



Adhesives & Repair Materials

Freeman TUF® Repair and Build-Up Materials

Formulated and manufactured by Freeman, TUF is a complete line of quality polyester repair & build-up materials which features:

- Low shrinkage
- Fast setting, sandable in 15 minutes
- Good wear resistance
- Bonds to most any surface
- "No-sag" properties
- Good chemical resistance



TUF Specifications

	Mix Ratio Resin to Hardener by wt.	Gel Time (minutes)	Hardness (Shore D @ 24 hrs)	Viscosity (cps@77°F)	Density (g/cc)	Available Colors
TUF-Fil	100:1.5	11	81	912,000	1.74	Mahogany, Pine, Gray
TUF-Fil White	100:1.5	9	95	400,000	2.50	White
TUF-Carv	100:1.5	10	71	581,000	1.14	Mahogany, Pine, White
TUF-Fil Hi-Temp	100:2.0	9	82	830,000	1.68	Dark Gray
Quik-Fil	100:1.5	11	70	208,000	0.89	Brown



TUF-Fil®

Freeman TUF-Fil closely matches mahogany and other hardwoods in hardness. It is suitable for high wear applications, and when fully cured, TUF-Fil may be scraped, filed, tapped and sanded. While it is still rubbery, it can be carved using woodworking tools. Tuf-fil Gray (Aluminum) makes a great repair material for gray fixture boards.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
053405	TUF-Fil Mahogany	Quart	2.8
053410	TUF-Fil Pine	Quart	2.8
053415	TUF-Fil Gray (Aluminum)	Quart	2.8
053425	TUF-Fil Mahogany	Gallon	11.5
053430	TUF-Fil Pine	Gallon	11.5
053435	TUF-Fil Gray (Aluminum)	Gallon	11.5
053428	TUF-Fil Mahogany	3 Gallon Cartridge	31.5
053433	TUF-Fil Pine	3 Gallon Cartridge	31.5
053437	TUF-Fil Gray (Aluminum)	3 Gallon Cartridge	31.5

TUF-Fil® White

TUF-Fil White is the hardest of the TUF line of products. It is used for repairing epoxy laminate tooling.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
053420	TUF-Fil White	Quart	3.8
053440	TUF-Fil White	Gallon	12.5
053438	TUF-Fil White	3 Gallon Cartridge	31.5

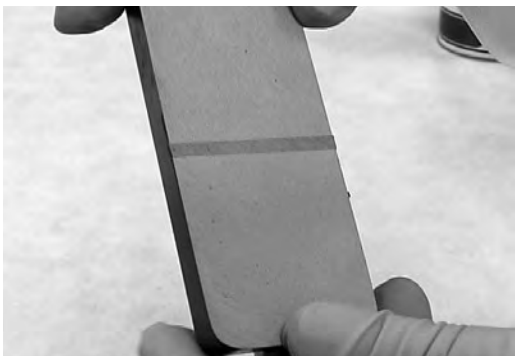
Freeman TUF Repair and Build-Up Materials (CONT'D.)



TUF-Carv®

Freeman TUF-Carv Repair & Build-Up Material is a less dense material than TUF-Fil, closely matching the hardness of pine and jelutong. It is ideal for any job that requires a durable, yet carvable finish. TUF-Carv, when cured, can be carved, sawed, sanded, filed, tapped and machined easily with woodworking tools.

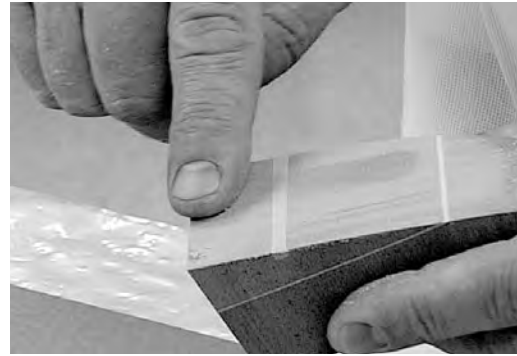
Catalog Number	Description	Availability	Net Wt. (Lbs.)
053205	TUF-Carv Mahogany	Quart	1.75
053210	TUF-Carv Pine	Quart	1.75
053213	TUF-Carv White	Quart	1.75
053215	TUF-Carv Mahogany	Gallon	7
053220	TUF-Carv Pine	Gallon	7
053223	TUF-Carv White	Gallon	7
053225	TUF-Carv Mahogany	3 Gallon Cartridge	21
053230	TUF-Carv Pine	3 Gallon Cartridge	21
053228	TUF-Carv White	3 Gallon Cartridge	21



Hi-Temp TUF-Fil®

Hi-Temp TUF-fil is ideal for the repair, build-up or alteration of tooling that will be subjected to operating temperatures ranging from 150°F to 350°F. It features high viscosity, very good adhesive properties when used on composite tooling, fiberglass, epoxy, polyester, metal, RenShape 550, RenShape 5008, and wood materials and a dark gray coloration compatible with most high temperature tooling.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
053451	Hi-Temp TUF-Fil Dark Gray	Quart	2.5
053452	Hi-Temp TUF-Fil Dark Gray	Gallon	10
053453	Hi-Temp TUF-Fil Dark Gray	3 Gallon Cartridge	30



Quik-Fil

Quik-Fil is a modeling board repair paste designed specifically for the repair, build-up and forming of fillets on medium-density modeling boards. It is similar in hardness to most 30-40 lb density boards and colored brown to match the most popular class of modeling boards. Quik-Fil also features excellent bonding properties with very little sag.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
053441	Quik-Fil Brown	Quart	1.1
053442	Quik-Fil Brown	Gallon	4.4

Cream Hardener

A premium quality white catalyst designed for use with all of the TUF Products. This product may also be used to catalyze other manufacturers' polyester filler products. The bright white color does not significantly change the color of the basic resin.



Catalog Number	Description	Availability
053445	Cream Hardener	1 oz. Tube
053450	Cream Hardener	4 oz. Tube

TUF Pneumatic Dispenser

A heavy duty, cast aluminum dispenser designed specifically for use with 3-gal cartridges of TUF-Fil, TUF-Carv, Econo-Fil, and Dynalite Products.

With this dispenser you have the convenience and economical means of dispensing only the amount of product needed for any job with little to no waste or mess. Its design permits it to be mounted anywhere in your shop for easy accessibility.



