

# MRO Products & OEM Adhesives



**Permatex**

**Devcon**

**TW Devcon**

# GOT CRACKS?

## Fix them with **FLOORSAVERS™** CONCRETE CRACK REPAIR

This self-leveling product fills cracks and gaps in concrete – **QUICKLY** and **EASILY**.



*Fits in standard caulking gun!*



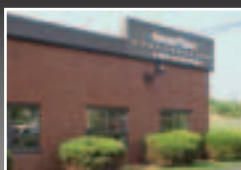
**Walking traffic in 30 minutes**



































**Forklift traffic in 1 hour**

### ORDER INFORMATION

DESCRIPTION	PART NO.	SIZE
FLOORSAVERS™ Concrete Crack Repair	13400	250ml cartridge
Mix Nozzle	14298	-----



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## Total Adhesive Solutions Carefully Matched or Custom Formulated to Your Application

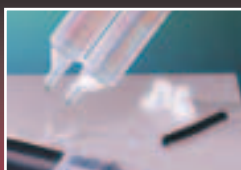
Because ITW Devcon offers a full range of high-performance adhesives, we will never force your application to fit our technology. Through our national network of distributors, we will work with you to assess your adhesive requirements. Our experienced application specialists will then recommend a total adhesives solution including the best adhesive for your needs, along with the right dispensing system. If desired, we will also supply bonded samples and test results, as well as training and support.



### Devcon and Permatex® OEM Adhesives include:

- ▼ High-strength, fast-curing epoxies
- ▼ Advanced methacrylates for bonding plastics, composites, metals and dissimilar substrates
- ▼ Instant-curing cyanoacrylates that eliminate the need for fixturing
- ▼ Chemical-resistant, MIL-SPEC threadlockers, retaining compounds and pipe sealants
- ▼ UV adhesives with unlimited open times and rapid light curing
- ▼ Specialty adhesives custom engineered for specialized applications

All these adhesives are available in a variety of package sizes including convenient, no-waste, mix-as-dispensed dual cartridges.

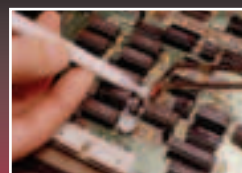


## OEM Adhesive Selector Guide

KEY: ● Excellent Choice ● Good Choice ○ Requires Metal Prep 90™ Blank - Not Recommended

OEM Material	One Minute™ Epoxy Gel	5 Minute™ Epoxy / Epoxy Gel	Dev-Thane™ Adhesives	10 Minute™ Epoxy	2 Ton® Clear Epoxy	Epoxy Plus™ 25	HP 250	Plastic Welder™	Plastic Welder™ II	Flex Welder™ Adhesives	Composite Welder™ FS	Metal Welder™ Adhesives	ZipGrip® Adhesives	UV Adhesives
<b>METAL</b>														
Aluminum <sup>1</sup>	●	●	●	●	●	●	●	○	○	○	○	●	●	●
Brass	●	●	●	●	●	●	●						●	
Cast Iron	●	●	●	●	●	●	●	○	●	●	○	●	●	●
Copper	●	●	●	●	●	●	●						●	
Ferrite	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Painted metals	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Plated metals			●	●	●	●	●		●		●	●	●	
Sheet metal			●	●	●	●	●	●	●		●	●	●	
Stainless steel <sup>1</sup>	●	●	●	●	●	●	●	○	○	○	○	●	●	
Cold rolled steel	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Galvanized			●			●	●			○	○			●
<b>PLASTIC</b>														
ABS			●	●		●		●	●	●	●	●	●	●
Acrylics (PMMA)			●	●		●	●	●	●	●	●	●	●	●
Fiberglass			●	●	●	●	●	●	●	●	●	●	●	●
Gel coats			●			●	●	●	●	●	●	●		●
Epoxy	●	●		●	●	●	●	●	●	●	●	●	●	●
Polyamides (Nylon) (6,6/6)						●	●		●	●	○	○	●	
Polyesters (PET/PBA blends)						●	●	●	●	●	●	●	●	
Polycarbonate	●					●	●	●	●	●	●	●	●	●
PPO and PPO blends								●	●	●	●	●	●	
Vinyls (PVC)	●	●		●	●	●	●	●	●	●	●	●	●	
RIM urethanes									●	●	●	●	●	
SMCs						●	●				●	●	●	
Styrene resins						●	●	●	●	●	●	●	●	●
Polyacrylate						●	●		●	●	●	●	●	
Polyurea									●	●	●	●	●	
Cellulosics (CAL, CAB, CAP)									●	●	●	●	●	
Polysulfone									●		●	●	●	
Phenolics						●	●	●	●	●	●	●	●	●
Laminates						●	●	●	●		●	●	●	
<b>WOOD</b>														
Wood (hard and soft)	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Plywood	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Particle board	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>OTHER</b>														
Brick	●	●	●	●	●	●	●	●	●	●	●	●		
Concrete	●	●	●	●	●	●	●	●	●	●	●	●		
Rubber			●										●	
Honeycomb	●	●	●	●	●	●	●	●	●	●	●	●		
Ceramics	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Glass			●											●

