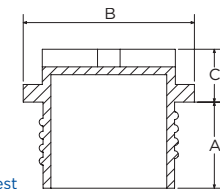
General Purpose Threaded Plugs

Material: High-Density Polyethylene

Temp Rating: 210° F/101° C



Standard color is green
Custom colors upon request



RECOMMENDED USE:

- Low Temp Finishing Processes, Shipping, Storage

APPLICATION:

- Designed to protect British Standard Pipe threads from low heat paint lines, damage, and debris

FEATURES:

- Round Flange
- Socket head with screwdriver slot

PART NUMBER	QTY	THREAD SIZE	DEPTH		FLANGE		HEIGHT		6 PT SOCKET
			A		B		C		
			in	mm	in	mm	in	mm	
GT-G125BSP-OGNHD	5000	G 1/8	0.350	8.89	0.830	21.08	0.29	7.37	1/2"
GT-G125BSP-OMINI	1000								
GT-G250BSP-OGNHD	5000	G 1/4	0.350	8.89	0.830	21.08	0.29	7.37	1/2"
GT-G250BSP-OMINI	1000								
GT-G375BSP-OGNHD	5000	G 3/8	0.400	10.16	0.910	23.11	0.33	8.38	3/4"
GT-G375BSP-OMINI	1000								
GT-G500BSP-OGNHD	2500	G 1/2	0.470	11.94	1.100	27.94	0.33	8.38	3/4"
GT-G500BSP-OMINI	500								

WT Series - UN Std

Wide Flange Threaded Plugs

Material: Nylon

Temp Rating: 325° F/162° C



Standard color is yellow
Custom colors upon request

RECOMMENDED USE:

- Low-Temp Finishing Processes, Shipping, Storage

APPLICATION:

- Protects UN standard threads with wide flange to protect surrounding area
- SAE standard threads

FEATURES:

- Optional Buna washer available when a tight seal is required (WT-B)

PART NUMBER	QTY	THREAD SIZE	DEPTH		FLANGE		HEIGHT		6 PT SOCKET
			A	B	C				
			in	mm	in	mm	in	mm	
WT-044X020-OMINI	1000	7/16-20	0.39	9.91	0.775	19.69	0.28	7.11	1/2"
WT-050X020-OYWNY	5000	1/2-20	0.405	10.29	0.853	21.67	0.280	7.11	1/2"
WT-056x018-OYWNY	2500	9/16-18	0.420	10.67	0.917	23.29	0.280	7.11	1/2"
WT-056x018-OMINI	500								
WT-075X016-OYWNY	2500	3/4-16	0.520	13.21	1.130	28.70	0.290	7.37	3/4"
WT-075X016-OMINI	500								
WT-088X014-OYWNY	2500	7/8-14	0.560	14.22	1.284	32.61	0.340	8.64	3/4"
WT-088X014-OMINI	500								
WT-106X012-OYWNY	1000	1 1/16-12	0.660	16.76	1.577	40.06	0.340	8.64	1"
WT-106X012-OMINI	200								
WT-119X012-OYWNY	1000	1 3/16-12	0.700	17.78	1.722	43.74	0.400	10.16	1"
WT-119X012-OMINI	200								
WT-131X012-OYWNY	1000	1 5/16-12	0.700	17.78	1.867	47.42	0.390	9.91	1"
WT-131X012-OMINI	200								
WT-163X012-OYWNY	500	1 5/8-12	0.770	19.56	2.217	56.31	0.400	10.16	1 1/8"
WT-163X012-OMINI	100								
WT-188X012-OYWNY	500	1 7/8-12	0.750	19.05	2.507	63.68	0.400	10.16	1 1/2"
WT-188X012-OMINI	100								

WIDE FLANGE THREADED PLUGS WITH WASHER (WT-B)

WT-044X020-BYWNY	5000	7/16-20	0.390	9.91	0.775	19.69	0.280	7.11	1/2"
WT-044X020-BMINI	1000								
WT-050X020-BMINI	1000	1/2-20	0.405	10.29	0.853	21.67	0.28	7.11	1/2"
WT-056x018-BYWNY	2500								
WT-056x018-BMINI	500	9/16-18	0.420	10.67	0.917	23.29	0.280	7.11	1/2"
WT-075X016-BYWNY	2500								
WT-075X016-BMINI	500	3/4-16	0.520	13.21	1.130	28.70	0.290	7.37	3/4"
WT-088X014-BYWNY	2500								
WT-088X014-BMINI	500	7/8-14	0.560	14.22	1.284	32.61	0.340	8.64	3/4"
WT-106X012-BYWNY	1000								
WT-106X012-BMINI	200	1 1/16-12	0.660	16.76	1.577	40.06	0.340	8.64	1"
WT-119X012-BYWNY	1000								
WT-119X012-BMINI	200	1 3/16-12	0.700	17.78	1.722	43.74	0.400	10.16	1"
WT-131X012-BYWNY	1000								
WT-131X012-BMINI	200	1 5/16-12	0.700	17.78	1.867	47.42	0.390	9.91	1"
WT-163X012-BYWNY	500								
WT-163X012-BMINI	100	1 5/8-12	0.770	19.56	2.217	56.31	0.400	10.16	1 1/8"
WT-188X012-BYWNY	500								
WT-188X012-BMINI	100	1 7/8-12	0.750	19.05	2.507	63.68	0.400	10.16	1 1/2"

JT Series

Flared JIC Threaded Plugs

Material: High-Density Polyethylene

Temp Rating: 210° F/101° C

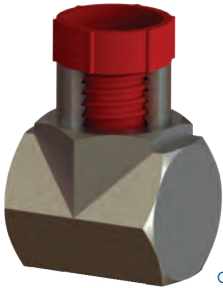
RECOMMENDED USE:

- Low-Temp Finishing Processes, Shipping, Storage

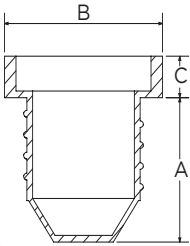
APPLICATION:

- Use when sealing JIC flare fittings (37 or 45 degree flare seating surface)
- Use to protect threads from damage and debris

Applicable Specifications: MIL-C-52078, MIL-C-5501/1, NAS 833



Standard color is red
 Custom colors upon request



FEATURES:

- Provides low pressure seal for JIC flare fittings
- Ribbed for easy installation & removal