Catalog Number	Description
053470	3 Gal. Dispenser For TUF Line
053471	Replacement Spout For TUF-Fil Dispenser
053462	Replacement Gasket For 3 Gallon Dispenser

SEE ALSO:	Product	Page No.
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General Purpose Repair Materials

Polyurethane-Based Repair Materials

Maxim Fast Urethane Adhesive & Repair Material

This is a black, two component urethane that quickly repairs or glues urethane molds, parts, and pattern equipment. It features a 5 minute gel time and may be sanded or machined in 25 minutes. Maxim is packaged in a caulk type tube and uses a standard caulking gun to dispense both components through a static mix nozzle, eliminating measuring and mixing. It is supplied with 2 mixing nozzles, but additional nozzles may be purchased in packs of 12.



Catalog Number	Description	Availability
054285	Maxim Fast Urethane Adhesive	8.45 fl. oz.
054286	Maxim Mixing Nozzles	12-pack

Ren Patch 5169 Foundry Board Repair Paste

A red polyurethane repair material that closely matches Ren Shape 5169 and RenShape 5179 for color, hardness, machinability, and thermal stability. Repaired areas blend very well with the surrounding tool surface and the paste bonds securely to the board.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056622	Ren-Patch 5169	50 ml	0.2

Devcon Flexane® 80 Urethane Putty

This putty formulation of Flexane 80 is an extremely tough repair material and may also be used for lining high wear parts.

Catalog Number	Description	Net Wt. (Lbs.)
054641	Devcon Flexane 80 Urethane Putty	4

Epoxy-Based Repair Materials

Devcon DE087 Wear Resistant Putty

This blended aluminum-filled epoxy putty is used to repair fatigued metal surfaces where exceptional durability and ruggedness is required. This product is used to repair molds at the parting line where metal has been lost or worn and is commonly used to fill voids in castings.

Catalog Number	Description	Mfg. No.	Net Wt. (Lbs.)
054638	Devcon Aluminum Wear-Resistant Putty	DE-087	20

Devcon Aluminum Putty

This aluminum-filled epoxy putty bonds to aluminum and many other metals for dependable non-rusting repairs to castings, machinery and equipment. It is commonly used to fill porosity in aluminum castings, and it can be machined, drilled, or tapped using conventional metalworking tools.

Catalog Number	Description	Mfg. No.	Net Wt. (Lbs.)
054585	Devcon Plastic Aluminum Putty F-1	10610	1
054590	Devcon Plastic Aluminum Putty F-3	10620	3

Devcon Fasmetal™ Putty

This high-performance, alumina-filled epoxy is used for making fast and dependable emergency repairs to leaks in pipes carrying ores, coal, cement, sand, and gravel. It hardens in 5 minutes and is economical and convenient. It can be applied in temperatures as low as 40°F.

Catalog Number	Description	Mfg. No.	Net Wt. (Lbs.)
054643	Devcon Fastmetal Putty	10780	0.75

Devcon Plastic Steel® Putty

The original metal-filled epoxy putty used for hundreds of routine maintenance, production, and tooling applications, especially in areas where welding or brazing would be undesirable or impossible. Bonds to most metals, concrete, and some plastics. It cures at room temperature and forms a tough, durable, metallic mass that can be drilled, tapped, machined, or painted. The 5-Minute Putty is a faster version of the standard Plastic Steel Putty.

Catalog Number	Description	Mfg. No.	Net Wt. (Lbs.)
054555	Devcon Plastic Steel Putty	10110	1
054560	Devcon Plastic Steel Putty	10120	4
054565	Devcon Plastic Steel Putty	10130	25
054582	Devcon 5-Minute Putty	10240	1

Devcon Titanium Putty

Titanium-reinforced epoxy for making repairs to machinery and equipment that can be precision machined. It features excellent temperature resistance (350°F), high compressive strength, and resistance to many chemicals and most acids, bases, solvents, and alkalis.

Catalog Number	Description	Mfg. No.	Net Wt. (Lbs.)
054631	Devcon Titanium Putty	10760	1

Devcon Bronze Putty

Bronze-filled epoxy putty for repairing bronze and brass bushings, shafts, castings and equipment parts. It repairs and rebuilds areas where brazing would be undesirable or impossible and bonds securely to bronze alloys, brass, copper, and ferrous metals. Can be machined, drilled, tapped, or grinded using conventional metalworking tools.

Catalog Number	Description	Mfg. No.	Net Wt. (Lbs.)
054632632	Devcon Plastic Bronze Putty	10260	1

Lab-Metal & Solvent

Lab-Metal is a durable and resilient, air-hardening metal filler ideal for filling sand holes, smoothing rough spots on castings or sealing riveted seams. It can be applied directly from the can or thinned for brush or spray applications. Lab-Metal will bond to metal, wood, plastic, glass, or plaster without the use of special tools and may be milled, drilled, tapped, and sanded smooth.

The standard Lab-Metal formulation withstands temperatures up to 350°F. The High-Temp formulation which can withstand temperatures up to 1000°F. Lab Solvent is a blend of solvents used to thin lab metal for spray or brush applications.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
027335	Lab-Metal	Quart	3
027337	Hi-Temp Lab-Metal	Pint	1.5
027330	Lab Solvent	Pint	1

General Purpose Repair Materials [CONT'D.]

Polyester-Based Repair Materials

Mia Plas-Fil

This is an excellent compound for repairing defects in fiberglass, metal, and wood. Using the cream hardener (included) as the catalyst, this paste material will solidify in approximately 15 minutes and is able to be sanded to a smooth, durable finish.



Catalog Number	Description	Availability	Net Wt. (Lbs.)
412515	Plas-Fil Gallon	Gallon	7.72
412195	Cream Hardener for Mia Plas-Fil	Tube	2.75 oz.

Mia Gelcoat Repair Kits

This product is a paste consistency polyester gelcoat that is used for durable, high quality repairs of boat decks or hulls. The Color Kit contains a 2 oz jar of resin, five 7 ml vials of color pastes, appropriate amount of MEKP catalyst, 3 tongue depressors, and instruction sheet. The unpigmented resin permits the addition of a variety of polyester color pastes to custom blend different colors. Color pastes are yellow, white, black, blue, and red. These resins have excellent water resistance and provide a quality finish and good gloss retention.



Catalog Number	Description	Availability
405005	Mia Gelcoat Repair Kit – Colors	2 oz. Kit
405010	Mia Gelcoat Repair Kit – White	2 oz. Kit

Dynatron Dynalite™

Lightweight, carvable, sandable, and economically-priced, this polyester repair material is a useful material for a wide range of tooling alterations and repair.