NOTES: <sup>1</sup> Use of Metal Prep 90™ primer/cleaner is recommended on these metals prior to bonding with Plastic Welder™, Plastic Welder™ II, Flex Welder™ and Composite Welder™ FS.



## 2-Part Structural Epoxy Adhesives

Devcon advanced epoxy adhesives are used for structural bonding, potting and encapsulating, and come in a variety of cure times and package sizes.

### Devcon® 5 Minute® Epoxy

Rapid-curing, general-purpose adhesive/encapsulant.

Item #	Container Size	Dispenser	Nozzle
14250	25 ml Dev-Tube™	—	—
14270	50 ml cartridge	14280 (manual)	14285
14210	2.5 oz	—	—
DA051	400 ml cartridge	14410 (manual)	14292
		14400 (pneumatic)	14292
14200	15 oz	—	—
14630	9 lb	—	—
DA032	10 gal kit	—	—
DA007	100 gal kit	—	—

### Devcon® 5 Minute® Epoxy Gel

Thixotropic, nonmigrating gel adhesive with excellent gap filling properties.

Item #	Container Size	Dispenser	Nozzle
14240	25 ml Dev-Tube™	—	—
14265	50 ml cartridge	14280 (manual)	14285
DA052	400 ml cartridge	14410 (manual)	14292
		14400 (pneumatic)	14292

### Devcon® One Minute™ Epoxy Gel

Lightning fast curing gel adhesive for filling gaps, cracks and holes.

Item #	Container Size	Dispenser	Nozzle
14277	50 ml cartridge	14280 (manual)	14285

### Devcon® 10 Minute™ Epoxy

Flexible epoxy provides excellent adhesion to metals and superior peel, impact and chemical resistance.

Item #	Container Size	Dispenser	Nozzle
14251	50 ml cartridge (clear)	14280 (manual)	14285
14255	50 ml cartridge (black)	—	—
DA012	400 ml cartridge (black)	14410 (manual)	14292
		14400 (pneumatic)	14292

### Devcon® 2 Ton® Clear Epoxy

Extremely strong, medium-cure, water-resistant adhesive.

Item #	Container Size	Dispenser	Nozzle
14310	25 ml Dev-Tube™	—	—
14260	50 ml cartridge	14280 (manual)	14285
14355	400 ml cartridge	14410 (manual)	14292
		14400 (pneumatic)	14292
14360	9 lb	—	—

### Devcon® Epoxy Plus™ 25

Rubber-toughened structural adhesive with superior peel, impact and fatigue resistance.

Item #	Container Size	Dispenser	Nozzle
14278	50 ml cartridge	14280 (manual)	14285
14350	400 ml cartridge	14410 (manual)	14293
		14400 (pneumatic)	14293

### Devcon® HP 250

High-performance, toughened structural adhesive with outstanding environmental, impact and chemical resistance.

Item #	Container Size	Dispenser	Nozzle
14315	50 ml cartridge	74001 (manual)	14285
14415	400 ml cartridge	14410 (manual)	14292
		14400 (pneumatic)	14292

### Devcon® HP 250Q

High-performance epoxy with high shear strength and impact toughness. Bonds to metals, FRP/SMC composites, stainless steel, aluminum, vinyl esters, nylon, wood and rigid plastics.

Item #	Container Size	Dispenser	Nozzle
14417	400 ml cartridge	14410 (manual)	14292
		14400 (pneumatic)	14292



| Indicates that either the manual or pneumatic dispenser listed to the right may be used with that size cartridge.



