

Chemical Resistance Chart for Plastic Labware

Please see page 428 for table notes and guide to abbreviations.

CHEMICAL	LDPE 20°C	HDPE 20°C	PP 20°C	PMP 20°C	PMMA 20°C	PC 20°C	PVC 20°C	PS 20°C
Acetaldehyde	G	G	G	G	G	L	G	U
Acetamide, Sat.	E	E	E	E	E	U	U	E
Acetic Acid, 50%	E	E	E	E	N	E	E	G
Acetic Anhydride	U	L	G	E	N	U	U	U
Acetone	G	U	E	E	N	U	U	U
Acetonitrile	E	E	L	L	N	U	U	U
Acrylonitrile	E	E	L	L	N	U	U	U
Adipic Acid	E	E	E	E	G	E	E	E
Alanine	E	E	E	E	E	U	U	E
Allyl Alcohol	E	E	E	E	N	G	G	G
Aluminum Hydroxide	E	E	E	E	G	L	E	G
Aluminum Salts	E	E	E	E	E	E	E	G
Amino Acids	E	E	E	E	E	E	E	E
Ammonia	E	E	E	E	G	U	E	G
Ammonium Acetate, Sat.	E	E	E	E	E	E	E	E
Ammonium Glycolate	E	E	E	E	E	G	E	E
Ammonium Hydroxide, 30%	E	E	E	E	E	U	E	G
Ammonium Oxalate	E	E	E	E	E	E	E	E
Ammonium Salts	E	E	E	E	E	E	E	G
Amyl Chloride	U	L	U	U	E	U	U	U
Aniline	E	E	G	U	N	L	U	U
Aqua Regia	U	U	U	U	F	U	U	U
Benzaldehyde	E	G	E	E	F	L	U	U
Benzene	U	U	U	G	N	U	U	U
Benzoic Acid, Sat.	E	E	E	E	E	E	E	G
Benzyl Acetate	E	E	E	E	N	L	U	U
Benzyl Alcohol	U	L	U	U	N	U	G	U
Bromine	U	L	U	U	N	L	G	U
Bromobenzene	U	U	U	U	N	L	U	U
Bromoform	U	U	U	U	N	U	U	U
Butadiene	U	L	U	U	G	U	L	U
Butyl Chloride	U	U	U	L	N	U	L	U
Butyl Acetate	G	G	G	G	U	U	U	U
Butyl Alcohol	E	E	E	E	L	G	G	E
Butyric Acid	U	L	U	U	N	L	G	U
Calcium Hydroxide, Conc.	E	E	E	E	G	U	E	G
Calcium Hypochlorite, Sat.	E	E	E	E	G	L	G	G
Carbazole	E	E	E	E	N	U	U	U
Carbon Disulfide	U	U	U	U	F	U	U	U
Carbon Tetrachloride	L	G	G	E	N	U	G	U
Cellosolve Acetate	E	E	E	E	L	L	U	U
Chlorobenzene	U	U	U	L	N	U	U	U
Chlorine, 10% (Moist)	G	G	L	E	E	G	E	U
Chloroacetic Acid	E	E	E	E	N	L	L	G
Chloroform	L	L	U	U	F	U	U	U
Chromic Acid, 50%	E	E	G	G	F	L	E	L
Citric Acid, 10%	E	E	E	E	E	E	G	E
Cresol	U	L	G	G	N	U	U	U
Cyclohexane	U	L	L	U	N	E	L	U
Cyclohexanone	U	L	L	G	N	U	U	U
Cyclopentane	U	L	L	G	N	U	L	U
Diacetone Alcohol	L	E	E	E	N	U	U	G
Diethyl Benzene	U	U	U	U	N	L	U	U
Diethyl Ether	U	L	U	U	F	U	L	U
Diethyl Ketone	U	U	G	L	N	U	U	U
Diethyl Malonate	E	E	E	E	NT	L	G	U
Diethylamine	U	L	G	L	G	U	U	G
Diethylene Glycol	E	E	E	E	E	G	U	G
Diethylene Glycol Ethyl Ether	E	E	E	E	E	L	L	U
Dimethyl Acetamide	L	E	E	E	E	U	U	U
Dimethyl Formamide	E	E	E	E	N	U	L	U
Dimethylsulfoxide	E	E	E	E	NT	U	U	E
Dioxane	G	G	G	L	N	U	L	U
Dipropylene Glycol	E	E	E	E	E	G	G	E
Ether	U	L	U	U	F	U	L	U
Ethyl Acetate	E	E	E	L	N	U	U	U
Ethyl Alcohol (Absolute)	E	E	E	E	G	E	E	L
Ethyl Benzene	U	U	U	U	N	U	U	U