Catalog Number	Description	Availability	Net Wt. (Lbs.)
053502	Dynatron Dynalite	Gallon	7.5
053503	Dynatron Dynalite	3 Gallon Cartridges (2)	26
053507	Dynatron Dynalite Cream Hardener	Tube	4 oz.

Dynatron Dyna-Plus™

Dyna-Plus is a gold colored polyester filler ideal for repairing metal, plastic, and wood. Lightweight for easy application to vertical surfaces.



Catalog Number	Description	Availability	Net Wt. (Lbs.)
053504	Dynatron Dyna-Plus	Gallon	10

3M™ Marson Platinum Body Filler

Marson Platinum Body Filler is a high quality polyester filler compound that is lightweight and adheres aggressively to steel, galvanized steel, and aluminum. Its smooth, creamy texture makes it easy to apply. Available in full case quantities of two (2) 3-Gallon cartridges.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
053508	3M Platinum Filler	3 Gallon Cartridges (2)	21.55

USC Base Coat/Clear Coat™

This polyester filler provides a very smooth, self-leveling surface for high quality repair projects. This filler provides extra adhesion to galvanized, zinc treated, and aluminum surfaces. Includes raspberry cream hardener.



Catalog Number	Description	Mfg. No.	Availability	Net Wt. (Lbs.)
053510	USC Base Coat/Clear Coat	16060B	Gallon	7.75

USC Feather-Rite®

Feather-Rite is an excellent compound for repairs on fiberglass, metal, or wood. This product will not load sandpaper, features a smooth and creamy consistency, and has excellent feather-edging properties. Includes red cream hardener.

Catalog Number	Description	Mfg. No.	Availability	Net Wt. (Lbs.)
053515	USC Feather-Rite	21330	Gallon	7.75

USC Duraglas® Fiberglass Reinforced Polyester Filler

Duraglas is reinforced with fiberglass fibers to increase strength for larger repairs. Ideal for repairing holes, rusted out areas, and cracks in metal. Also bonds well to wood and fiberglass. Includes white cream hardener.

Catalog Number	Description	Mfg. No.	Availability	Net Wt. (Lbs.)
053520	USC Duraglass	24030	Gallon	11.75

Fillet Shapers

Made of high quality spring steel, this set of four fillet tools is ideal for creating fillets from TUF-Fil, TUF-Carv, or any epoxy paste material. Each tool is 5¾" long and is ground to a smooth radius. Radius sizes are 1/16", 1/8", 3/16", 1/4", 5/16", 3/8", 1/2".



Catalog Number	Description	Availability
046375	Fillet Shapers	Set of 4



Epoxy Adhesives

Freeman offers a broad line of two-component epoxy adhesives for bonding a wide range of metals and plastics. Epoxy adhesives consist of an epoxy resin plus a hardener. They allow great versatility in formulation since there are many resins and many different hardeners. They form extremely strong durable bonds with most materials, especially metals.



Epoxy Adhesives Specifications

Product	Mix Ratio Resin to Hardener (Wt.)	Mix Ratio Resin to Hardener (Vol.)	Gel Time (min.)	Light Handling Time	Cure Time @ 73°F (hr)	Mixed Viscosity (cps.)	Hardness (Shore D)	Lap Shear Strength (psi)	Peel Strength (pli)	Tensile Strength (psi)	Servicable Temperature/Max (°F)	Color
Freeman Fast Set 505	1:1	1:1	5	15 min	4	10,400	85	—	—	2,500	200	Clear
Fastweld 10	1:1	1:1	4	10 min	4	250,000	85	2,840	—	3,850	—	Gray
5-Minute Epoxy	1:1	1:1	3-6	15 min	1	10,000	85	—	—	1,400	200	Lt. Amber
Araldite 2010-1	1:1	1:1	10	30 min	3	80,000	78	3,300	46	—	175	Pale Yellow
Araldite 2011	100:80	1:1	105	7 hours	10	45,000	80	2,700	29	4,800	175	Pale Yellow
Araldite 2012	1:1	1:1	4	20 min	1.75	30,000	82	2,700	31	—	175	Pale Yellow
Araldite 2013	100:60	1:1	75	4 hours	10	Paste	80	2,600	23	5,000	160	Gray
Araldite 2014	2:1	2:1	40	4 hours	5	90,000	84	2,600	17	5,500	285	Gray
Araldite 2015	1:1	1:1	40	4 hours	10	Paste	75	2,400	29	3,400	212	Beige
ASI MP 5405	1:1	1:1	3-5	—	24	12,500	80	—	—	7,000	266	Clear
ASI MP 5430	1:1	1:1	20-30	—	24	12,500	80	—	—	7,000	266	Clear
ASI MP 54110	1:1	1:1	8-12	30-60 min	24	15,000	80	—	35	2,300	266	Clear
ASI MP 54460	100:47	2:1	20	—	24	50,000	77	3,700	25	6,600	302	Off-White
ASI MP 54750	100:85	1:1	60-90	—	24-48	15,000	80	—	—	7,000	—	Clear
AY557/HY557	1:1	1:1	4	10 min	4	14,000	83	2,560	—	4,630	—	Clear
AW1253/HV1253	100:82	1:1	20	4 hours	6	Paste	73	1,990	—	2,130	—	Brown
AW1258/HV1258	1:1	1:1	23	4 hours	6	Paste	89	2,840	—	5,600	—	Gray
AV8503/HV8503	100:92	1:1	30	3 hours	24	250,000	78	3,380	—	3,400	250	Blue-Green
AW8594/HY994	100:40	100:55	75	—	—	7,500	85	3,410	—	6,600	164	White
AW136/HY994	100:40	100:55	75	—	—	7,500	85	3,410	—	6,660	212	Black
Araldite 8579	100:40	100:40	60	8 hours	8	125,000	—	2,500	—	—	248	Gray
TDR-1100-11	100:42	2:1	95	8 hours	24	13,000	85	4,100	—	9,000	195	Clear

Freeman Fast Set 505 Epoxy Adhesive

Freeman Fast Set 505 is a rapid curing, two component epoxy adhesive. With a gel time of 5 minutes, parts glued with this product may be handled in 15 minutes. Designed with a color indicator to ensure complete mixing. Freeman 505 is excellent for bonding metal, wood, ceramic, fiberglass, and most RenShape modeling & styling boards.