Physical Properties	5 Minute® Epoxy	5 Minute® Epoxy Gel	One Minute™ Epoxy Gel	10 Minute™ Epoxy		2 Ton® Clear Epoxy	Epoxy Plus™ 25	HP 250	HP 250Q
<b>Color</b>	Clear	Opaque	Clear	Black	Clear	Clear	Grey	Straw	Straw
<b>Mix ratio</b> resin:hardener	1:1	1:1	1:1	1:1	1:1	1:1	1:1	2:1	2:1
<b>Mixed viscosity</b> cP	10,000	Gel	70,000	90,000	80,000	8,000	70,000	105,000	77,000
<b>Working time</b> <sup>1</sup> minutes	3 ~ 6	4 ~ 7	45 sec	10	10	8 ~ 12	25	65	30
<b>Fixture time</b> <sup>2</sup> minutes	10 ~ 15	10 ~ 15	1	20	20	30 ~ 35	3.5 hours	5 hours	3 ~ 3.5 hours
<b>Functional cure</b> hours	0.75 ~ 1	0.75 ~ 1	0.5 ~ 0.75	1.5	1.5	2	24	24	12
<b>Adhesive tensile lap shear (ASTM D1002)</b> <sup>3</sup> psi	1,900 <sup>4</sup>	2,500	1,600 <sup>4</sup>	2,400	2,400	2,250	2,750	3,200	850
<b>Tensile elongation</b> %	1	1	1	5	5	1	20	25	36
<b>Peel strength</b> pli	2 ~ 3	2 ~ 3	2 ~ 3	20 ~ 25	20 ~ 25	2 ~ 3	20 ~ 25	35 ~ 40	45
<b>Impact resistance</b> ft-lb / in <sup>2</sup>	5.5	6.5	4.5	10	10	6.5	10	12	9.15
<b>Maximum dry service temperature</b> °F	-40 ~ 200	-40 ~ 200	-40 ~ 200	-67 ~ 200	-67 ~ 200	-40 ~ 200	-40 ~ 200	-67 ~ 250	250

NOTES: <sup>1</sup> The maximum allowable time to mate and position parts after mixing and application of the adhesive. After this interval, parts must not be disturbed. <sup>2</sup> The time required for the adhesive to generate sufficient bond strength to allow parts to be handled without deformation of the bond line. <sup>3</sup> All tensile strength data per ASTM D1002 on grit-blasted steel, bond line thickness of 0.010". <sup>4</sup> Bond line thickness of 0.005".

Key: ● Excellent ● Very Good ○ Fair ○ Poor

Chemical Resistance	5 Minute® Epoxy	5 Minute® Epoxy Gel	One Minute™ Epoxy Gel	10 Minute™ Epoxy	2 Ton® Clear Epoxy	Epoxy Plus™ 25	HP 250	HP 250Q
<b>ACIDS</b>								
Acetic 10%	○	○	○	○	○	○	●	●
Hydrochloric 10%	○	○	○	○	○	○	●	●
Sulfuric 10%	○	○	○	○	○	○	●	●
<b>ALCOHOLS</b>								
Glycol	○	○	○	●	●	●	●	●
Isopropanol	○	○	○	○	○	○	○	○
Methanol	○	○	○	○	○	○	○	○
<b>KETONES</b>								
Acetone	○	○	○	○	○	○	○	○
Methyl ethyl ketone	○	○	○	○	○	○	○	○
<b>ALKALIS</b>								
Ammonium hydroxide 20%	○	○	○	○	○	○	●	●
Sodium hydroxide 10%	○	○	○	○	○	○	●	●
<b>HYDROCARBONS</b>								
Gasoline (unleaded)	●	●	●	○	●	○	○	○
Mineral spirits	●	●	●	●	●	●	●	●
Motor oil	●	●	●	●	●	●	●	●
<b>CHLORINATED HYDROCARBONS</b>								
Perchloroethylene	○	○	○	○	○	○	○	○
<b>SALTS</b>								
Sodium chloride	○	○	○	○	○	○	○	○
Trisodium phosphate	○	○	○	○	○	○	○	○





**Devcon® Food Grade Pot & Seal**

An epoxy potting compound acceptable for meat and poultry plants. It is ideal for bonding filter screens to frames.