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CHEMICAL	LDPE 20°C	HDPE 20°C	PP 20°C	PMP 20°C	PMMA 20°C	PC 20°C	PVC 20°C	PS 20°C
Ethyl Benzoate	L	G	G	G	N	U	U	U
Ethyl Butyrate	G	G	G	L	N	U	U	U
Ethyl Chloride, Liquid	L	L	L	L	N	U	U	U
Ethyl Cyanoacetate	E	E	E	E	N	U	U	G
Ethyl Lactate	E	E	E	E	F	L	L	L
Ethylene Chloride	G	G	L	U	N	U	U	U
Ethylene Glycol	E	E	E	E	E	G	E	E
Ethylene Glycol Methyl Ether	E	E	E	E	E	L	L	U
Ethylene Oxide	L	G	L	L	E	L	L	U
Fatty Acids	E	E	E	E	E	G	E	E
Fluorides	E	E	E	E	N	E	E	G
Fluorine	L	G	L	L	N	G	E	U
Formaldehyde, 40%	E	E	E	E	E	E	G	U
Formic Acid, 98-100%	E	E	E	E	N	L	L	U
Freon TF	E	E	E	L	G	G	L	L
Fuel Oil	L	G	E	G	G	E	E	U
Gasoline	L	G	G	G	G	E	G	U
Glutaraldehyde (Disinfectant)	E	E	E	L	G	E	E	E
Glycerine	E	E	E	E	E	E	E	E
Hexane	U	G	G	L	E	L	G	U
Hydrazine	U	U	U	U	N	U	U	U
Hydrochloric Acid, 35%	E	E	E	E	E	U	G	L
Hydrofluoric Acid, 48%	E	E	E	E	U	U	G	U
Hydrogen Peroxide, 90%	E	E	E	E	U	E	E	U
Iodine Crystals	U	U	L	E	N	U	U	U
Isobutyl Alcohol	U	E	E	G	F	E	E	G
Isopropyl Acetate	G	E	G	G	N	U	U	U
Isopropyl Alcohol	E	E	E	E	F	E	E	E
Isopropyl Benzene	L	G	L	U	N	U	U	U
Isopropyl Ether	U	U	U	U	F	U	U	U
Jet Fuel	L	L	L	L	G	U	U	G
Kerosene	L	G	G	G	G	E	E	U
Lacquer Thinner	U	L	L	E	N	U	U	U
Lactic Acid, 85%	E	E	E	E	E	E	G	G
Mercury	E	E	E	E	E	U	E	E
Methoxyethyl Oleate	E	E	E	E	E	L	E	U
Methyl Acetate	L	L	G	E	N	U	U	U
Methyl Alcohol	U	U	E	U	F	G	U	L
Methyl Ethyl Ketone	U	U	E	U	N	U	U	U
Methyl Isobutyl Ketone	U	U	G	L	N	U	U	U
Methyl Propyl Ketone	G	E	G	L	N	U	U	U
Methyl-t-butyl Ether	U	L	L	E	G	U	U	U
Methylene Chloride	L	E	L	E	N	U	U	U
Mineral Oil	G	E	E	E	E	E	E	E
Mineral Spirits	L	L	L	E	E	U	G	G
Nitric Acid, 1-10%	E	E	E	E	E	E	E	L
Nitric Acid, 50%	G	G	L	L	F	G	G	U
Nitric Acid, 70%	L	G	U	L	G	U	U	U
Nitrobenzene	U	L	U	U	N	U	L	U
Nitromethane	U	L	U	U	N	U	U	U
n-Octane	E	E	E	E	E	G	L	U
Ozone	E	E	E	E	E	E	E	L
Perchloric Acid	G	G	G	G	N	U	U	G
Perchloroethylene	U	U	U	U	F	U	U	U
Phenol, Liquid	U	U	U	U	N	U	U	U
Phosphoric Acid, 85%	E	E	E	E	F	E	E	E
Picric Acid	U	U	U	E	N	U	U	G
Pine Oil	G	E	E	G	E	G	U	U
Potassium Hydroxide, Conc.	E	E	E	E	E	U	E	G
Propane Gas	U	L	U	U	E	L	E	U
Propionic Acid	L	E	U	U	N	U	G	G
Propylene Glycol	E	E	E	E	E	G	L	E
Propylene Oxide	E	E	E	E	N	G	L	U
Resorcinol, Sat.	E	E	E	E	N	G	L	G
Salicylaldehyde	E	E	E	E	G	G	L	U
Salicylic Acid, Sat.	E	E	E	E	F	E	G	E
Salt Solutions, Metallic	E	E	E	E	E	E	E	G
Silicone Oil	E	E	E	E	E	E	E	E

Chemical Resistance Chart for Plastic Labware

CHEMICAL	LDPE 20°C	HDPE 20°C	PP 20°C	PMP 20°C	PMMA 20°C	PC 20°C	PVC 20°C	PS 20°C
Silver Acetate	E	E	E	E	E	E	G	G
Silver Nitrate	E	E	E	E	E	E	E	G
Sodium Acetate, Sat.	E	E	E	E	E	E	G	G
Sodium Hydroxide, 1%	E	G	E	E	E	E	E	G
Sodium Hydroxide, 50% to Sat	G	G	E	E	E	U	U	E
Sodium Hypochlorite, 15%	E	E	G	E	E	G	E	E
Stearic Acid, Crystals	E	E	E	E	E	E	E	E
Sulfuric Acid, 60%	E	E	E	E	G	G	E	G
Sulfuric Acid, 98%	G	G	L	G	N	U	G	U
Sulfur Dioxide, Liquid	U	U	U	U	N	G	L	U
Sulfur Salts	L	G	L	L	G	L	U	U
Tartaric Acid	E	E	E	E	E	E	E	G
Tetrahydrofuran	L	G	G	L	N	U	U	U
Thionyl Chloride	U	U	U	U	N	U	U	U
Toluene	L	L	L	L	N	L	U	U
Tributyl Citrate	G	E	G	G	F	U	U	U
Trichloroacetic Acid	L	L	L	E	N	L	L	L
Trichloroethane	U	L	U	U	N	U	U	U
Trichloroethylene	U	L	U	U	N	U	U	U
Tris Buffer, Solution	E	E	E	E	E	G	G	G
Turpentine	L	G	G	L	F	L	G	U
Undecyl Alcohol	E	E	E	E	N	G	E	G
Urea	E	E	E	E	E	G	G	E
Vinylidene Chloride	U	L	U	U	N	U	U	U
Xylene	G	L	L	L	N	U	U	U
Zinc Stearate	E	E	E	E	E	E	E	E

Resin Codes:

LDPE Low-Density Polyethylene

PMMA..... Acrylic

HDPE High-Density Polyethylene

PC Polycarbonate

PP Polypropylene

PVC Polyvinyl Chloride

PMP..... Polymethylpentene

PS..... Polystyrene

Chemical Resistance: This chemical resistance chart is a general guide only. Because of the variety of factors that can affect the chemical resistance of a plastic product, it is recommended that the user make tests under expected use conditions. Chemicals may affect the strength, appearance, color, dimensions, flexibility or weight of plastics. Variable factors like temperature, pressure, chemical concentration, length of exposure, and combinations of chemical reagents can affect the chemical resistance of plasticware. As temperature increases, resistance to chemical attack decreases. Environmental stress cracking differs from chemical attack and is caused by the combined factors of tensile stress, the inherent susceptibility of the plastic to stress crack and stress-cracking agents. Such agents as detergents, lubricants, plating additives and brighteners and surface-active agents, even in small concentrations, may cause cracking.