PART NUMBER	QTY	THREAD SIZE	DEPTH		HEAD DIAMETER		HEIGHT	
			A		B		C	
			in	mm	in	mm	in	mm
JT-031X024-ORDHD	5000	5/16-24	0.440	11.18	0.440	11.18	0.180	4.57
JT-031X024-OMINI	1000							
JT-038X024-ORDHD	5000	3/8-24	0.460	11.68	0.500	12.70	0.180	4.57
JT-038X024-OMINI	1000							
JT-044X020-ORDHD	5000	7/16-20	0.530	13.46	0.620	15.75	0.190	4.83
JT-044X020-OMINI	1000							
JT-050X020-ORDHD	5000	1/2-20	0.530	13.46	0.680	17.27	0.250	6.35
JT-050X020-OMINI	1000							
JT-056X018-ORDHD	5000	9/16-18	0.500	12.70	0.810	20.57	0.250	6.35
JT-056X018-OMINI	1000							
JT-075X016-ORDHD	2500	3/4-16	0.750	19.05	0.940	23.88	0.250	6.35
JT-075X016-OMINI	500							
JT-088X014-ORDHD	2500	7/8-14	0.870	22.10	1.060	26.92	0.250	6.35
JT-088X014-OMINI	500							
JT-106X012-ORDHD	1500	1 1/16-12	0.860	21.84	1.410	35.81	0.250	6.35
JT-106X012-OMINI	300							
JT-119X012-ORDHD	1200	1 3/16-12	0.930	23.62	1.500	38.10	0.250	6.35
JT-119X012-OMINI	240							
JT-131X012-ORDHD	1000	1 5/16-12	0.930	23.62	1.500	38.10	0.250	6.35
JT-131X012-OMINI	200							
JT-163X012-ORDHD	500	1 5/8-12	0.940	23.88	2.220	56.39	0.340	8.64
JT-163X012-OMINI	100							
JT-188X012-ORDHD	500	1 7/8-12	1.150	29.21	2.310	58.67	0.310	7.87
JT-188X012-OMINI	100							
JT-225X012-ORDHD	250	2 1/4-12	1.310	33.27	2.750	69.85	0.380	9.65
JT-225X012-OMINI	50							
JT-250X012-ORDHD	250	2 1/2-12	1.310	33.27	3.090	78.49	0.380	9.65



ENSURE THE RIGHT FIT, REQUEST A SAMPLE TODAY

Call 888.echo.365 to order or submit request online at echoinnovates.com.

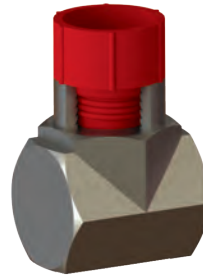
THREADED

RT Series

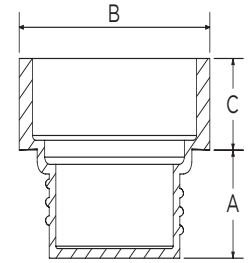
SAE O-Ring Port Threaded Plugs

Material: High-Density Polyethylene

Temp Rating: 210° F/101° C



Standard color is red
Custom colors upon request



RECOMMENDED USE:

- Low-Temp Finishing Processes, Shipping, Storage

APPLICATION:

- Used in hydraulic & non-hydraulic SAE O-ring type ports to protect threads from damage and debris

FEATURES:

- Integrated plastic O-Ring helps provide a seal to reduce need for an O-Ring
- Ribbed for easy installation & removal

PART NUMBER	QTY	THREAD SIZE	DEPTH		HEAD DIAMETER		HEIGHT	
			A		B		C	
			in	mm	in	mm	in	mm
RT-044X020-ORDHD	5000	7/16-20	0.320	8.13	0.650	16.51	0.380	9.65
RT-044X020-OMINI	1000							
RT-050X020-ORDHD	5000	1/2-20	0.320	8.13	0.720	18.29	0.380	9.65
RT-050X020-OMINI	1000							
RT-056X018-ORDHD	5000	9/16-18	0.360	9.14	0.780	19.81	0.380	9.65
RT-056X018-OMINI	1000							
RT-075X016-ORDHD	2500	3/4-16	0.400	10.16	0.980	24.89	0.380	9.65
RT-075X016-OMINI	500							
RT-088X014-ORDHD	2500	7/8-14	0.450	11.43	1.110	28.19	0.380	9.65
RT-088X014-OMINI	500							
RT-106X012-ORDHD	2500	1 1/16-12	0.620	15.75	1.310	33.27	0.380	9.65
RT-106X012-OMINI	500							
RT-131X012-ORDHD	1000	1 5/16-12	0.620	15.75	1.560	39.62	0.380	9.65
RT-131X012-OMINI	200							
RT-163X012-ORDHD	1000	1 5/8-12	0.620	15.75	1.880	47.75	0.380	9.65
RT-163X012-OMINI	200							

THREADED

DON'T SEE THE PART YOU NEED? CONSIDER CUSTOM PROTECTION!

Our engineering team has years of experience in developing custom protection solutions when our standard products will not fit a specific application. We recognize the importance of working closely with you to understand your needs in order to provide a solution that will exceed your expectations. This is how we protect the world's best products from start to finish.



Check out [page 101](#) to learn more about our custom solutions, or call [888-echo-365](tel:888-echo-365) to discuss your custom solution.

PT Series - SAE

Port Threaded Plugs

Material: High-Density Polyethylene

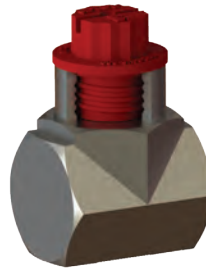
Temp Rating: 210° F/101° C

RECOMMENDED USE:

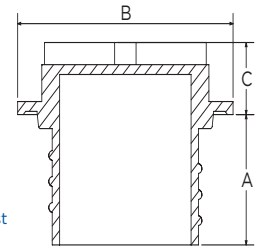
- Low-Temp Finishing Processes, Shipping, Storage

APPLICATION:

- Use plug with SAE thread sizes to protect ports from debris, moisture, and damage.
- Use plug when leakage is of concern



Standard color is red
Custom colors upon request



FEATURES:

- Flange protects surrounding area
- Integrated lip and plastic O-Ring helps provide seal

PART NUMBER	QTY	THREAD SIZE	DEPTH		FLANGE		HEIGHT		12 PT SOCKET
			A		B		C		
			in	mm	in	mm	in	mm	
PT-044X020-ORDHD	5000	7/16-20	0.340	8.64	0.660	16.76	0.300	7.62	3/8"
PT-044X020-OMINI	1000								
PT-044X024-ORDHD	5000	7/16-24	0.340	8.64	0.660	16.76	0.300	7.62	3/8"
PT-044X024-OMINI	1000								
PT-050X020-ORDHD	5000	1/2-20	0.340	8.64	0.730	18.54	0.310	7.87	7/16"
PT-050X020-OMINI	1000								
PT-056X018-ORDHD	5000	9/16-18	0.360	9.14	0.800	20.32	0.300	7.62	1/2"
PT-056X018-OMINI	1000								
PT-075X016-ORDHD	2500	3/4-16	0.410	10.41	1.020	25.91	0.310	7.87	11/16"
PT-075X016-OMINI	500								
PT-088X014-ORDHD	2500	7/8-14	0.530	13.46	1.160	29.46	0.300	7.62	13/16"
PT-088X014-OMINI	500								
PT-106X012-ORDHD	1000	1 1/16-12	0.610	15.49	1.450	36.83	0.310	7.87	1"
PT-106X012-OMINI	200								
PT-131X012-ORDHD	1000	1 5/16-12	0.610	15.49	1.740	44.20	0.300	7.62	1 1/4"
PT-131X012-OMINI	200								
PT-163X012-ORDHD	500	1 5/8-12	0.610	15.49	2.170	55.12	0.300	7.62	1 9/16"
PT-163X012-OMINI	100								

PT Series - Metric

Port Threaded Plugs

Material: High-Density Polyethylene

Temp Rating: 210° F/101° C

RECOMMENDED USE:

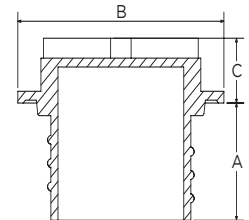
- Low-Temp Finishing Processes, Shipping, Storage

APPLICATION:

- Use plug when leakage is of concern
- Use plug with metric thread sizes to protect ports from debris, damage, and moisture



Standard color is blue
Custom colors upon request



FEATURES:

- Designed to protect Metric threads with flange to protect surrounding area
- Integrated lip and plastic O-Ring help provide seal

PART NUMBER	QTY	THREAD SIZE	DEPTH		FLANGE		HEIGHT		12 PT SOCKET
			A		B		C		
			in	mm	in	mm	in	mm	
PT-M10X150-OBLHD	5000	M10 X 1.5	0.330	8.38	0.650	16.51	0.300	7.62	M10
PT-M10X150-OMINI	1000								
PT-M12X150-OBLHD	5000	M12 X 1.5	0.410	10.41	0.730	18.54	0.300	7.62	M10
PT-M12X150-OMINI	1000								
PT-M14X150-OBLHD	5000	M14 X 1.5	0.410	10.41	0.810	20.57	0.300	7.62	M12
PT-M14X150-OMINI	1000								
PT-M18X150-OBLHD	2500	M18 X 1.5	0.410	10.41	0.970	24.64	0.310	7.87	M16
PT-M18X150-OMINI	500								

CAPS

Echo's line of protection caps are designed for a variety of applications, including shipping protection and low-temperature painting. The following pages describe each of these in detail.

Each cap is available in a standard color as well as the sizes indicated in each section. If you are interested in a color or size not listed, contact us to discuss a custom protection option.

MATERIALS:

LOW-DENSITY POLYETHYLENE

180°F / 82°C

Recommended Uses:

- Available for Standard threads
- Protect components from damage, dust, and moisture during production, storage, and shipping
- Protect threads during low-temperature paint processes

Product Features:

- Tapered design allows for use as a plug or cap for multiple sizes
- Flange provides extra protection and prevents plug from being pushed through hole

VINYL

250°F / 120°C

Recommended Uses:

- Caps both threaded and non-threaded parts
- Protects threads and surfaces during low-temperature paint processes, storage, and shipping

Product Features:

- Recommended to mask studs and tube ends
- Also used for shipping protection
- Many 1/2" length sizes available in stock



SECTION CONTENTS:

LOW TEMP VINYL CAPS	94
FC SERIES - FLANGE CAPS - SAE STANDARD	96
DUST COVERS	97



Low Temp Vinyl Caps

Temp Rating: 250° F/120° C

RECOMMENDED USE:

- Low-Temp Finishing Processes, Shipping, Storage

APPLICATION:

- Use when looking to cap studs or tube ends at a slightly lower temperature rating for paint processes or for shipping protection.

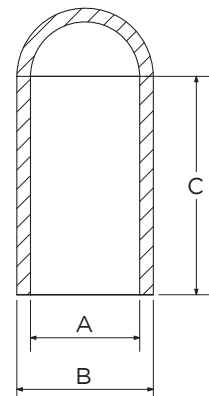
FEATURES:

- Many 1/2" length sizes available in stock
- Vinyl material allows cap to stretch for a snug fit without tearing

PART NUMBER	QTY	CAP DIMENSIONS		TYPICAL OD		LENGTH	
		A		B		C	
		in	mm	in	mm	in	mm
55-0000062-00625	5000	0.062	1.57	0.142	3.61	0.625	15.88
55-0000062-OMINI	1000						
55-0000080-00625	5000	0.080	2.03	0.160	4.06	0.625	15.88
55-0000080-OMINI	1000						
55-0000093-00750	5000	0.093	2.36	0.173	4.39	0.750	19.05
55-0000093-OMINI	1000						
55-0000109-00750	5000	0.109	2.77	0.189	4.80	0.750	19.05
55-0000109-OMINI	1000						
55-0000125-01000	5000	0.125	3.18	0.205	5.21	1.000	25.40
55-0000125-OMINI	1000						
55-0000140-01000	5000	0.140	3.56	0.220	5.59	1.000	25.40
55-0000140-OMINI	1000						
55-0000156-01000	5000	0.156	3.96	0.236	5.99	1.000	25.40
55-0000156-OMINI	1000						
55-0000172-01000	5000	0.172	4.37	0.252	6.40	1.000	25.40
55-0000172-OMINI	1000						
55-0000187-01000	5000	0.187	4.75	0.267	6.78	1.000	25.40
55-0000187-OMINI	1000						
55-0000203-01000	5000	0.203	5.16	0.283	7.19	1.000	25.40
55-0000203-OMINI	1000						
55-0000218-01000	5000	0.218	5.54	0.298	7.57	1.000	25.40
55-0000218-OMINI	1000						
55-0000234-01000	5000	0.234	5.94	0.314	7.98	1.000	25.40
55-0000234-OMINI	1000						
55-0000250-01000	5000	0.250	6.35	0.330	8.38	1.000	25.40
55-0000250-OMINI	1000						
55-0000281-01000	5000	0.281	7.14	0.361	9.17	1.000	25.40
55-0000281-OMINI	1000						
55-0000312-01000	5000	0.312	7.92	0.392	9.96	1.000	25.40
55-0000312-OMINI	1000						
55-0000343-01000	2500	0.343	8.71	0.423	10.74	1.000	25.40
55-0000343-OMINI	1000						
55-0000375-01000	2500	0.375	9.53	0.455	11.56	1.000	25.40
55-0000375-OMINI	1000						
55-0000406-01000	2500	0.406	10.31	0.486	12.34	1.000	25.40
55-0000406-OMINI	1000						
55-0000437-01000	2500	0.437	11.10	0.517	13.13	1.000	25.40
55-0000437-OMINI	1000						



Standard color is black
Custom colors upon request



PART NUMBER	QTY	CAP DIMENSIONS		TYPICAL OD		LENGTH	
		A		B		C	
		in	mm	in	mm	in	mm
55-0000500-01000	2500	0.500	12.70	0.580	14.73	1.000	25.40
55-0000500-0MINI	1000						
55-0000562-01000	2500	0.562	14.70	0.642	16.31	1.000	25.40
55-0000562-0MINI	1000						
55-0000625-01000	2500	0.625	16.56	0.705	17.91	1.000	25.40
55-0000625-0MINI	1000						
55-0000687-01000	2500	0.687	17.45	0.767	19.48	1.000	25.40
55-0000687-0MINI	1000						
55-0000750-01000	2500	0.750	19.05	0.830	21.08	1.000	25.40
55-0000750-0MINI	1000						
55-0000812-01000	2500	0.812	20.62	0.892	22.66	1.000	25.40
55-0000812-0MINI	1000						
55-0000875-01000	2500	0.875	22.22	0.955	24.26	1.000	25.40
55-0000875-0MINI	1000						
55-0000937-01000	2500	0.937	23.78	1.017	25.83	1.000	25.40
55-0000937-0MINI	1000						
55-0001000-01000	1000	1.000	25.40	1.080	27.43	1.000	25.40
55-0001000-0MINI	200						
55-0001062-01000	1000	1.062	26.97	1.142	29.01	1.000	25.40
55-0001062-0MINI	200						
55-0001125-01000	1000	1.125	28.57	1.205	30.61	1.000	25.40
55-0001125-0MINI	200						
55-0001187-01000	1000	1.187	30.15	1.267	32.18	1.000	25.40
55-0001187-0MINI	200						
55-0001250-01000	1000	1.250	31.75	1.330	33.78	1.000	25.40
55-0001250-0MINI	200						
55-0001375-01000	1000	1.375	34.92	1.455	36.96	1.000	25.40
55-0001375-0MINI	200						
55-0001500-01000	500	1.500	38.10	1.580	40.13	1.000	25.40
55-0001500-0MINI	100						
55-0001625-01000	500	1.625	41.27	1.705	43.31	1.000	25.40
55-0001625-0MINI	100						
55-0001750-01000	500	1.750	44.45	1.830	46.48	1.000	25.40
55-0001750-0MINI	100						
55-0001875-01000	500	1.875	47.62	1.955	49.66	1.000	25.40
55-0001875-0MINI	100						
55-0002000-01000	500	2.000	50.80	2.080	52.83	1.000	25.40
55-0002000-0MINI	100						