Item #	Container Size	Dispenser	Nozzle
DA999	400 ml cartridge	15043 (manual)	15047

**Devcon® 5-Minute® I-FR**

Flame retardant, non-brominated, antimony free, 5-Minute® 2-component epoxy paste. Ideal for applications requiring a self-extinguishing structural epoxy system. UL94V-0 approval and RoHS compliant.

Item #	Container Size	Dispenser	Nozzle
14272	50 ml cartridge	14280 (manual)	14285

**Devcon® 10-Minute™ I-FR**

Flame retardant, non-brominated, antimony free, 10-Minute™ epoxy with impact resistance. 2-component epoxy paste. Non-sag, structural epoxy for potting inserts and edge sealing. UL94V-0 approval and RoHS compliant.

Item #	Container Size	Dispenser	Nozzle
14258	50 ml cartridge	14280 (manual)	14285

Physical Properties	Food Grade Pot & Seal	Flame Retardant	
		5-Minute® I-FR	10-Minute™ I-FR
Color	White	White	White
Mix ratio resin:hardener	4:1	1:1	1:1
Mixed viscosity cP	100,000	55,000	150,000
Working time <sup>1</sup> minutes	42 @ 75°F	4 - 6	10
Fixture time <sup>2</sup> minutes	10 @ 200°F	10 ~ 15	20 ~ 25
Functional cure hours	25 @ 200°F	1	3
Adhesive tensile lap shear (ASTM D1002) <sup>3</sup> psi	1,980	1,430 <sup>4</sup>	2,700
Tensile elongation %	1	1	5
Peel strength pli	2 ~ 3	2	15
Impact resistance ft-lb/in <sup>2</sup>	5.2	5	8
Maximum dry service temperature °F	-40 - 280	-40 - 200	-67 - 200

NOTES: <sup>1</sup> The maximum allowable time to mate and position parts after mixing and application of the adhesive. After this interval, parts must not be disturbed.

<sup>2</sup> The time required for the adhesive to generate sufficient bond strength to allow parts to be handled without deformation of the bond line.

<sup>3</sup> Per ASTM D1002 on grit-blasted steel, bond line thickness of 0.010".

<sup>4</sup> Bond line thickness of 0.005".

Key: ● Excellent ○ Very Good ○ Fair ○ Poor

Chemical Resistance	5-Minute® I-FR	10-Minute™ I-FR	Food Grade Pot & Seal
<b>ACIDS</b>			
Acetic 10%	○	○	○
Hydrochloric 10%	○	○	○
Sulfuric 10%	○	○	○
<b>ALCOHOLS</b>			
Glycol	●	○	○
Isopropanol	●	○	○
Methanol	○	○	○
<b>KETONES</b>			
Acetone	○	○	○
Methyl ethyl ketone	○	○	○
<b>ALKALIS</b>			
Ammonium hydroxide 20%	●	○	○
Sodium hydroxide 10%	●	○	○
<b>HYDROCARBONS</b>			
Gasoline (unleaded)	●	●	○
Mineral spirits	●	●	○
Motor oil	●	●	○
<b>CHLORINATED HYDROCARBONS</b>			
Perchloroethylene	○	○	○
<b>SALTS</b>			
Sodium chloride	●	○	○
Trisodium phosphate	●	○	○

○ Indicates that either the manual or pneumatic dispenser listed to the right may be used with that size cartridge.





## Urethane Adhesives

Devcon urethane formulations are primerless adhesives that bond metals, plastic, galvanized metal and other hard-to-bond substrates. They offer rapid curing and exceptional flexibility.



### Devcon® Dev-Thane™ 5

Primerless, fast-setting, two-part urethane adhesive for high-performance bonding of a variety of substrates such as aluminum, steel, ABS, urethane and composites.

Item #	Container Size	Dispenser	Nozzle
14503	50 ml cartridge	14280 (manual)	14285
14500	400 ml cartridge	14410 (manual) 14400 (pneumatic)	14293 14293

### Devcon® Dev-Thane™ 2

Faster-curing version of Dev-Thane™ 5 with a fixture time of 20 minutes.