Freeman Fast Set 505 50 ml cartridges include one static mix nozzle. Freeman Fast Set 505 Gallon with Dispensing Pumps (055356) has convenient hand pumps for easy dispensing. One pump of resin and one pump of hardener gives the exact ratio.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
055352	Freeman Fast Set 505	50 ml	0.12
055350	Freeman Fast Set 505	Pint	2
055355	Freeman Fast Set 505	Gallon	16
055356	Freeman Fast Set 505 with Pumps	Gallon	16

Fastweld 10 Epoxy Adhesive

This fast-setting epoxy adhesive is ideal for the bonding of small parts for repair work. Fastweld 10 will cure at temperatures as low as 5°C (41°F).



Catalog Number	Description	Availability	Net Wt. (Lbs.)
056505	Fastweld 10	50 ml	0.12
056512	Fastweld 10 Tube	9 oz. Tube	0.56
056511	Fastweld 10 Tubes	24 pk of 9 oz. Tubes	13.5

Devcon 5-Minute Epoxy

A widely popular, rapid-curing, low viscosity, general-purpose adhesive/encapsulant which easily dispenses, mixes in seconds, and dries in 15 minutes with full strength in 1 hour. It bonds rigid durable substrates such as metals, glass, ceramics, concrete, and wood in all combinations, forming a clear hard rigid bond that self-levels in minutes.



Catalog Number	Description	Mfg. No.	Availability	Net Wt. (Lbs.)
054647	Devcon 5-Minute Epoxy	14270	50 ml	0.12
054618	Devcon 5-Minute Epoxy	14210	2.5 oz Tube	2.5
054620	Devcon 5-Minute Epoxy	14200	15 fl. oz.	1
054634	Devcon 5-Minute Epoxy	14630	9 lb.	9

Epoxy Adhesives [CONT'D.]

Araldite 2000 Series Epoxy Adhesives

The Araldite line of urethane, epoxy, and methacrylate adhesives is a diverse selection engineered to bond a wide variety of materials, including the most challenging metals, composites, and thermoplastics. With formulations designed to bond dozens of materials and gel times ranging from 4 minutes to 1-1/2 hours, Araldite is the most versatile line of adhesives for the wide range of bonding applications.

Araldite 2010-1 Epoxy Adhesive

This fast setting epoxy adhesive is ideal for bonding metal, ceramics, rubber, plastics, and glass. Araldite 2010-1 features a 10 minute gel time, a handling strength of 30 minutes, and a thick viscosity for vertical applications.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056400	Araldite 2010-1 Adhesive	50 ml	0.13

Araldite 2011 Epoxy Adhesive

This epoxy adhesive features high shear strength and good resistance to dynamic loading. Room temperature cure and long 120 minute work life. Strong bonding to metals, ceramics, rubbers and rigid plastics.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056451	Araldite 2011 Adhesive Cartridge	50 ml	0.12
056449	Araldite 2011 Adhesive Cartridge	200 ml	0.46
056447T	Araldite 2011 (AW 106/HV 953)	3.6 oz Tubes (2)	0.46
056480Q	Araldite 2011 Adhesive	Quart	4
056480	Araldite 2011 Adhesive	6 Quarts	24
056409	Araldite 2011 Adhesive (AW 106) Resin Only	2 Gallons	17.60
056463	Araldite 2011 Adhesive (HV 953) Hardener Only	2 Gallons	14.08

Araldite 2012 Epoxy Adhesive

Tough epoxy adhesive features high shear strength and four minute work life. Room temperature cure. Strong bonding to metals, ceramics and rubbers.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056452	Araldite 2012 Adhesive	50 ml	0.13

Araldite 2013 Epoxy Adhesive

Gap-filling epoxy adhesive features good environmental stability and chemical resistance. For use on metals, ceramics and rubbers.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056453	Araldite 2013 Adhesive	50 ml	0.18
056756	Araldite 2013 Adhesive	200 ml	0.71
056467	Araldite 2013 (AV 144-2) Adhesive Resin Only	5 Gallon	50
056468	Araldite 2013 (H 997) Adhesive Hardener Only	5 Gallon	30

Araldite 2014 Epoxy Adhesive

Gap-filling, no-sag epoxy adhesive features excellent resistance to water and chemicals. 250°F heat resistance. Room temperature cure. For use on metals and electronic components.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056454	Araldite 2014 Adhesive	50 ml	0.18

Araldite 2015 Epoxy Adhesive

Sag-resistant, tough epoxy adhesive with good shear strength. Room temperature cure. Ideal for metals, sheet molding compounds and fiberglass reinforced parts.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056455	Araldite 2015 Adhesive	50 ml	0.16
056430	Araldite 2015 Adhesive (XB 5308) Resin Only	5 Gallon	50
056431	Araldite 2015 Adhesive (5309-1) Hardener Only	5 Gallon	50

Adhesive Systems, Inc. (ASI) Epoxy Adhesives

Adhesive Systems offers a board range of epoxy adhesives specifically designed for structural bonding, potting, and encapsulating applications. ASI offers a diverse selection of cure times, viscosities, and performance properties to meet the specific needs of almost any bonding application.

ASI MP 5405 Epoxy Adhesive

ASI MP 5405 is a two part unfilled epoxy adhesive designed for ceramics, and most plastics. It cures to a tough semi-rigid material and is free flowing in viscosity. It features good resistance to water, salt spray, inorganic acids and bases, and most organic solvents. It was specially formulated to a 1:1 mix ratio for use in either dispensing equipment or side-by-side dual cartridges.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
414850	MP 5405 Adhesive	50 ml	0.2

ASI MP 5430 Epoxy Adhesive

ASI MP 5430 is a two component epoxy adhesive designed for ceramics and most plastics. Features include a 1:1 mix ratio, cures to a clear semi-rigid bond, and is highly resistant to water and most organic solvents.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
414874	MP 5430 Adhesive	50 ml	0.2

ASI MP 54110 Epoxy Adhesive

ASI MP 54110 is a clear, two part, unfilled epoxy adhesive. It is designed for bonding metals, ceramics, and most plastics. This product has good water, saltwater, and chemical resistance. It offers a 1:1 mix ratio for ease of use. Normal room temperature handling strength can be reached in 30-60 minutes.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
414880	MP 54110 Adhesive	50 ml	0.2

ASI MP 54460 Epoxy Adhesive

ASI MP 54460 is a medium viscosity epoxy/copolymer resin formulation recommended for industrial bonding, small potting and laminating applications where excellent structural, mechanical and electrical properties are required. This two-part adhesive exhibits good wetting, cures at room temperature and develops strong, low shrinkage bonds to most materials including optical fibers, glass ceramics, most metals and many rigid plastics. It has excellent dimensional stability over a wide temperature range.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
414934	MP 54460 Adhesive	50 ml	0.2

ASI MP 54750 Epoxy Adhesive

ASI MP 54750 is a versatile two component epoxy adhesive used for bonding bonding and potting applications in electronic components. Flows well and cures to a tough semi-rigid polymer. Good resistance to water and organic solvents.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
414952	MP 54750 Adhesive	50 ml	0.2



Epoxy Adhesives [CONT'D.]