FC Series - SAE

Flange Caps

Material: Low-Density Polyethylene

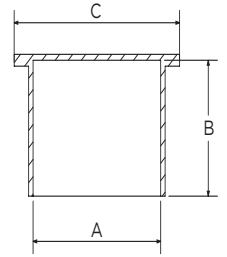
Temp Rating: 180° F/82° C

RECOMMENDED USE:

- Low Temp Finishing Processes, Shipping, Storage

APPLICATION:

- Use when capping SAE threaded & non-threaded studs to protect the stud from debris, moisture, and damage.



FEATURES:

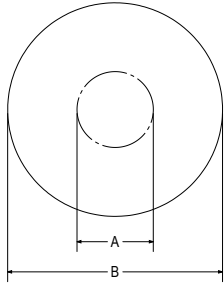
- Features flange at top for ergonomic install & removal

PART NUMBER	QTY	THREAD SIZE	INSIDE DIAMETER		INSIDE LENGTH		FLANGE DIAMETER	
			A		B		C	
			in	mm	in	mm	in	mm
FC-044X047-ORDLD	5000	7/16"	0.428	10.87	0.500	12.70	0.690	17.53
FC-044X047-OMINI	1000							
FC-050X047-ORDLD	5000	1/2"	0.490	12.45	0.500	12.70	0.750	19.05
FC-050X047-OMINI	1000							
FC-056X050-ORDLD	5000	9/16"	0.550	13.97	0.530	13.46	0.810	20.57
FC-056X050-OMINI	1000							
FC-069X050-ORDLD	5000	11/16"	0.676	17.17	0.530	13.46	0.940	23.88
FC-069X050-OMINI	1000							
FC-075X067-ORDLD	2500	3/4"	0.738	18.75	0.700	17.78	1.000	25.40
FC-075X067-OMINI	500							
FC-081X056-ORDLD	2500	13/16"	0.802	20.37	0.590	14.99	1.060	26.92
FC-081X056-OMINI	500							
FC-088X066-ORDLD	2500	7/8"	0.864	21.95	0.690	17.53	1.120	28.45
FC-100X066-ORDLD	2500	1"	0.990	25.15	0.690	17.53	1.250	31.75
FC-100X066-OMINI	500							
FC-106X075-ORDLD	2500	1-1/16"	1.051	26.70	0.780	19.81	1.310	33.27
FC-106X075-OMINI	500							
FC-119X075-ORDLD	1000	1-3/16"	1.175	29.85	0.780	19.81	1.440	36.58
FC-119X075-OMINI	200							
FC-131X075-ORDLD	1000	1-5/16"	1.298	32.97	0.780	19.81	1.560	39.62
FC-131X075-OMINI	200							
FC-144X075-ORDLD	1000	1-7/16"	1.426	36.22	0.780	19.81	1.690	42.93
FC-144X075-OMINI	200							
FC-163X085-ORDLD	1000	1-5/8"	1.612	40.94	0.880	22.35	1.880	47.75
FC-163X085-OMINI	200							
FC-188X097-ORDLD	1000	1-7/8"	1.861	47.27	1.000	25.40	2.120	53.85
FC-200X109-ORDLD	1000	2"	1.985	50.42	1.120	28.45	2.250	57.15
FC-200X109-OMINI	200							

Dust Covers

Polyethylene Film Cap

New Product



RECOMMENDED USE:

- Low Temperature Lines, Wet Paint, Shipping, Storage

APPLICATION:

- Stretch over large hole or irregular shape for protection against unwanted contaminants or dust.

FEATURES:

- Flexible but durable
- Does not promote condensation
- Reusable
- 100% recyclable

PART NUMBER	QTY	INSIDE DIAMETER		OUTSIDE DIAMETER	
		A		B	
		in	mm	in	mm
PB-0001500-03750	100	1.5	38.1	3.75	95.25
PB-0001500-04500	100	1.5	38.1	4.5	114.3
PB-0001500-05500	100	1.5	38.1	5.5	139.7
PB-0001500-07000	100	1.5	38.1	7	177.8
PB-0002250-09000	100	2.25	57.15	9	228.6
PB-0002880-11500	50	2.88	73.152	11.5	292.1
PB-0003630-14500	50	2.63	66.802	14.5	368.3
PB-0004380-17500	50	4.38	111.252	17.5	444.5

New Product: Dust Covers

Order Online Today

Echo's dust covers are commonly used as a cost efficient plastic cap to cover a wide range of sizes to protect components from moisture, debris, and contaminants. Stretch the caps over the component to aid protection throughout the manufacturing line, shipping, or storage. The flexibility of the cap allow for easy application and removal.

Order online at echosupply.com or call a representative at 888.echo.365.



*Elastic Band For Tight Fit



PROTECTIVE NETTING

Reduce costs and save time by eliminating conventional packaging. Protective netting is designed to protect your parts during any phase of the production process, storage or shipping and handling of your products. The web-like, breathable design allows for flexibility to fit over practically any shape and prevents moisture retention.

Custom netting is available.