Item #	Container Size	Dispenser	Nozzle
14501	50 ml cartridge (light grey)	14280 (manual)	14285
14510	400 ml cartridge (dark grey)	14410 (manual) 14400 (pneumatic)	14293 14293

### Devcon® Rubber Adhesive

Industrial-strength rubber adhesive for flexible, durable bonds to rubber, flexible plastics, metals, glass and ceramics. Solvent-based, one-component contact adhesive that cures in 30 minutes and lasts for years. It has outstanding resistance to oils, acids and alkalis. Flexible, waterproof and UV-resistant. Excellent aging and weathering properties.

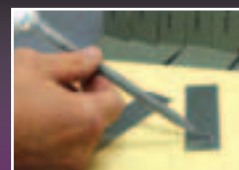
Item #	Container Size
14900	1 pt

Physical Properties	Dev-Thane™ 2	Dev-Thane™ 5
<b>Color</b>	Light Grey, Dark Grey	Grey
<b>Mix ratio</b> <small>resin:hardener</small>	1:1	1:1
<b>Mixed viscosity</b> <small>cP</small>	100,000	45,000
<b>Fixture time</b> <small>minutes</small>	20	45
<b>Working time</b> <small>minutes</small>	2	5
<b>Peel strength</b> <small>pli</small>	60 ~ 75	60 ~ 75
<b>Functional cure</b> <sup>1</sup> <small>hours</small>	1.5	4
<b>Tensile Elongation</b> %	200	200
<b>Cured hardness</b> (ASTM D2240) <small>Shore D</small>	63	63
<b>Adhesion Tensile Lap Shear</b> (ASTM D1002) <small>psi</small>	1,890	1,940

NOTES: <sup>1</sup> Faster cure times can be achieved by heating.

Key: ● Excellent ● Very Good ○ Fair ○ Poor

Chemical Resistance	Devcon® Rubber Adhesive	Devcon® Dev-Thane™ 5
<b>ACIDS</b>		
Acetic 10%	○	○
Hydrochloric 10%	●	●
Sulfuric 10%	●	●
<b>ALCOHOLS</b>		
Glycol	○	○
Isopropanol	○	●
Methanol	○	○
<b>KETONES</b>		
Acetone	○	○
Methyl ethyl ketone	○	○
<b>ALKALIS</b>		
Ammonium hydroxide 20%	●	○
Sodium hydroxide 10%	●	●
<b>HYDROCARBONS</b>		
Gasoline (unleaded)	○	●
Mineral spirits	●	●
Motor oil	●	●
<b>CHLORINATED HYDROCARBONS</b>		
Perchloroethylene	○	○
<b>SALTS</b>		
Sodium chloride	●	●
Trisodium phosphate	●	●



## 2-Part Structural Acrylic Adhesives

Advanced methacrylate adhesives produce tough, flexible bonds on today's hard-to-bond plastics, composites, exotic metals and dissimilar substrates.

### Devcon® Plastic Welder™

Toughened adhesive for high strength load-bearing bonds to engineered plastics, metals, composites, ceramics and dissimilar substrates. Approved under UL 746C Polymeric Adhesive Systems, Electrical Equipment - Component. SAMS listed.

Item #	Container Size	Dispenser	Nozzle
14300	25 ml Dev-Tube™ (straw)	—	—
14320	47 ml cartridge (straw)	14280 (manual)	14285
DA291	47 ml cartridge (white)		
DA290	47 ml cartridge (black)		
14385	400 ml cartridge (straw)	14410 (manual)	14292
DA160	400 ml cartridge (white)	14400 (pneumatic)	14292
DA295	400 ml cartridge (black)		
14330	2 liter kit (straw)	—	—
DA033/034	10 gal kit (straw)	—	—
14388/14389	10 gal kit (black)	—	—
DA309/307	100 gal kit (straw)	—	—

### Devcon® Plastic Welder™ II

Formulated for difficult-to-bond engineered plastics such as nylon-based alloys, epoxy composites and modified polyesters.

Item #	Container Size	Dispenser	Nozzle
14340	47 ml cartridge (straw, black or white)	14280 (manual)	14285
14390	400 ml cartridge (straw)	14400 (pneumatic)	14292
14386/14387	10 gal kit (straw)	—	—

### Devcon® Composite Welder™ FS

Flexible adhesive for bonding composites, thermoplastics and thermosets. Fast fixture and cure times; superior impact and fatigue resistance. Approved under UL 746C Polymeric Adhesive Systems, Electrical Equipment - Component. SAMS listed.