Letter Codes:

E=Excellent

*No damage after 30
days of constant exposure*

NT=Not Tested

G=Good

*Little or no damage after 30
days of constant exposure*

U=Unsatisfactory

*Immediate damage, not
recommended*

L=Limited

*Some effect after 7
days of constant exposure*

Physical Properties of Resins

	Max. Use Temp. (°C)	Brittleness Temp. (°C)	Transparency	Flexibility
LDPE	80	-100	Translucent	excellent
HDPE	120	-100	Translucent	rigid
PP	135	0	Translucent	rigid
PMP	175	+20	Clear	rigid
PMMA	90	-60	Clear	rigid
PC	135	-135	Clear	rigid
PVC	70	-30	Clear	rigid
PS	90	+20	Clear	rigid

	Sterilization* Autoclaving	Sterilization* Gas	Sterilization* Dry Heat	Sterilization* Disinfectants	Specific Gravity
LDPE	No	Yes	No	Yes	0.92
HDPE	No	Yes	No	Yes	0.95
PP	Yes	Yes	No	Yes	0.90
PMP	Yes	Yes	Yes	Yes	0.83
PMMA	No	No	No	Some	1.18
PC	Yes	Yes	No	Yes	1.20
PVC	No	Yes	No	Yes	1.34
PS	No	Yes	No	Some	1.05

* Sterilization:

- **A Autoclaving** - Clean and rinse item with distilled water before autoclaving. Certain chemicals which have no appreciable effect on resins at room temperature may cause deterioration at autoclaving temperatures unless removed with distilled water beforehand.
- **Gas** - Ethylene oxide.
- **Dry Heat** - at 160°C.
- **Disinfectants** - Benzalkonium chloride, formalin, ethanol, etc.

Cleaning and Sterilization Guide to Plastic Labware

Scienceware® plastic labware is designed to provide many years of useful service under normal laboratory conditions. The physical properties and chemical resistance of the plastics used in the manufacture of Scienceware® plastic labware are provided for your convenience.

In addition, the following recommendations for cleaning and sterilization of plastic labware are designed to ensure their continuous, effective performance.



Cleaning:

1. Wash in a mild, non-alkaline detergent. We recommend the use of Bel-Art Aquet® Detergent F17094 (Catalog page 70).
2. Next, rinse thoroughly in tap water.
3. Final rinse in distilled water to eliminate all traces of residue.
 - To avoid damage to plastic products, do not utilize abrasive materials such as cleansers or scouring pads. Polycarbonate (PC) items should not be exposed to strong alkaline cleaning agents, as these agents will cause crazing and cracking of the polycarbonate surface.
 - If ultrasonic cleaners are employed, avoid direct contact with transducer diaphragm. When special cleaning is necessary, such as the removal of grease or oil, organic solvents (e.g., acetone, alcohols) may be applied. Use these with caution, as more than brief exposure may affect the polyolefins. Rinse again thoroughly before use. For PS or PVC, only an alcohol-based solution should be utilized. Do not use organic solvents when cleaning acrylics.
 - To remove organic matter from plastic labware, sodium hypochlorite solutions (bleaches) are suggested. A cleaning agent made of chromic acid, though effective, will eventually cause plastic to become brittle.

Laboratory Washing Machines:

Laboratory washing machines are a convenient method of cleaning most types of plastics with the exception of low-density polyethylene, acrylic and polystyrene. Items manufactured of these plastics are adversely affected by the heat involved. In addition, the strength of polycarbonate (PC) will be weakened by repeated exposure to washers. Polycarbonate labware utilized in high stress situations should be washed by hand to ensure effective performance.

When laboratory washing machines are used, water temperature should be set at 57°C (135°F) maximum. To avoid damage or abrasion, labware should be weighted down so it stays firmly in place. Exposure to the metal spindles of the washers can be eliminated by covering them with plastic tubing.

Sterilization:

Always clean items and rinse thoroughly in distilled water prior to autoclaving. To avoid pressure build-up, set closures upon containers loosely without threading. Carboys and spigots should be autoclaved empty to prevent leakage. Autoclave at 121°C (250° F) for twenty minutes to ensure sterility. Ethylene-oxide or chemical disinfectants are recommended for PVC.

Chemical disinfectants such as benzalkonium chloride, formalin, ethanol, iodophor and quaternary ammonium compounds may be used. When choosing ethyleneoxide (ETO) gas sterilization, a seven to fourteen day quarantine period is necessary for the assurance of no ETO residue.

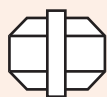
Microwaving:

All plastic materials allow transmission of microwaves; however, please refer to the Physical Properties Chart (page 429) before using plastic containers in a microwave, as the contents in the plastic container may exceed the actual plastic container's heat resistance.