MATERIALS:

LOW-DENSITY POLYETHYLENE

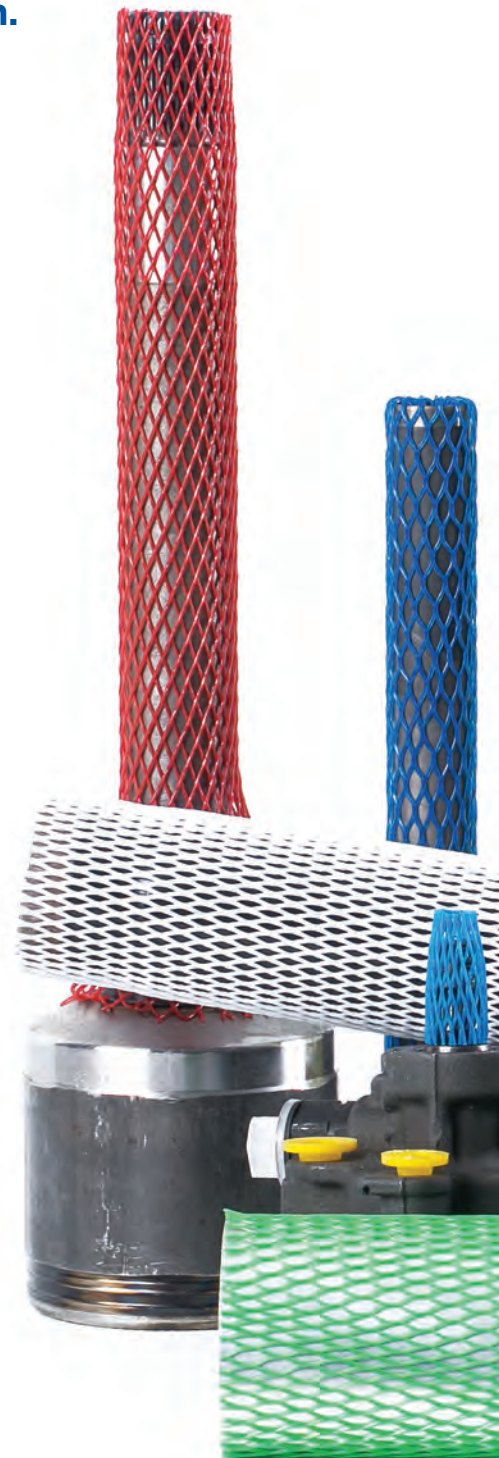
180°F / 82°C

Recommended Uses:

- Economically protects parts against damage
- Flexibility ideal for irregular shaped parts
- Easy to apply and remove

Product Features:

- Breathable design prevents moisture retention
- Stocked in spools



SECTION CONTENTS:

SN SERIES - Standard Netting

100



SN Series

Standard Netting

Material: Low-Density Polyethylene

Temp Rating: 180° F/82° C

RECOMMENDED USE:

- Shipping and Storage

APPLICATION:

- Flexibility ideal for irregular shaped parts
- Economically protects parts against damage

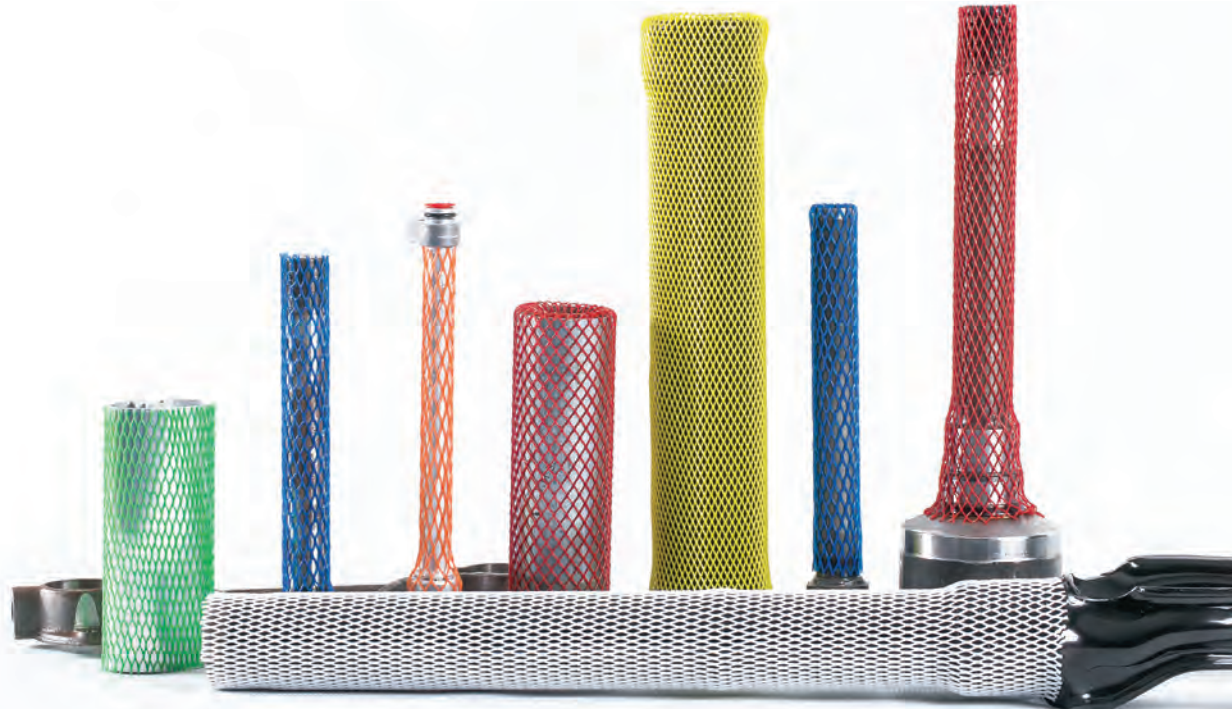
FEATURES:

- Easy to apply and remove
- Stocked in spools



Refer to chart for color

PART NUMBER	SIZE	FEET / COIL	METER / COIL	COLOR
SN-025X050-0ORLD	.25"- .50"	3000	914	ORANGE
SN-025X050-0MINI	.25"- .50"	600	182	ORANGE
SN-050X100-0BLLD	.50"-1.00"	2750	838	BLUE
SN-050X100-0MINI	.50"-1.00"	550	167	BLUE
SN-100X150-0RDLD	1.00"-1.50"	1700	518	RED
SN-100X150-0MINI	1.00"-1.50"	340	103	RED
SN-150X200-0BKLD	1.50"-2.00"	900	274	BLACK
SN-150X200-0MINI	1.50"-2.00"	180	54	BLACK
SN-200X250-0WHLD	2.00"-2.50"	800	243	WHITE
SN-200X250-0MINI	2.00"-2.50"	160	48	WHITE
SN-250X300-0YWLD	2.50"-3.00"	600	182	YELLOW
SN-250X300-0MINI	2.50"-3.00"	120	36	YELLOW
SN-300X400-0GNLD	3.00"-4.00"	450	137	GREEN
SN-300X400-0MINI	3.00"-4.00"	90	27	GREEN
SN-400X500-0ORLD	4.00"-5.00"	350	106	ORANGE
SN-400X500-0MINI	4.00"-5.00"	70	21	ORANGE
SN-500X600-0NALD	5.00"-6.00"	250	76	NATURAL
SN-500X600-0MINI	5.00"-6.00"	50	15	NATURAL
SN-600X700-0BLLD	6.00"-7.00"	250	76	BLUE
SN-600X700-0MINI	6.00"-7.00"	50	15	BLUE
SN-700X900-0MINI	7.00"-9.00"	40	12	RED



CUSTOM PROTECTION SOLUTIONS

At Echo, we go far beyond providing parts. We strive to partner with you to create solutions that fit your unique needs. Our engineering team has years of experience in developing custom protection solutions when our standard products will not fit a specific application. We recognize the importance of working closely with you to understand your needs in order to provide a solution that will exceed your expectations.

Custom Protection Solutions Are Endless...