Other Araldite Epoxy Adhesives

Araldite AY 557 / HY 557 Epoxy Adhesive

This epoxy adhesive is fast setting for quick repairs to small parts. Suggested for metal bonding, this material is also great for gluing most tooling boards and some plastics. One to one mix ratio and 10 minute handling strength makes this adhesive easy to use for fast gluing.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056483	Araldite AY 557 Resin Only	5 Gallon	45
056484	Araldite HY 557 Hardener Only	5 Gallon	45

Araldite AV 1253 / HV 1253 Epoxy Adhesive

A mahogany-colored, carvable paste. You can easily sand it, carve it and tool it using typical woodworking tools. It is recommended for the repair and bonding of wood products.



Catalog Number	Description	Availability	Net Wt. (Lbs.)
056513Q	Araldite AV 1253 Resin Only	Quart	1.5
056515Q	Araldite HV 1253 Hardener Only	Quart	1.2
056513	Araldite AV 1253 Resin Only	6 Quarts	9
056515	Araldite HV 1253 Hardener Only	6 Quarts	7.4

Araldite AV 1258 / HV 1258 Epoxy Adhesive

An aluminum-filled, general-purpose paste that is recommended for general bonding repair and gap filling. It machines easily.



Catalog Number	Description	Availability	Net Wt. (Lbs.)
056641	Araldite AV 1258 / HV 1258	Tube	0.7
056507	Araldite AV 1258 / HV 1258	Case of 24 Tubes	16.5
056499	Araldite AV 1258 Resin Only	6 Quarts	18
056501	Araldite HV 1258 Hardener Only	6 Quarts	18
056407	Araldite AV 1258 Resin Only	Gallon (2)	22
056427	Araldite HV 1258 Hardener Only	Gallon (2)	22

Araldite AV 8503 / HV 8503 Epoxy Adhesive

Araldite AV 8503 / HV 8503 is a high viscosity, two component, epoxy adhesive that is specifically designed for bonding sheet molding compound (SMC). This product can be heat accelerated for faster curing and has a maximum service temperature of 250° F.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056758	Araldite AV 8503 Resin Only	6 Quarts	14.5
056759	Araldite HV 8503 Hardener Only	6 Quarts	13.4

Araldite AW 8594 / HY 994 Epoxy Adhesive

Araldite AW 8594 / HY 994 is a two-part laminating system for fabricating snow skis, snowboards, and other composite parts. A heat cure is recommended for optimal results.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056438	Araldite AW 8594 Resin Only	5 Gallon	52
056414	AralditeHY 994 Hardener Only	5 Gallon	34.5

Araldite AW 136 / HY 994 Epoxy Adhesive

This product is a black, high strength epoxy adhesive used to bond a variety of substrates. Features include a long gel time and service temperatures to 212° F.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056423	Araldite AW-136 Resin Only	6 Quarts	15.3
056425	Araldite HY 994 Hardener Only	6 Quarts	10.9

Araldite 8579 Epoxy Adhesive

Araldite 8579 Epoxy Adhesive is a thixotropic, room temperature curing paste that spreads easily and has good gap filling characteristics. It is heat resistant to 248°F and offers good chemical resistance.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056479	Araldite 8579 Resin Only	6 Quarts	13.2
056478	Araldite 8579 Hardener Only	6 Pints	5.3

Araldite TDR 1100-11 Epoxy Adhesive

Tough epoxy adhesive for bonding fiberglass, plastics, and wood. Excellent results when heat curing above 160°F.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056419	Araldite TDR 1100-11 Resin Only	5 Gallon	35
056420	Araldite TDR 1100-11 Hardener Only	5 Gallon	35

Basics of Adhesive Chemistries

Epoxyes: Epoxy adhesives consist of an epoxy resin plus a hardener. They allow great versatility in formulation since there are many resins and many different hardeners. They form extremely strong durable bonds with most materials, especially metals.

Methacrylates: A modified type of acrylic, these toughened adhesives are fast-curing and offer high strength and toughness. Supplied as two parts (resin and catalyst), they tolerate minimal surface preparation and bond well to the widest range of materials. The products are available in a wide range of cure speeds and as liquids or pastes which will gap-fill up to 5mm.

Polyurethanes: Polyurethane adhesives are commonly one part moisture curing or two-part. They provide strong resilient joints, which are resistant to impact. They are useful for bonding GRP (glass fiber-reinforced plastics) and many thermoplastic materials.

Cyanoacrylates: A special type of acrylic, cyanoacrylate adhesives cure through reaction with moisture held on the surfaces to be bonded. They need close-fitting joints. Usually, they solidify in seconds and are suited to small plastic parts and to rubber.

Hot Melts: Related to one of the oldest forms of adhesive, sealing wax, today's industrial hot melts are based on modern polymers. Hot melts are used for the fast assembly of structures designed to be only lightly loaded.

Methacrylate Adhesives

Freeman offers a broad line of Araldite, ASI, and Devcon two-component methacrylate adhesives. All are formulated for easy handling and are generally excellent for bonding thermoplastics, composites, and some metals. Methacrylates are usually the best choice for bonding dissimilar substrates.