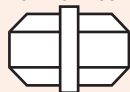
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Spinbar® Octagon with Pivot Ring

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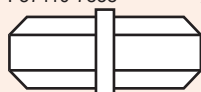
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F37110-5838 $\frac{5}{8} \times \frac{3}{8}$ "



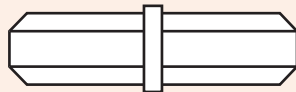
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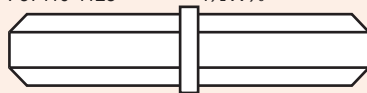
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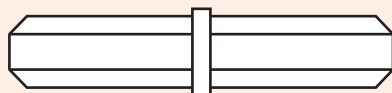
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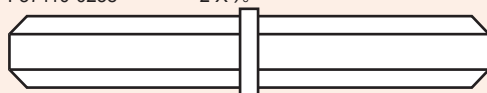
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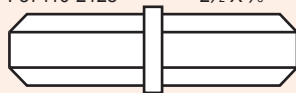
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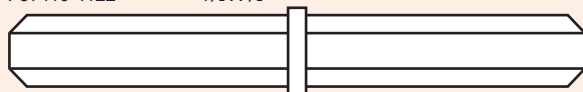
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F37110-2128 $2\frac{1}{2} \times \frac{3}{8}$ "



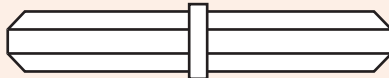
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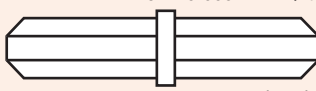
F37110-0003 $3 \times \frac{1}{2}$ " (Also available in Spinfinity™)



F37110-0212 $2\frac{1}{2} \times \frac{5}{16}$ "



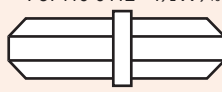
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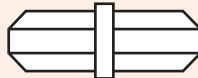
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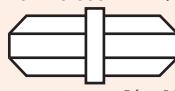
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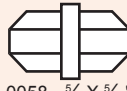
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F37110-0001 $1 \times \frac{5}{16}$ "



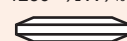
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F37110-0058 $\frac{5}{8} \times \frac{5}{16}$ "



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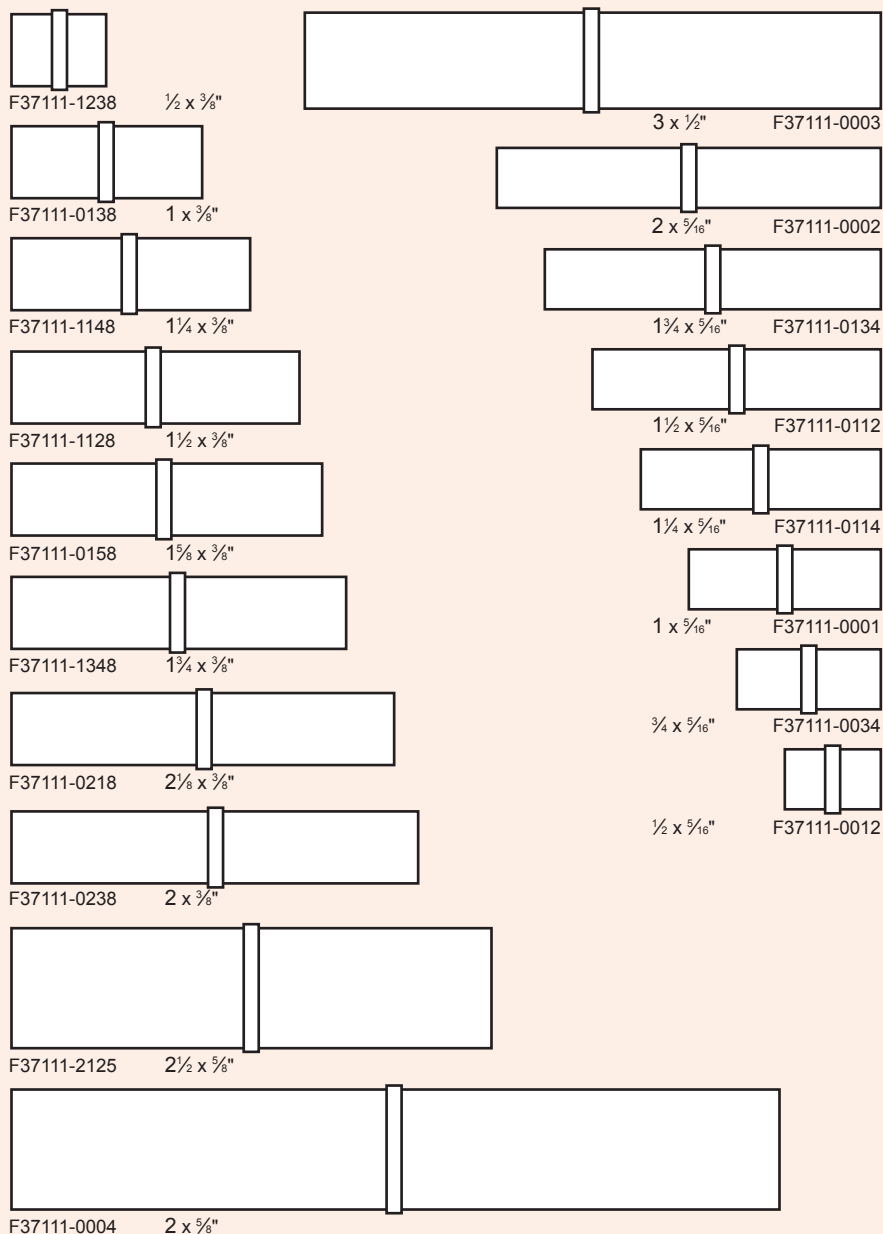
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*No Pivot Ring

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Spinbar® Cylindrical with Removable Pivot Ring