FLUID POWER



- Accumulators
- Fluid Routing Lines
- Manifold Ports
- Control Valves
- Hose Fittings
- Motors

AEROSPACE



- Brake Lines
- Fuel Lines
- Hydraulic Valves
- Connectors
- Fuel Pumps
- Hose Fittings
- Sensors

AUTOMOTIVE



- Fluid Routing
- Engine
 - Coolant/Fuel Lines
 - Oil Pumps
 - Engine Intake
- HVAC
 - A/C Lines
 - Condenser Ports

Please visit our website to submit a request for custom product quote at echoinnovates.com, or call 888.echo.365 with your request information.



CUSTOM MASKING & PROTECTION

For over 50 years, Echo has worked hand-in-hand with both large and small job shops, and world-class manufacturing facilities to provide innovative masking solutions.

We understand that standard masking and protection does not fit every application, and we take pride in partnering with our customers to create solutions that make sense for their business. Our custom masking components have improved line efficiencies, decreased product rework, and a number of other bottom-line tangibles that provide real value to not only you but also your customers.

WHY CUSTOM?

CUSTOM MASKING PROVIDES:

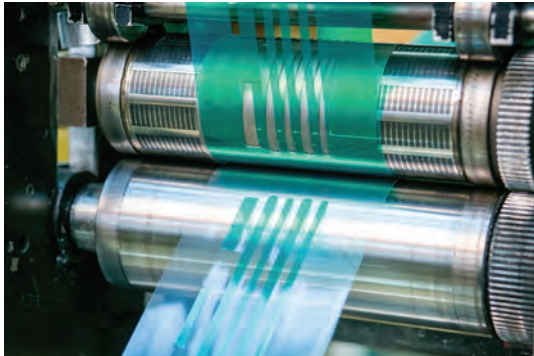
- Decreased rework resulting in increased quality
- Masking and de-masking ergonomics
- Increased line output
- Reduced labor costs
- A reusable option

CUSTOM PROTECTION:

- Tailored to your specifications
- Defends your product from damage
- Gives you and your consumer peace of mind
- Protects the quality of your product



CUSTOM CAPABILITIES



CONVERTING CAPABILITIES

- Rotary Die Cut (up to 30" wide) - in roll form
- Overhead Die Cut (30"x30" Platten) - individual pieces
- Slitters (up to 60" wide)
- 2 Large Scale Plotters (up to 54" wide)



RAPID PROTOTYPING CAPABILITIES

- Simulated rubber 3D Printer
- Plastic 3D Printer

Can have parts within as little as 5-7 business days.
Size tolerance for both: +/- .020 in



RUBBER MANUFACTURING CAPABILITIES

- Injection Molding
- Compression Molding
- Over Molding
- Extrusion (Including Co-Extrusions)
- Transfer Molding



PLASTIC MANUFACTURING CAPABILITIES

- Injection Molding
- Over Molding
- Extrusion (Limited - 2" Max)



FOR CUSTOM RUBBER & PLASTIC COMPONENTS & ASSEMBLIES,
TURN TO PAGE 105 OR CALL 888.echo.365 TO DISCUSS

CORE TECHNOLOGIES

SEALING | CONNECTING | NVH | FASTENING

Echo partners with you to create and supply meaningful solutions to your most pressing connecting, fastening, NVH, and sealing challenges. We have designed, engineered, and manufactured thousands of value-added rubber and plastic components and assemblies within countless industries.

Echo now offers domestic plastic injection molding capabilities through Ammex, our Monroe, Michigan location. The Ammex team offers full service plastic injection molding including tooling design, mold flow analysis, and manufacturability consultation. Ammex delivers impeccable quality with a defect rate of less than 0.5 PPM.

Below are some of the most common materials we use. Call us for a more comprehensive list of materials and custom compounds to meet your specifications.

Plastic:

- ▶ PP
- ▶ HDPE
- ▶ LDPE
- ▶ Acrylic
- ▶ Polycarbonate (PC)
- ▶ ABS
- ▶ Nylon
- ▶ Acetal

Rubber:

- ▶ Natural rubber
- ▶ EPDM
- ▶ SBR
- ▶ Neoprene
- ▶ NBR/Nitrile
- ▶ Silicone
- ▶ Vinyl
- ▶ Viton®
- ▶ HNBR
- ▶ Fluorosilicone

Common Processes:

- ▶ Injection Molding
- ▶ Compression Molding
- ▶ Transfer Molding
- ▶ Extrusions
- ▶ Extrude and Vulcanization
- ▶ Post-Curing
- ▶ Over Molding
- ▶ Lathe Cut
- ▶ Die Cut
- ▶ Texturing
- ▶ Sub-Assembly
- ▶ Custom Formulation & Mixing

Requesting A Quote

For a custom plastic or rubber component, contact us at 888.echo.365, go to echoinnovates.com/request-quote or send us an email with CAD files at sales@echosupply.com. An industry expert from Echo will be assigned to your account to handle all quotes and questions.

TARGET END MARKETS



AUTOMOTIVE & MOBILITY



AGRICULTURE



CONSTRUCTION/ HEAVY EQUIPMENT



POWERSPORT



MARINE



ELECTRONICS



SEALING TECHNOLOGY

Echo sealing technology prevents leakage and protects systems from outside contamination.

Sealing Solutions Includes:

- ▶ Plugs
- ▶ Adhesive Tape
- ▶ Housing Seals
- ▶ Boots
- ▶ Caps
- ▶ Gasket Seals
- ▶ Bellows



FASTENING TECHNOLOGY

Echo fastening technology brings two or more objects together and holds them tightly in a fastening lock. Echo plastic fasteners are ideal for automotive lightweighting or any industry moving away from metal.

Fastening Solutions Include:

- ▶ Mounting Brackets
- ▶ Coolant Line Clips
- ▶ Line Spacers
- ▶ A/C Valve Caps
- ▶ Ties
- ▶ Fasteners



CONNECTING TECHNOLOGY

Echo connecting technology supports the connection between components carrying fluids, while also holding strength during movement throughout varying conditions and temperatures.

Connecting Solutions Include:

- ▶ Hoses
- ▶ Tubes
- ▶ Fittings
- ▶ Adapters
- ▶ Connectors
- ▶ Ducts



NVH TECHNOLOGY

Echo Noise, Vibration, and Harshness (NVH) technology improves vehicle ride quality by reducing vibration and noise. NVH technology may be used in interior or exterior applications.

NVH Solutions Include:

- ▶ Spacers/Shims
- ▶ Grommets
- ▶ Bumpers
- ▶ Plugs

TESTING CAPABILITIES

Echo values providing quality solutions while creating peace of mind for our customers. To ensure the quality and accuracy of our products, Echo offers multiple in-house testing capabilities. Echo's testing machines may be used for tapes, plastic or rubber components.

Echo's Testing Capabilities Include:

Compression & Tensile Testing

Echo's Compression Test measures the force required to insert and pull either the product itself or a connecting component from the product. The Tensile test measures the tension within the product and determines at what load of weight will break the part.

Echo commonly uses these tests for custom clips manufactured by Echo to test the ease of inserting fluid routing lines into the clip, while also measuring the difficulty of removing the line from the clip. (See examples of clips below.)



Oven Testing

Echo's ovens are used to test masking and OEM components' life endurance at high-temperature ranges.

Specifically, within masking, materials are required to endure vigorous high temperatures at long lengths of time.