Item #	Container Size	Dispenser	Nozzle
14165	490 ml cartridge (blue green)	Contact Devcon Tech Service	
14166	490 ml cartridge (black)	Contact Devcon Tech Service	
DA461/462	10 gal kit	—	—

### Devcon® Flex Welder™

Fills gaps to 3/8" and provides exceptionally flexible bonds to plastics, composites and metals in applications involving constant flexing, shock or vibration.

Item #	Container Size	Dispenser	Nozzle
14345	47 ml cartridge	14280 (manual)	14285

### Devcon® Flex Welder™ FC

Fast-curing version of Flex Welder™, Flex Welder™ FC has a fixture time of 11 minutes and achieves functional cure in one hour.

Item #	Container Size	Dispenser	Nozzle
14324	400 ml cartridge (off-white)	14410 (manual)	14292

### Devcon® Metal Welder™

High-performance structural adhesive formulated to bond a wide range of metals including: aluminum, stainless steel, cold-rolled steel and dissimilar substrates without primers. Approved under UL 746C Polymeric Adhesive Systems, Electrical Equipment - Component. SAMS listed.

Item #	Container Size	Dispenser	Nozzle
14366	35 ml cartridge	14280 (manual)	14285
14367	380 ml coax cartridge	14409 (manual)	14293

### Devcon® Metal Welder™ II

Longer open time version of Metal Welder™ adhesive for bonding large metal parts and assemblies.

Item #	Container Size	Dispenser	Nozzle
14363	380 ml coax cartridge	14409 (manual)	14293

### Devcon® Metal Prep 90™

Primer/conditioner improves bond durability on aluminum or stainless steel surfaces.

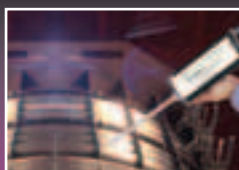
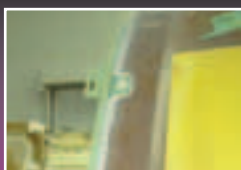
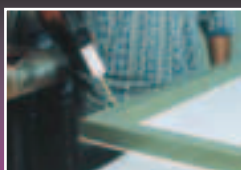
Item #	Container Size	Dispenser	Nozzle
19650	1 pt	—	—



All Devcon  
Methacrylate Adhesives  
Are GREENGUARD® Certified



| Indicates that either the manual or pneumatic dispenser listed to the right may be used with that size cartridge.



Physical Properties	Plastic Welder™		Plastic Welder™ II	Composite Welder™ FS	Flex Welder™	Flex Welder™ FC	Metal Welder™	Metal Welder™ II
	Straw, Black	White	Straw, Black, White	Blue Green, Black	Off-White	Off-White, Black	Grey / Beads	Grey / Beads
<b>Color</b>	Straw, Black	White	Straw, Black, White	Blue Green, Black	Off-White	Off-White, Black	Grey / Beads	Grey / Beads
<b>Mix ratio</b> <small>resin:hardener</small>	1:1	1:1	1:1	10:1	1:1	1:1	10:1	10:1
<b>Mixed viscosity</b> <small>cP</small>	50,000 <sup>4</sup>	50,000 <sup>4</sup>	56,000 <sup>4</sup>	120,000 <sup>4</sup>	52,000	52,000	90,000 <sup>4</sup>	90,000 <sup>4</sup>
<b>Working time</b> <sup>1</sup> <small>minutes</small>	4 ~ 6	2 ~ 3	15 ~ 20	4 ~ 8	9 ~ 12	3 ~ 5	4 ~ 6	12 ~ 16
<b>Fixture time</b> <sup>2</sup> <small>minutes</small>	10 ~ 15	8 ~ 10	30 ~ 35	10 ~ 15	40 ~ 45	11 ~ 15	20 ~ 25	45 ~ 55
<b>Functional cure</b> <small>hours</small>	0.75 ~ 1	0.75 ~ 1	2 ~ 4	0.75 ~ 1	2 ~ 4	1	1 ~ 2	4
<b>Adhesive tensile lap shear</b> <sup>3</sup> <small>(ASTM D1002) psi</small>	3,500	3,500	3,000	2,260	2,563	2,554	2,450	2,020
<b>Tensile elongation</b> %	15 ~ 25	15 ~ 25	5 ~ 15	100 ~ 125	120	100	30 ~ 60	40 ~ 60
<b>Peel strength</b> <small>pli</small>	35 ~ 40	35 ~ 40	15 ~ 20	60 ~ 65	20 ~ 27	20 ~ 27	30 ~ 40	30 ~ 40
<b>Impact resistance</b> <small>ft-lb / in<sup>2</sup></small>	22	22	17	22	20	19	>20	>20
<b>Maximum dry service temperature</b> <small>°F</small>	-67 ~ 250	-67 ~ 250	-67 ~ 250	-40 ~ 250	-67 ~ 250	-40 ~ 250	-67 ~ 200	-67 ~ 200