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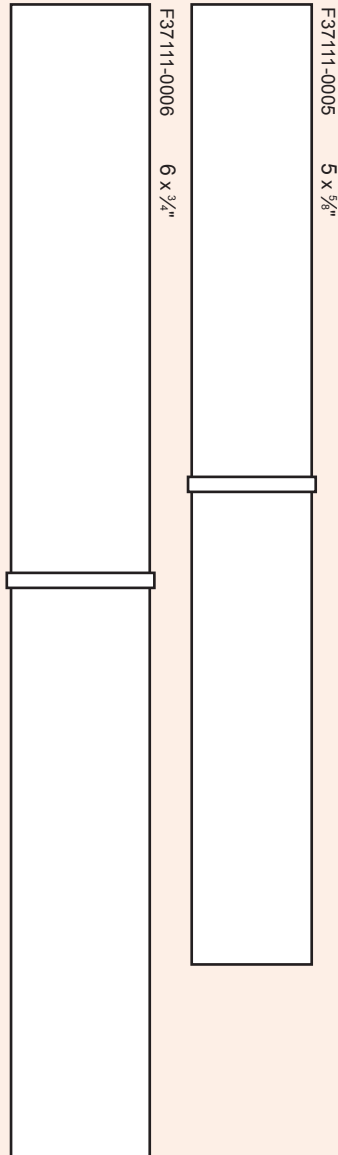


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Spinbar® Cylindrical with Removable Pivot Ring

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Spinbar® Round with Tapered Ends

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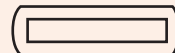
F37113-0208 20 x 8mm F37113-0409 40 x 9mm
F37113-0309 30 x 9mm F37113-0509 50 x 9mm

Spinbar® Round Pyrex® Glass Bars

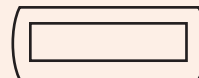
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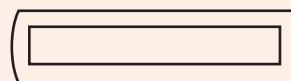
F37101-0012 1/2 x 3/8"



F37101-7814 7/8 x 1/4"



F37101-0001 1 x 3/8"



F37101-0112 1 1/2 x 3/8"

Spinbar® Magnetic Stirring Bar Actual Size Guide

Spinbar® Octagon, Color-Coded

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$\frac{1}{2} \times \frac{1}{8}$ "

F37109-0034* - Red -0035 - Yellow -0036 - Blue
*No Pivot Ring



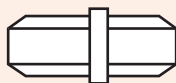
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F37109-0001 - Red -0002 - Yellow -0003 - Blue



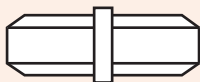
$\frac{5}{8} \times \frac{5}{16}$ "

F37109-0004 - Red -0005 - Yellow -0006 - Blue



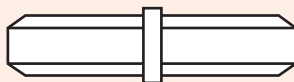
$\frac{7}{8} \times \frac{5}{16}$ "

F37109-0007 - Red -0008 - Yellow -0009 - Blue



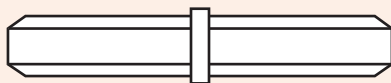
$1 \times \frac{5}{16}$ "

F37109-0010 - Red -0011 - Yellow -0012 - Blue



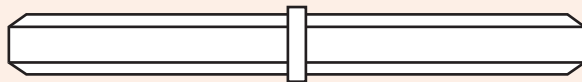
$1\frac{1}{2} \times \frac{5}{16}$ "

F37109-0019 - Red -0020 - Yellow -0021 - Blue



$2 \times \frac{5}{16}$ "

F37109-0028 - Red -0029 - Yellow -0030 - Blue



$3 \times \frac{1}{2}$ "