Product	Mix Ratio Resin to Hardener (Wt.)	Mix Ratio Resin to Hardener (Vol.)	Gel Time (min.)	Light Handling Time (min.)	Cure Time @ 73°F	Mixed Viscosity (cps.)	Hardness (Shore D)	Lap Shear Strength (psi)	Peel Strength (pli)	Tensile Strength (psi)	Max Servicable Temperature (°F)	Color
Araldite 2021	10:9	1:1	3	8	20 min	45,000	78	3,200	63	—	230	Beige
Araldite 2022	100:94	1:1	10	18	30 min	60,000	75	3,600	23	—	212	Pale Yellow
MP 55300	1:1	1:1	4-6	10-15	—	50,000	—	3,000-3,500	—	3,000-3,500	250	Off White
MP 55305	1:1	1:1	3-5	6-10	—	50,000	—	3,000-3,500	—	3,000-3,500	250	Off White
MP 55310	1:1	1:1	10-18	20-35	—	50,000	—	3,000-3,500	—	3,000-3,500	250	Off White
MP 55320	10:1	10:1	8-12	25-30	—	90,000	—	3,000-3,500	—	3,000-3,500	180	Off White
MP 55420	10:1	10:1	4-6	15-20	—	90,000	—	1,750-2,800	—	2,500-3,500	250	Off White
Plastic Welder	—	1:1	10-15	45-60	24 hrs	50,000	78	—	35-40	3,500	250	Black

Araldite 2021 Methacrylate Adhesive

Multi-purpose adhesive that features a 3 minute gel time and an 8 minute handling strength for fast, effective bonding of ABS, PVC, acrylic, polycarbonate, as well as most metals.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056401	Araldite 2021 Adhesive	50 ml	0.11

Araldite 2022 Methacrylate Adhesive

This is a toughened adhesive that features a 10 minute gel time and an 18 minute handling strength for fast bonding of thermoset composites, ABS, PVC, acrylic, polycarbonate, and metal. This material is also offers excellent resistance to gasoline and oils.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056402	Araldite 2022 Adhesive	50 ml	0.11

ASI MP 55300 Methacrylate Adhesive

MP 55300 forms a tough, durable bonds to many substrates including, plastic, composites and metal. Surface cleaning or preparation is not required in most cases or the use of primers or chemical wipes. This is fast curing product and fixture in 10-12 minutes.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
415150	MP 55300 Adhesive Natural	50 ml	0.25
415152	MP 55300 Adhesive Natural	400ml	1.30
415154	MP 55300 Adhesive White-HV	400ml	1.30
415151	MP 55300 Adhesive Natural	10 Gal Unit	90.0

ASI MP 55305 Methacrylate Adhesive

MP 55305 is a 1:1 mix ratio adhesive designed for bonding a wide range of thermoplastics, composites, and metals. MP 55305 has excellent impact resistance and is thixotropic for applications on vertical surfaces. This product is fast curing with a 3-5 minute working time and parts may be handled in 6-10 minutes.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
415156	MP 55305 Natural Adhesive	50 ml	0.20
415158	MP 55305 Natural Adhesive	400 ml	1.30
415157	MP 55305 Natural Adhesive	10 Gal Unit	90.0

ASI MP 55310 Methacrylate Adhesive

MP 55310 is a 1:1 mix ratio adhesive that features a long work time of 10-18 minutes for bonding larger parts. Excellent for gluing composites, thermoplastics, and metals. This product also has good chemical and impact resistance.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
415162	MP 55310 Adhesive	50 ml	0.20
415164	MP 55310 Adhesive	400 ml	1.30
415166	MP 55310 Adhesive	10 Gal Unit	80.6

ASI MP 55320 Methacrylate Adhesive

MP 55320 is a 10:1 mix ratio adhesive specifically designed for bonding plastics, metals, and composites. This product features an 8-12 minute working time and parts may be handled in 25-30 minutes. MP 55320 also features excellent chemical and environmental resistance.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
415168	MP 55320 Adhesive	380 ml	1.25

ASI MP 55420 Methacrylate Adhesive

MP 55420 is a 10:1 mix ratio adhesive that features a 4-6 minute working time for fast assembly of plastic, metal, or composite parts. Parts may be handled in 15-20 minutes. Fully cured parts bonded with MP 55420 have excellent resistance to thermal cycling and resistance to a wide range of chemicals.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
415199	MP 55420 Adhesive	380 ml	1.25

Devcon Plastic Welder Methacrylate Adhesive

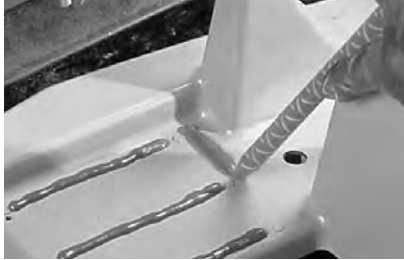
Toughened structural adhesive formulated for bonding difficult-to-bond substrates such as nylon containing alloys, modified polyesters, epoxy composites and standard plastics. This one to one mix ratio methacrylate features superior bond strength, durability, and impact resistance. Plastic Welder has a creamy consistency with excellent gap filling capabilities and good peel strength in all environments.

Catalog Number	Description	Mfg. No.	Availability
054646	Devcon Plastic Welder Black	DA290	47 ml



Polyurethane Adhesives

Araldite two-component polyurethane adhesives are formulated for easy handling and are generally excellent for bonding a wide variety of plastic materials and are good for some metal applications.



Araldite 2018 Polyurethane Adhesive

This two component polyurethane adhesive is specifically designed for bonding thermoplastic materials. Araldite 2018 remains flexible and features good UV stability and low shrinkage.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056428	Araldite 2018 Adhesive	200 ml	0.46

Araldite 2040 Polyurethane Flexible Adhesive

General-purpose gray adhesive with a 15 min. work time and a light handling time of 10 hours (that can be accelerated with heat). For bonding plastic, polycarbonate and nylon. Cures to a 30 Shore D hardness

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056456	Araldite 2040 Adhesive	50 ml	0.13

Araldite 2042 Polyurethane Adhesive

Environmentally stable and impact-resistant. It offers a 2.5 minute work time and a light handling time of one hour (that can be accelerated with heat). It is suitable for bonding polycarbonate ABS, FRP, SMC and nylon and materials with different coefficients of thermal expansion. Cures to an 85 Shore A hardness.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056458	Araldite 2042 Adhesive	50 ml	0.13

Araldite AY 8683/HY 8683 Polyurethane Adhesive

Araldite AY 8683 / HY 8683 polyurea elastomeric adhesive is a two-component system formulated for filter-bonding applications. This polyurea elastomer has a 100:60 mix ratio, a quick set time 15 minutes. Because of its low viscosity, it can be conveniently mixed by hand or via meter-mix equipment. It cures at room temperature to a 95 Shore A hardness.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056439	Araldite AY 8683	5 Gallon	40
056441	Hardener HY 8683	5 Gallon	24

Cyanoacrylate Adhesives

A complete line of cyanoacrylate adhesives and accessories for various bonding applications. These fast setting materials are designed for metal, wood, plastic, and tooling board adhesive requirements.