Peel Testing

Echo utilizes the Peel Test to measure the force required to peel the tape from a substrate surface. This test helps Echo evaluate and compare new tapes to measure the strength of the adhesives. With experience and testing, Echo is able to provide customers with knowledgeable recommendations for customer's processes.

Optical Comparator

Echo's Optical Comparator Testing Machine is a new addition to Echo's testing capabilities. This test is primarily utilized for quality checks, but also may be used for reverse engineering within a matter of seconds.

The machine scans the product, optically compares the design, and provides detailed measurements of the product. (See machine to the right.)



Optical Comparator Testing Machine

Reference & Masking Tips

Masking Plugs and Caps Application and Temperature Guide

APPLICATION	COOL		MEDIUM		HOT
	180°F/82°C LDPE OLDPE (Page 21)	200°F/93°C Natural Rubber O1NAT	350°F/177°C Hi-Temp Vinyl Page 31	350°F/177°C EPDM Rubber O6EPD	550°F/280°C Silicone Rubber O4SIL
Painting air-dry	•	•	•	•	
Painting bake to 350°F				•	•
Powder coating					•
E-coating					•
Chromic anodizing-type I	•	•	•	•	•
Hard anodizing-type II and III	•	•	•	•	•
Electroplating	•	•	•	•	•
Electroless nickel	•		•	•	•
Chrome plating	•		•		•
Wave solder plating	•		•		•
Gold finger plating	•		•	•	•

Masking Tips

IMPROVE THE EFFECTIVENESS OF TAPES

- ▶ Clean & dry surface before application of tape to rid surface of dirt & debris
- ▶ Use the right width
- ▶ Choose the proper thickness
- ▶ Maximize contact space for tape products when possible
- ▶ Use die-cuts for high-volume precision masking
- ▶ Use special designs for speed alignment

GET THE MOST OUT OF MOLDED MASKS

- ▶ Select the right material
- ▶ Use pull or flanged handle to reduce application time and effort
- ▶ Add a small vent to ease removal
- ▶ Use multi-purpose caps and plugs to save stocking space and reduce costs
- ▶ Smart color coding for smooth production
- ▶ Use threaded plugs to mask threaded holes
- ▶ Consider other options if you are using steel masks
- ▶ Design masks with production line in mind

Screw Size and Treaded Hole Size

SCREW SIZE TO MASKING CAP SIZE

Screw size	Cap size
#2 1.6mm	0.080
#4 3.0mm	0.093-0.109
#6 3.5mm	0.125
4.0mm	0.140
#8	0.156
#10 5.0mm	0.172-0.187
#1/4 6.0mm	0.234-0.250

THREADED HOLE SIZE FOR PULL PLUGS

Hole size	Reference No.
0-80	01-0020062 or 01-0020068
1/4-20	01-0020218 or 01-0020250
2-56	01-0020093
5/16-18	01-0020281 or 01-0020312
4-40	01-0020109
6-32	01-0020130
3/8-18	01-0020350
8-24	01-0020157
7/16-16	01-0020437
10-24	01-0020190
6-32	01-0020125

MATERIAL DATA CHART

Material	Temp Rating °F	Temp Rating °C	Recommended Processes	Features	Formulations Available
Silicone	600	315	Powder Coating, E-coating, Plating, Anodizing	Durable, reusable, cost-effective	High Tear Strength, Conductive
EPDM	350	177	Wet painting, Plating, Anodizing, Blasting	Durable, reusable, cost-effective, customizable	High Temp
Low-Density Polyethylene (LDPE)	180	82	Plating, Anodizing, Spray-Painting,	Long Lifespan, flexible design/styles for specific applications, Economical	Not Common
High-Density Polyethylene (HDPE)	215	101	Wet Paint	Flexible design/styles for specific applications	Not Common
Nylon	325	162	Powder Coating, E-coating, Plating, Anodizing	Flexible design/styles for specific applications	High Impact, Glass Filled
High Temp Vinyl	350	177	Painting, Plating, Anodizing, Blasting	Durable, reusable, cost-effective	Not Common
Paper	400	204	Low Temp Paint Processes, Storage & Shipping	Economical compared to plastic when heat is a factor, flexible but durable, no condensation, 100% virgin paper, 100% recyclable, 0.025" thickness	Not Common
Polyester	400	204	Powder coating, E-coating, anodizing	Clean removal, industry standard, excellent line definition	Not Common
Polyimide	500	260	Powder coating, soldering, extended high temp paint cures, PC boards	Clean removal, flame retardant, excellent electrical insulation	Not Common
Glass Cloth	500	260	Powder Coating, Extended High Temp Paint Cures	Clean removal, flame retardant, high-pressure blasting resistant, abrasion resistant	Not Common
High Temp Crepe	325	162	Low Temp Powder Coating/Liquid Coating	Clean removal, conforms to irregular surfaces/corners, paint flaking resistant	Not Common
Vinyl	175	99	Hard Chrome Plating, Electroplating, Anodizing, Abrasive Blasting, Storage & Shipping Protection	Solvent and chemical resistant, no adhesive residue, shipping protection, flexible sizing	Not Common
Lead Foil	225	107	Plating, Electroplating, Anodizing, Paint Stripping	Electromagnetic & radio frequency shield, conforms to irregular surfaces	Not Common
Aluminum Foil	325	162	Plating, Shielding, Paint Stripping	Confirms to irregular surfaces, high reflectivity provides effective heat & light interference	Not Common

PLACING AN ORDER

1

ORDER ONLINE

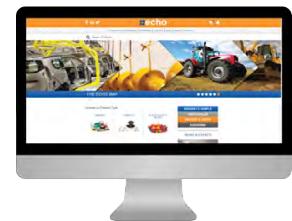
Shop online at echoinnovates.com for real-time pricing whenever purchasing is most convenient for you. Whether you're new to purchasing from Echo or if you're a repeat customer, the website is an easy way to place your order.

Website orders must be of minimum \$75.

If special contracting applies to you, register your email and contract pricing will then be reflected online once you're logged in.

Benefits to creating an account at echosupply.com

- Access to order history when logged in
- Ability to reorder catalog parts
- Payment available with credit card & terms



2

CALL IN YOUR ORDER

Call us at **1-888.echo.365** to talk to a representative to place your order. Echo's customer care team is fully equipped to handle processing your order and requests.

Benefits to calling in your order:

- Assist in selection and sizing
- One-on-one interactions
- Instant Customer Service



EMAIL PURCHASE ORDER

3


Send us an email to sales@echosupply.com with your purchase order attached. Echo's customer care team will reach out to you shortly to finalize the order.