F37109-0031 - Red -0032 - Yellow -0033 - Blue

Spinbar® Magnetic Stirring Bar Actual Size Guide

Spinbar® Polygon with Pivot Ring

37122 series, page 379



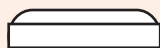
F37120-0125 12 x 5mm



F37120-0010 10 x 6mm



F37120-0015 15 x 6mm



F37120-0020 20 x 8mm



F37120-0025 25 x 8mm



F37120-0030 30 x 8mm



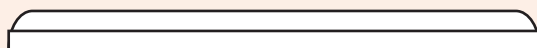
F37120-0040 40 x 8mm



F37120-0050 50 x 8mm



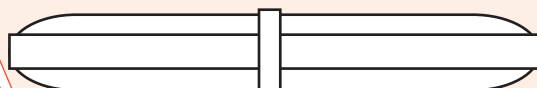
F37120-0060 60 x 7mm



F37120-0070 70 x 10mm



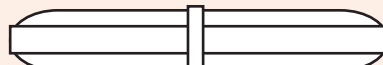
F37120-0080 80 x 10mm



F37122-0070 70 x 10mm



F37122-0060 60 x 10mm



F37122-0050 50 x 8mm



F37122-0045 45 x 8mm



F37122-0040 40 x 8mm



F37122-0035 35 x 6mm



F37122-0025 25 x 6mm



F37122-0020 20 x 6mm



F37122-0012 12 x 4.5mm

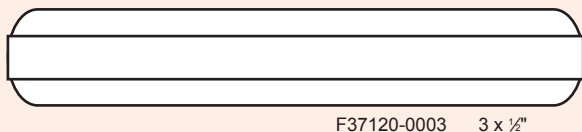
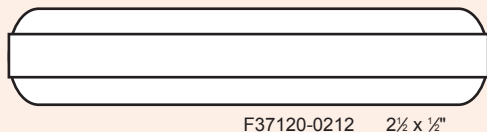
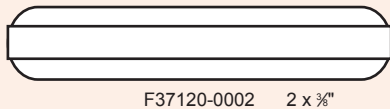
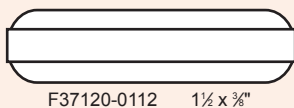
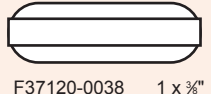
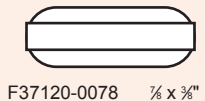
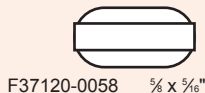
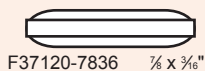
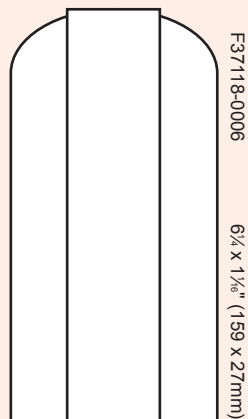
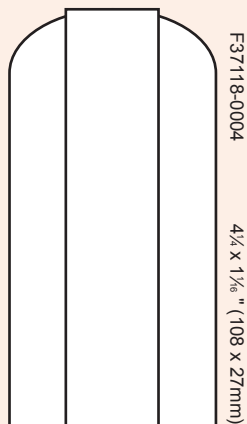
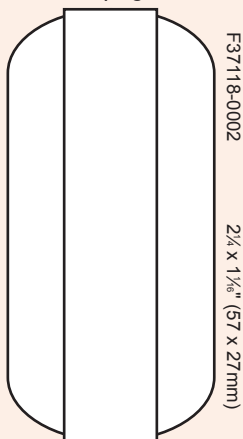
Spinbar® Polygon Metric Units, No Pivot Ring

37120 series, page 379

Spinbar® Magnetic Stirring Bar Actual Size Guide

Spinbar® Giant Polygon - No Pivot Ring

37118 series, page 380

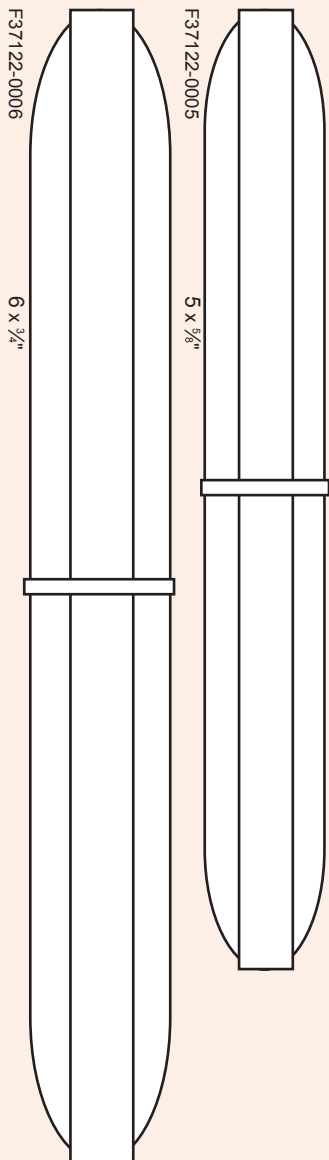


Spinbar® Polygon
English Units, No Pivot Ring
37120 series, page 379

Spinbar® Magnetic Stirring Bar Actual Size Guide

Spinbar® Giant Polygon with Pivot Ring

37122 series, page 380



Spinvane® Bars

page 387

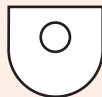
F37134-0000



F37135-0000



F37136-0000



F37137-0000

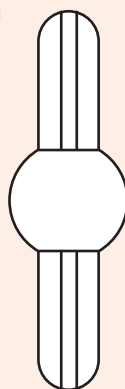


Spinbar® Saturn

37116 series, page 383

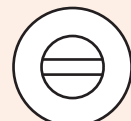
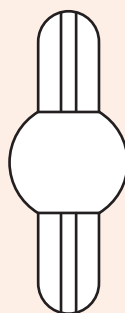
F37116-0003

50mm



F37116-0002

40mm



0.615" Diameter

Spinbar® Magnetic Stirring Bar Actual Size Guide

Spinbar® Micro (Flea) Bars

37121 series, page 384

F37121-0001 - Red		-0002 - Yellow	-0003 - Blue	8 x 1.5mm
F37121-0004 - Red		-0005 - Yellow	-0006 - Blue	15 x 1.5mm
F37121-0007 - Red		-0008 - Yellow	-0009 - Blue	2.0 x 2.0mm
F37121-0010 - Red		-0011 - Yellow	-0012 - Blue	5 x 2.0mm
F37121-0013 - Red		-0014 - Yellow	-0015 - Blue	7 x 2.0mm
F37121-0016 - Red		-0017 - Yellow	-0018 - Blue	3 x 3.0mm
F37121-0019 - Red		-0020 - Yellow	-0021 - Blue	6.4 x 3.0mm
F37121-0022 - Red		-0023 - Yellow	-0024 - Blue	10 x 3.0mm
F37121-0025 - Red		-0026 - Yellow	-0027 - Blue	12.7 x 3.0mm

Spinwedge® Bars

37123 series, page 381

		
F37123-0001	3/8" width	1/2" length
		
F37123-0002	3/8" width	1" length
		
F37123-0000	1/2" width	1 1/4" length
		
F37123-0003	1/2" width	2" length

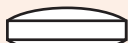
Spinbar® Magnetic Stirring Bar Actual Size Guide

Spinbar® Elliptical (Egg Shaped) Bars

37130 series, page 381



F37130-0038 $\frac{3}{8} \times \frac{3}{16}$ "



F37130-0058 $\frac{9}{16} \times \frac{1}{4}$ "



F37130-0034 $\frac{3}{4} \times \frac{3}{8}$ "
For 10, 25, 50 and 100ml round bottom flasks.



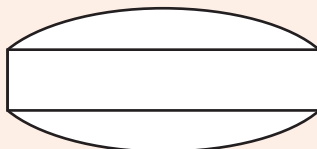
F37130-0001 $1 \times \frac{1}{2}$ "
For 100 and 200ml round bottom flasks.



F37130-0114 $1\frac{1}{4} \times \frac{5}{8}$ "
For 300 and 500ml round bottom flasks.