NOTES: <sup>1</sup> The maximum allowable time to mate and position parts after mixing and application of the adhesive. After this interval, parts must not be disturbed.

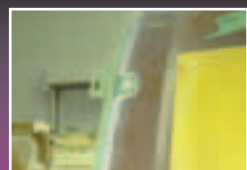
<sup>2</sup> The time required for the adhesive to generate sufficient bond strength to allow parts to be handled without deformation of the bond line.

<sup>3</sup> All tensile strength data per ASTM D1002 on grit-blasted steel, bond line thickness of 0.010".

<sup>4</sup> Thixotropic gel.

Key: ● Excellent ○ Very Good ○ Fair ○ Poor

Chemical Resistance	Plastic Welder™	Plastic Welder™ II	Composite Welder™ FS	Flex Welder™	Flex Welder™ FC	Metal Welder™	Metal Welder™ II
<b>ACIDS</b>							
Acetic 10%	○	○	○	○	○	○	○
Hydrochloric 10%	○	○	○	○	○	○	○
Sulfuric 10%	●	○	○	○	○	○	○
<b>ALCOHOLS</b>							
Glycol	○	○	○	○	○	○	○
Isopropanol	○	○	○	○	○	○	○
Methanol	○	○	○	○	○	○	○
<b>KETONES</b>							
Acetone	○	○	○	○	○	○	○
Methyl ethyl ketone	○	○	○	○	○	○	○
<b>ALKALIS</b>							
Ammonium hydroxide 20%	○	○	○	○	○	○	○
Sodium hydroxide 10%	○	○	○	○	○	○	○
<b>HYDROCARBONS</b>							
Gasoline (unleaded)	○	○	○	○	○	○	○
Mineral spirits	○	○	○	○	○	○	○
Motor oil	○	○	○	○	○	○	○
<b>CHLORINATED HYDROCARBONS</b>							
Perchloroethylene	○	○	○	○	○	○	○
<b>SALTS</b>							
Sodium chloride	○	○	○	○	○	○	○
Trisodium phosphate	○	○	○	○	○	○	○



## UV Light-Cured Adhesives

Devcon Tru-Bond™ light-cured adhesives offer the flexibility of unlimited open time plus the productivity of instant cure when exposed to UV light.



### Devcon® Tru-Bond™ Glass Bonding (GB)

Designed for bonding glass to glass and dissimilar substrates such as steel and aluminum, Tru-Bond™ GB Series adhesives cure to a hard, rigid polymer when exposed to light.

Item #	Container Size	P/N
18100	25 ml syringe	GB 205
18101	1 liter	GB 205

### Devcon® Tru-Bond™ Plastic Bonding (PB)

Designed for bonding plastics including ABS, polycarbonate and acrylic, Tru-Bond™ PB Series adhesives form flexible bonds with superior resilience and impact resistance. These adhesives cure in seconds when exposed to light—even through translucent substrates.

Item #	Container Size	P/N
18200	25 ml syringe	PB 60
18201	1 liter	PB 60
18204	1 liter	PB 950
18205	25 ml syringe	PB 3500
18206	1 liter	PB 3500
18210	25 ml syringe	PB Gel

### Devcon® Tru-Bond™ Dual-Cure Coating (DC)

Thick version (#18300) forms hard, mar-resistant domes on decals, jewelry, tags and emblems and can be dyed or pigmented. Thin version (#18305) flows and self-levels onto capacitors or resistors and forms a very thin film to protect flexible substrates.