Benefits to emailing your order:


- Quick initiative to begin processing order
- Good for when your purchase order is already established



HOOK LOAD CAPACITY REFERENCE CHARTS

	C & CV HOOKS	
	DIAMETER	LOAD CAPACITY
	in	lbs
	0.044	2
	0.062	3
	0.076	4
	0.12	25
	0.18	60

	S HOOKS	
	DIAMETER	LOAD CAPACITY
	in	lbs
	0.044	2
	0.062	4
	0.076	8
	0.12	20
	0.18	50

	V HOOKS	
	DIAMETER	LOAD CAPACITY
	in	lbs
	0.044	4
	0.062	13
	0.076	20
	0.12	50
	0.18	80

NAS & MILITARY SPECIFICATIONS

SERIES	DESCRIPTION	NAS SPEC	MIL SPEC	PAGE
WP	Wide Flange Plug	NAS 816	-	78-79
JT	Flared JIC Threaded Plug	NAS 833	MIL-C-52078, MIL-C-5501/1	89
TP	Tapered Plug	NAS 834	MIL-C-5501/7 (MIL-C-52078)	72-77
GT	General Purpose Threaded Plug - UN Std	NAS 838	MIL-C-52078, MIL-C-5501/2, MIL-C-5501/10	86

ORDERING INFORMATION

TERMS AND CONDITIONS

Exclusive Governing Provisions

The sale of all products by Echo Engineering & Production Supplies, Inc. ("Echo") to Purchaser is subject to and governed exclusively by these terms and conditions of sale (the "Conditions"). Echo's acceptance of any order or other offer by Purchaser (whether written, telephonic, electronic, or otherwise) for any products is expressly made conditional on Purchaser's assent to these Conditions. Purchaser's assent shall be deemed given on the earlier of (i) written acceptance of these Conditions, or (ii) failure to reject these Conditions in writing by specifically naming and rejecting these Conditions in their entirety within seven (7) days after receipt of these Conditions as contained, referenced, or incorporated in a Seller acknowl-

TERMS AND CONDITIONS CONTINUED

edgment, bill of lading, invoice or any other writing (including, without limitation, electronic correspondence).

These Conditions, together with the Echo acknowledgment, bill of lading, invoice or other writing (including electronic correspondence) from Echo that accompanies, contains, incorporates or references these Conditions, comprise the entire agreement between the parties, and supersede all prior or contemporaneous understandings, agreements, negotiations, representations and warranties, and communications, both written and oral.

These Conditions prevail over any of Purchaser's general terms and conditions of purchase regardless whether or when Purchaser has submitted its purchase order or such terms.

No additional or different conditions, whether contained in a purchase order or any other communication from Purchaser (whether written or oral and whether previously given or later asserted), shall be binding on Echo unless specifically agreed to in writing by an executive officer of Echo. The failure of Echo to object to such additional or different conditions shall not be a waiver of these Conditions or an acceptance of such additional or different conditions. Fulfillment of Purchaser's order does not constitute acceptance of any of Purchaser's terms and conditions and does not serve to modify or amend these Conditions.

Purchaser's modification or amendment of, or addition to, these Conditions or any order accepted by Echo shall not bind Echo unless such modification, amendment, or addition is in writing and signed by an executive officer of Echo.

Payment methods

- Net 30 on approved credit
- All major credit cards accepted
- Wire transfer, check or bank draft

Minimum orders

- US \$75.00
- Full bag quantities on plugs & caps
- Case quantities on selected tape products
- Minimum orders stated on custom or special order products

Returns

- 15% restocking fee on standard items.
- Store credit will be issued for all returns.
- Purchaser must use any store credit (net of the applicable restocking fee) toward future purchases of products within 12 months of Echo's issuance of the credit; any store credit not so used within 12 months is cancelled and of no further force or effect.
- All returns must be accompanied by an RMA# issued by the Echo office where the purchase was made.
- All claims must be made within 15 days of the invoice date. Custom & special orders may not be returned, unless defective.
- Echo will not honor or process any RMAs or Credits after 90 days from the original invoice date.

Freight

F.O.B. Echo any location

Credit

Echo reserves the right to charge 2% per month on any outstanding balances beyond the customer's terms. Should action be required to enforce payment of any past due account, the customer is to pay all costs, including but not limited to, court costs, attorneys' fees, finance charges, and collection agency charges that may be incurred or expended. Returned checks will be charged a \$25.00 fee.

All accounts that are more than sixty (60) days past due will be handled on a C.O.D. or credit card basis until current. Echo reserves the right to suspend or terminate any business transactions with any account which is more than sixty (60) days past due or beyond their credit limit.

Risks of Use

The uses to which Echo's products are put are solely the discretion & responsibility of the purchaser or user. Purchaser assumes any and all liability arising out of, or in any way connected with the use of such products & hereby agrees to indemnify, defend and hold Echo harmless for such liability, including from and against all losses, damages and expenses, including without limitation attorneys' fees and costs, arising out of any claim or demand for any such liability. Samples of most Echo products are available at no charge for test evaluation, but no such samples or evaluation shall alter these Conditions in any way. The use of any sample or model in connection with a sale of goods is for illustrative purposes only and does not constitute a warranty that the goods will conform to the sample or model. Purchaser assumes all responsibility for testing the compatibility and capacity of its products with goods sold by Echo.

Insurance

Purchaser shall name Echo as an additional insured under its commercial general liability insurance, which shall include products-completed operations coverage. Such insurance shall be primary and shall not contribute with any other insurance available to Echo. Echo shall not be responsible for any deductible or self-insured retention in connection with such insurance; and Purchaser shall be solely responsible for paying any such deductible or self-insured retention on Echo's behalf. Upon request, Purchaser shall provide evidence of such insurance satisfactory to Echo.

Warranties

Echo's products are guaranteed to be free from defective material or workmanship for a period of 90 days from the date of shipment. The Echo office where the order was placed shall inspect and determine whether products are defective.

Other than as expressly stated herein, Echo makes no representations, warranties or guaranties of any kind. ECHO EXPRESSLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Remedies

The exclusive remedy for losses or damages resulting from the sale of products by Echo is limited to, at Echo's election, one of the following: (i) return of defective products and repayment of the purchase price, or (ii) replacement of defective products. In no event shall Echo be liable for punitive, special, incidental, or consequential losses or damages.

Governing Law and Jurisdiction

This contract shall be governed by the laws of the State of Indiana, without regard to conflict of laws issues. Any dispute arising out of or relating to these Conditions or any products purchased from Echo shall be brought exclusively in the state or federal courts of Indiana.

INDUSTRIES SERVED

Echo products are used in a number of different industries as part of the manufacturing process as well as part of the finished product.



AUTOMOTIVE

Echo's high-quality products have performed in some of the most popular vehicles around the world.



AGRICULTURE

We have partnered with both large and small manufacturers of tractors, planters, combines, balers, cultivators, and sprayers.



HEAVY MACHINERY

Echo's extensive product lines in masking, hanging, OEM components, and protection serve the heavy equipment industry.



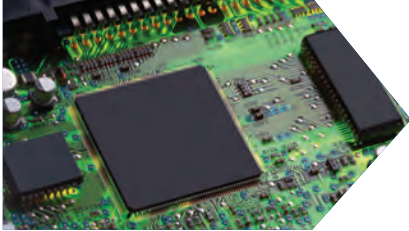
POWERSPORT

Echo has extension experience in providing masking and rubber/plastic components to powersport manufactures of motorcycles, ATVs, and side-by-sides.



MARINE

We have partnered with many major marine companies worldwide providing specialized rubber and plastic components such as engine covers.



ELECTRONICS

Echo has key engineering, production, and warehousing capabilities to support the country's top electronics manufacturers.



Echo Engineering and Production Supplies, Inc.

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AMMEX PLASTICS

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fax: 734.241.9632

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Milpitas, CA 95035
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fax: 408.945.0336
toll-free: 888.echo.365

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