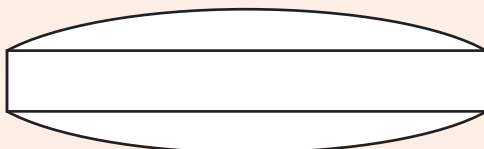
F37130-0112 $1\frac{1}{2} \times \frac{5}{8}$ "
For 300 and 500ml round bottom flasks.



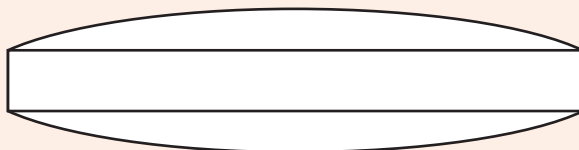
F37130-0158 $1\frac{1}{2} \times \frac{3}{4}$ "
For 500 and 1000ml round bottom flasks.



F37130-0002 $2 \times \frac{3}{4}$ "
For 2000 and 3000ml round bottom flasks.



F37130-0212 $2\frac{1}{2} \times \frac{3}{4}$ "
For 3000 and 5000ml round bottom flasks.



F37130-0003 $3 \times \frac{3}{4}$ "
For 12000 and 22000ml round bottom flasks.

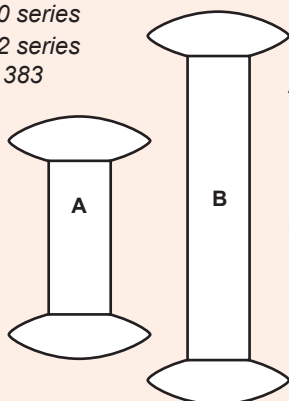
Spinbar® Magnetic Stirring Bar Actual Size Guide

Circulus™ Bars

37170 series

37172 series

page 383

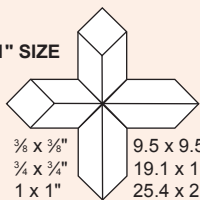


A. 32mm long		
F37170-0000		White
F37170-0001		Red
F37170-0002		Yellow
F37170-0003		Blue
B. 52mm long		
F37172-0000		White
F37172-0001		Red
F37172-0002		Yellow
F37172-0003		Blue

Spinplus™ Bars

37144 series, page 382

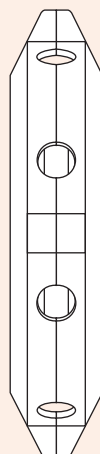
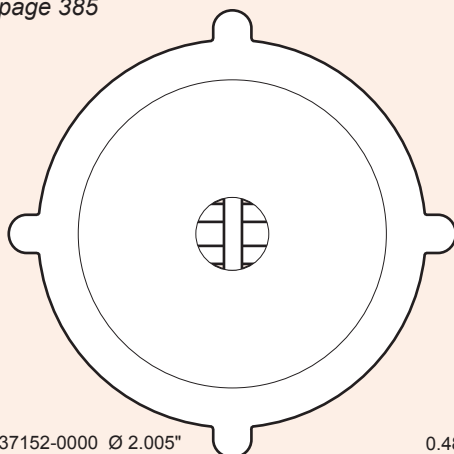
SHOWN IN 1" SIZE
37144-0100



F37144-0038	$\frac{3}{8} \times \frac{3}{8}$ "	9.5 x 9.5mm
F37144-0034	$\frac{1}{4} \times \frac{1}{4}$ "	19.1 x 19.1mm
F37144-0100	1 x 1"	25.4 x 25.4mm
F37144-0114	$1\frac{1}{4} \times 1\frac{1}{4}$ "	32 x 32mm
F37144-0112	$1\frac{1}{2} \times 1\frac{1}{2}$ "	38 x 38mm

Spinbar® Capsule

page 385



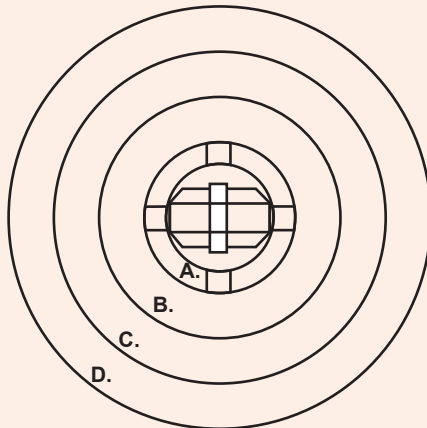
F37152-0000 Ø 2.005"

0.48" Thick

Spinbar® Magnetic Stirring Bar Actual Size Guide

Spinring® Bars

37140 series, page 382



- A. F37140-0005
- B. F37140-0010
- C. F37140-0015
- D. F37140-0020

Stirring bar size $\frac{1}{2} \times \frac{5}{16}$ " ring diameter $\frac{3}{4}$ "
 Stirring bar size $1 \times \frac{5}{16}$ " ring diameter $1\frac{1}{4}$ "
 Stirring bar size $1\frac{1}{2} \times \frac{5}{16}$ " ring diameter $1\frac{3}{4}$ "
 Stirring bar size $2 \times \frac{5}{16}$ " ring diameter $2\frac{1}{4}$ "

Spinbar® Cell Bar

page 388

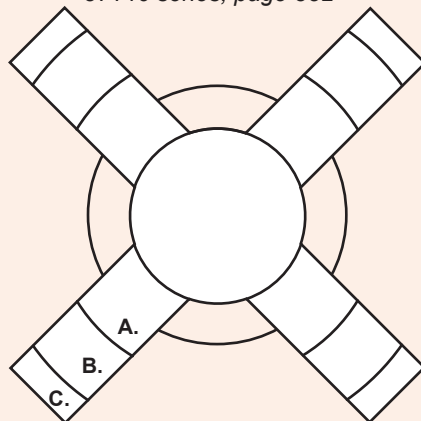
F37150-0000

9 X 8mm



Spinstar® Bars

37146 series, page 382



- A. F37146-0100
- B. F37146-0250
- C. F37146-0400

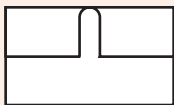
for 100ml beaker, $1\frac{1}{4}$ " diameter
 for 250ml beaker, $2\frac{1}{8}$ " diameter
 for 400ml beaker, $2\frac{3}{4}$ " diameter