Freeman F-Bond Instant CA Adhesives

F-Bond Thin – General purpose and extremely fast setting.

F-Bond Medium – Rapid setting medium viscosity adhesive.

F-Bond Thick – Rapid setting high viscosity, ideal for gap filling applications.

F-Bond Gel – Thixotropic formulation which allows for use on vertical applications.

F-Bond Flex Black – Formulated with a flexible rubber filler which allows for high vibration and shock applications.



Catalog Number	Description	Viscosity (cps)	Availability
055300	Freeman F-Bond Thin	3	2 oz
055307	Freeman F-Bond Thin	3	8 oz
055301	Freeman F-Bond Medium	250	2 oz
055308	Freeman F-Bond Medium	250	8 oz
055302	Freeman F-Bond Thick	1500	2 oz
055309	Freeman F-Bond Thick	1500	8 oz
055303	Freeman F-Bond Gel	Thixotropic	20 grams
055311	Freeman F-Bond Flex Black Thick	1500	2 oz

Freeman F-Bond Accessories

F-Bond Accelerator – Use to accelerate cure time and increase gap-filling capabilities.

F-Bond Dosing Tips – High-quality precision application replacement tips for our 2 oz. bottles.

F-Bond Piercing Cap – A needle point cap to prevent dispenser clogging.



Catalog Number	Description	Availability
055304	Freeman F-Bond Accelerator (with pump)	2 oz
055324	Freeman F-Bond Accelerator Aerosol	10 oz
055305	Freeman F-Bond Accelerator	8 oz
055315	Freeman F-Bond 8 oz Cap	
055314	Freeman F-Bond Dosing Tips for 2 oz Bottles	
055316	Freeman F-Bond Piercing Cap	

Devcon ZipGrip® Adhesive

A low viscosity (20cps), single-component cyanoacrylate adhesive for close-fitting parts. ZipGrip bonds in seconds to rubber, fixturing rubber gaskets, splicing o-rings, repairing plastics and metals. It is also highly resistant to aging and weathering.



Catalog Number	Description	Mfg. No.	Availability
054629	ZipGrip GPE 3	70144	14 grams

Adhesive Dispensing Guns and Static Mix Nozzles

50 ml Cartridge Dispensing Gun

This dispensing gun is designed to be used with Huntsman, Araldite, Devcon, RenPatch, and ASI 50 ml adhesive cartridges. The gun includes two inserts, one for dispensing 1:1 mix ratio materials and the other for dispensing 2:1 mix ratio materials.



Catalog Number	Description
056460	50 ml Dispensing Gun (Manual)

Caulking Gun and 50 ml Conversion Kit

The 50 ml conversion kit is a plastic adaptor unit that is used in conjunction with a standard 9" caulking gun. This product is a low cost alternative to the 50 ml Dispensing Gun (part #056460) when the number of 50 ml cartridges used doesn't justify the cost of a dedicated dispensing gun.



It is suggested for use with our Heavy Duty Caulking Gun (057120), but will fit all standard 9" models. Caulking Gun and 50 ml Conversion Kit sold separately.

Catalog Number	Description
057120	Caulking Gun (Heavy Duty)
415480	Caulking Gun Conversion Kit

50 ml Static Mix Nozzle – Round

These 50 ml static mix nozzles are of the conventional round design and are the most widely used through the industry. With a .250 inside diameter and 21 elements, they are used for effective and complete mixing of most all 50 ml adhesive cartridges. They are six inches in overall length.



Catalog Number	Description
056488	50 ml Round Static Mix Nozzles

50 ml Static Mix Nozzle – Square

These 50 ml static mix nozzles are the suggested mix nozzle for all Adhesive System, Inc. (ASI) and Huntsman 50 ml adhesive cartridges. Its patented square design, with 20 elements per nozzle and an element width of .203 inches, provides superior mixing performance, while being about two-thirds the length of round spiral mixers. This design results in less adhesive waste, while ensuring consistent, high quality mixing.



This nozzle fits nearly all 50 ml adhesive cartridges due to the bell design. They are 4.03 inches in overall length.

Catalog Number	Description
415802	50 ml Square Static Mix Nozzles

50 ml Static Mix Nozzle – Mini

These small 50 ml Mini Nozzles are used to minimize adhesive waste to the greatest degree when using 50 ml cartridges. This nozzle is only suitable for lower viscosity adhesives and testing should be conducted to ensure thorough mixing and proper dispensing. With a .125" inside diameter and 17 elements, they are round in design and feature a 2.5 inch overall length.



Catalog Number	Description
056510	50 ml Mini Nozzles

200 ml Cartridge Dispensing Gun

This dispensing gun is designed to be used with 200 ml adhesive cartridges. Available in both pneumatic and manual models.



Catalog Number	Description
056462	200 ml Dispensing Gun (Pneumatic)
056598	200 ml Dispensing Gun (Manual)

380 ml Cartridge Dispensing Gun

This dispensing gun is designed to be used with coaxial 380 ml cartridges. This is the recommended gun for 10:1 mix ratio materials from Adhesives Systems Inc. Available in both pneumatic (call for availability) and manual models.



Catalog Number	Description
415476	380 ml Dispensing Gun (Manual)

400 ml Cartridge Dispensing Gun

This dispensing gun is designed to be used with Huntsman, Araldite, and ASI 400 ml cartridges.



Catalog Number	Description
056443	400 ml Dispensing Gun

200/380/400 ml Static Mix Nozzle

These static mix nozzles are used for effective and complete mixing of adhesives that are packaged in either 200, 380, or 400 ml cartridges. These mixers are made with an integral nut, eliminating the need for an individual retaining nut.



They feature a square design for superior mixing, 24 elements, static mixing length of 5 inches, and overall length of 6.8 inches.

Catalog Number	Description
415800	200/380/400 ml Static Mix Nozzle



Hot Melt Foundry Adhesives

Manufactured by Power Adhesives LTD. and specifically formulated for instant bonding of foundry cores, these hot melt adhesives are comprised of 100% solids, containing no solvents or water.



Tecbond® 501 Foundry Adhesive

This material has a low viscosity for easy flow and can tolerate temperatures to 145–150° F. Each rigid stick is 1¾" in diameter and 1⅝" long for maximum glue flow. Each stick has the product number and batch number clearly printed for quality control purposes. The Tec 3200 Industrial Duty Dispensing Gun must be used to dispense this glue. This material is sold in 22 lb. boxes.