Spinbar® Magnetic Stirring Bar Actual Size Guide

Spinfin® Bars

37125 series, page 386

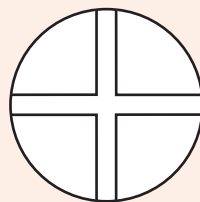
PROFILE VIEW



F37125-0058
3/8" diameter
1/2" height



F37125-0034
3/4" diameter
1/2" height



F37125-0078
7/8" diameter
1/2" height



F37125-0014
3/16" diameter
3/8" height



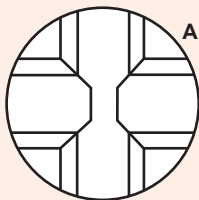
F37125-0038
3/8" diameter
3/8" height



F37125-0012
1/2" diameter
1/2" height

Double Spinfin® Bars

37126 series, page 386



A.



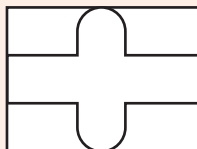
B.



C.

CAT NO.	DIAMETER	HEIGHT
A. F37126-0001	1"	3/4"
B. F37126-0034	3/4"	3/8"
C. F37126-0012	1/2"	1/2"

PROFILE VIEW

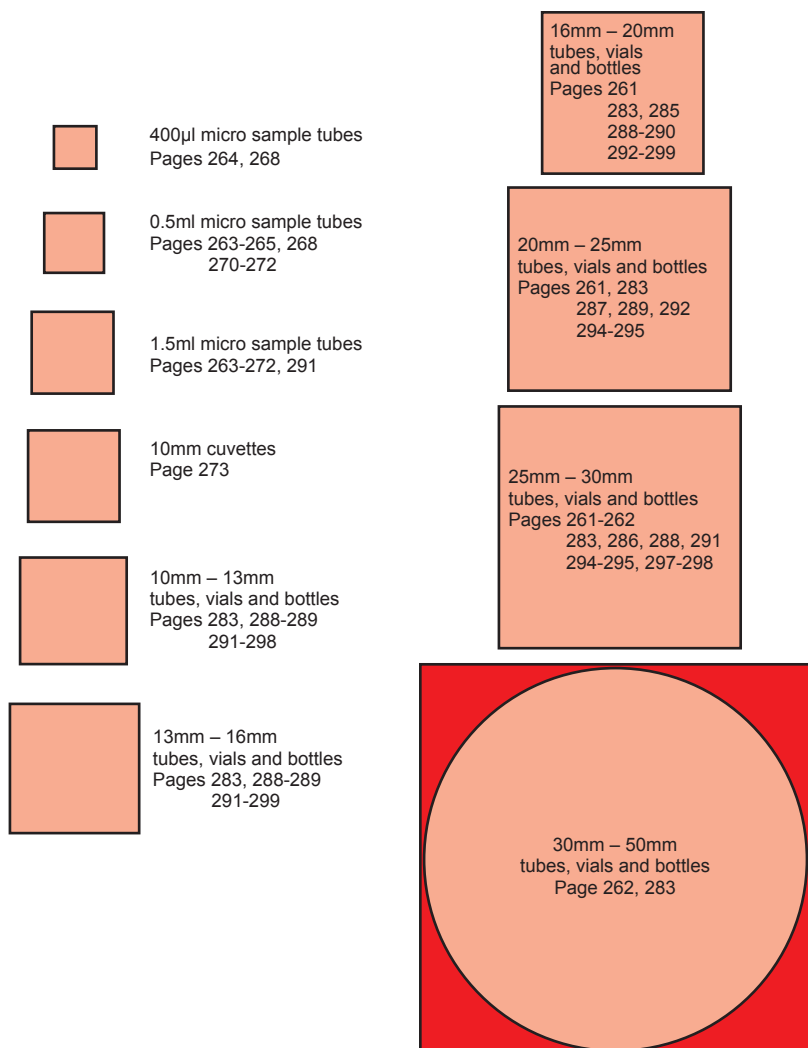


Rack Selection Guide – Tubes, Vials & Bottles

Use this sizing chart to determine the rack that best fits your tubes, bottles, vials, etc. Shaded area is the size of the rack opening. Tube bottom should fit within the shaded area. Catalog pages for racks designed to fit each tube or bottle size are located next to each schematic.

Scienceware® racks are manufactured from the highest quality materials and assure a precise fit for your tubes, bottles or vials. Choose from Poxygrip® coated wire racks, No-Wire™ polypropylene supports (racks) or any of our other molded plastic racks, each with unique features designed to meet your specific needs. Most Scienceware® racks are autoclavable, and many racks either stack or “knock down” for convenient storage.

If you have customized needs for a unique rack design that requires a special size, material or configuration, please contact us at 1.800.4BELART for a custom manufacturing quote.



Key to Icons

For your convenience, the following symbols, or icons, are used throughout this catalog. They serve to identify the areas in the lab where the product(s) can be used, safety/environmental hazards, processes and component materials.



Relates to products involving radioactive materials.



Indicates a Biohazard; usually found on waste containers.



Indicates that a product may be autoclaved.



Indicates that the product is CE Certified.



Indicates that the product is ETL listed.



High Density Polyethylene



Low Density Polyethylene



Polycarbonate



Polyethylene



Polypropylene



Polystyrene



Polyvinyl Chloride



Polymethylpentene