Catalog Number	Description	Diameter	Length	Net Wt. (Lbs.)
176071	Hot Melt Adhesive Tecbond 501	1.75"	1.625"	22

Tecbond® 601 Foundry Adhesive

Tecbond 601 Foundry Adhesive is higher in viscosity & faster setting than Tecbond 501 and can tolerate temperatures to 185° F. Each rigid stick is 1¾" in diameter and 1⅝" long for maximum glue flow. Each stick has the product number and batch number clearly printed for quality control purposes.

Catalog Number	Description	Diameter	Length	Net Wt. (Lbs.)
176072	Hot Melt Adhesive Tecbond 601	1.75"	1.625"	22

Tec® 3200 Industrial Duty Dispensing Gun

This gun is specifically designed to dispense Tecbond adhesives. The Tec 3200 High Output Applicator is designed for continuous industrial hot melt glue applications. Loaded with two Tecbond glue sticks (1¾" diameter), this gun will dispense 8 lbs. of glue per hour and operates on a standard 110 voltage.

Features Include:

- 400 watt stainless steel heater cartridge
- 4 minute warm up
- Solid state temperature control
- Automatic "stand-by" mode to prevent overheating of glue
- One year warranty

Catalog Number	Description
176070	Tec 3200 Hot Melt Glue Applicator

Wood Glue

Freeman Medium Viscosity White Wood Glue

Freeman Medium Viscosity White Wood Glue is a polyvinyl acetate adhesive that has a great balance of set time, viscosity, and holding strength. It is extremely effective for gluing most all species of hardwood and softwood.



Catalog Number	Description	Availability	Net Wt. (Lbs.)
022128	White Wood Glue – Medium Viscosity	Gallon	9
022640	White Wood Glue – Medium Viscosity	5 Gallon	45

Freeman High Viscosity White Wood Glue

Freeman High Viscosity White Wood Glue is a thicker version of our Medium White Wood Glue for vertical applications or where a higher viscosity adhesive is preferred. It is extremely effective for gluing most all types of wood and is excellent for installing leather fillets due to the increased viscosity.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
023639	White Wood Glue – High Viscosity	Gallon	9
023640	White Wood Glue – High Viscosity	5 Gallon	45

Freeman Fast Set White Wood Glue

Freeman Fast Set White Wood Glue is the fastest setting wood glue we offer. It is primarily used for assembly work where rapid hardening is required. Works well with all types of hardwood and softwood.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
022663	White Wood Glue – Fast Set	Gallon	9
022664	White Wood Glue – Fast Set	5 Gallon	45

Gold Wood Glue

Freeman Gold Wood Glue is light yellow in color and features a high viscosity and fast set time, making it ideal for assembly and fillet work.



Catalog Number	Description	Availability	Net Wt. (Lbs.)
023635	Gold Wood Glue – High Viscosity	Gallon	9
023636	Gold Wood Glue – High Viscosity	5 Gallon	45

Wood Glue Applicator Bottles

Non-stick, plastic glue bottles in popular and convenient sizes are available (empty) for pattern shop use. Screw-on plastic spout which can be cut to desired opening size gets the glue into the tight places where you need it.

Catalog Number	Description	Availability
023658	Glue Bottle with Spout	2 oz
023660	Glue Bottle with Spout	8 oz
023665	Glue Bottle with Spout	16 oz
023670	Glue Bottle with Spout	Quart
023673	Additional Spout for Glue Bottle	2 oz
023662	Additional Spout for Glue Bottle	8 oz
023672	Additional Spout for Glue Bottle	16 & 32 oz

Ren Tooling Board Adhesives



Ren-Weld 103

This light yellow epoxy adhesive is formulated for the effective bonding of RenShape Foam, Modeling, Styling, and Tooling Boards. Ren-Weld 103 has a 2,100 cps viscosity for ease of application yet contains flow control agents to prevent excessive resin run-out. Other features include a 20 minute gel time and a 10 hour handling strength.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056506	Ren-Weld 103	Gallon	10

Ren-Weld 5008

A medium-speed adhesive which is hardness and color matched for use with RenShape 5008. The material has a 75 minute gel time and reaches full strength after 24 hours. The cure may be accelerated by heating the material to 200°F for 4 hours.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056108	Ren-Weld 5008	Gallon	6

Ren-Weld 5169

This red urethane adhesive is specifically designed for gluing RenShape 5169 and 5179 Foundry Boards. Ren-Weld 5169 has a 1:1 mix ratio by volume, 8-13 minute gel time, 80D Shore hardness, and an 8-10 hour handling strength.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
056620	Ren-Weld 5169	Quart	4

SEE ALSO

Product	Page No.
Repro Ultra Light for foam boards	16
Repro Light for medium density boards	15
RenLam 1700-1 for medium density boards	34
Maxim Fast for foundry boards	58
Freeman 690 for fixture boards	34

Other Specialty Adhesives

Sheet Wax Spray Adhesive

Sprayway Number 66 is the easiest way to coat plain sheet wax for fabrication. Can also be used on paper, plastics, leather, metal or glass.

Catalog Number	Description	Availability
054510	Sprayway Number 66 Spray Adhesive	15.6 fl. oz.



3M™ Super 77™ Multipurpose Adhesive

Super 77 Spray Adhesive is a fast drying general purpose adhesive designed for permanently attaching fabric, paper, plastics, and light-weight foams to rigid base materials.

Catalog Number	Description	Mfg. No.	Availability
054516	3M #77 Super Spray Adhesive	21210-9	24 fl. oz.



3M™ Polystyrene Foam Insulation 78 Spray Adhesive

Creates a high temperature resistant bond while providing a long open time ideal for polystyrene panel bonding, roofing membrane attachments, and foam boards.

Catalog Number	Description	Mfg. No.	Availability
054514	Polystyrene Foam Insulation 78 Spray Adhesive	41593-7	24 fl. oz.



3M™ Hi-Strength 90 Spray Adhesive

High Strength 90 Adhesive produces a secure bond for heavier items such as laminates, particle board, wood, metal, and many plastics. This product is the recommended adhesive for Freeman Machinable Wax.

Catalog Number	Description	Mfg. No.	Availability
054515	3M #90 High Strength Spray Adhesive	30023-3	24 fl. oz.



Styro Glue

This brush-on adhesive product should be used on polystyrene patterns. Styro Glue will not attack polystyrene and it will burn off without ash residue.

Catalog Number	Description	Availability	Net Wt. (Lbs.)
022030	Styro Glue – Green	Gallon	7.8