Item #	Container Size	P/N
18300	25 ml syringe	DC 1000
18301	1 liter	DC 1000
18305	25 ml syringe	DC 200
18306	1 liter	DC 200

### Devcon® Tru-Bond™ Pressure Sensitive Adhesive (PSA)

Tru-Bond™ PSA Series are UV curable pressure sensitive adhesives (PSAs). Solvent-free liquids, they can be applied directly to parts or as films and then UV cured to create PSAs. These adhesives can be applied in a wide range of film or bead thicknesses and will cure within a broad range of UV dosages. Once cured, they provide an excellent balance of peel strength and creep resistance.

Item #	Container Size	P/N
18401	25 ml syringe	PSA 3000
18402	1 liter	PSA 3000
18406	1 liter	PSA 125

### Devcon® Tru-Bond™ Universal Bonding (UB)

Tru-Bond™ UB Series bonds rigid substrates to flexible substrates with UV/Visible light. Also cures through many translucent substrates, as well as UV blocked plastics. UB Series is weather-resistant and creates tough, durable bonds to glass, metals, plastics and ceramics.

Item #	Container Size	P/N
18705	25 ml syringe	UB 3000
18706	1 liter	UB 3000





## Tru-Bond™ Product Selector Guide

SERIES	Product	Size	Item #	Cured Color	Viscosity cP	Specific Gravity g/ml	Tensile Strength psi	% Elongation (ASTM D882)	% Volume Shrinkage	% Water Absorption (ASTM D570) 24 hours	Shore Hardness	Temperature Range °F
PSA	PSA 125	1 liter	18406	Optically Clear	125	1.06	—	—	—	4.2	70A	SAFT <sup>1</sup> = 150
	PSA 3000	25 ml 1 liter	18401 18402	Optically Clear	3,000	1.07	—	—	—	0.0	20A	SAFT <sup>1</sup> = 260
Universal Bonder	UB 3000	25 ml 1 liter	18705 18706	Optically Clear	3,000	1.07	312	214	5.8	7.5	90A	-65 ~ 300
Plastic Bonding	PB 60	25 ml 1 liter	18200 18201	Optically Clear	60	0.99	570	366	9.09	6.1	45D	-65 ~ 300
	PB 950	1 liter	18204	Optically Clear	950	1.00	511	348	7.41	4.3	42D	-65 ~ 300
	PB 3500	25 ml 1 liter	18205 18206	Optically Clear	3,500	1.00	480	325	9.00	5.0	50D	-65 ~ 300
	PB Gel	25 ml	18210	Optically Clear	Gel	1.03	577	359	8.74	5.1	37D	-65 ~ 300
Dual Cure Coating	DC 200	25 ml 1 liter	18305 18306	Optically Clear	200	1.14	2,209	3.9	6.56	2.1	83D	-65 ~ 300
	DC 1000	25 ml 1 liter	18300 18301	Optically Clear	1,000	1.17	1,028	7.4	5.65	1.1	78D	-65 ~ 300
Glass Bonding	GB 205	25 ml 1 liter	18100 18101	Optically Clear	205	1.07	2,290	15	8.41	3.2	78D	-65 ~ 300

NOTES: All products cure under ultraviolet (UV) and visible light. Dual Cure Coatings (DC Series) cure with UV, visible light and heat.  
<sup>1</sup> Shear Adhesion Failure Temperature

## Tru-Bond™ Substrate Selector Guide

Key: ● Good to Excellent Adhesion ○ Fair to Good Adhesion

SERIES	PLASTICS																	METAL					NON-METAL						
	ABS	FR-4	Polyethylene	Polyamide	PBT	Polycarbonate	Polyetherimide	Polyester-Sulphone	PETG	Polyimide	PMMA	POP	Polypropylene	PPS	Polystyrene	PSU	PUR	PVC (flexible)	PVC (rigid)	SAN	Aluminum	Cold-Rolled Steel	Copper	Galvanized Steel	Stainless Steel	Zinc	Crystal	Glass	Ferrite
PSA	●	●	○	○	●	●	○	○	●	●	●	○	○	○	○	●	●	●	●	○	●	●	●	●	●	●	●	●	●
UB	●	●			●	●	○	○	●	●	●	○			●		●	●	●	○	●	●	●	●		●	●	●	
PB	●	●			●	●	○	○	●	●	●	○			●		●	●	●	○		○	○	○					
DC	●	●				○				○	●				○		○	○			●	●	○	○	●	○	●	●	○
GB	○	●			○	○				○	○				○		○	○			●	●	○	○	●		●	●	●



**Permatex® ZipGrip® Instant Adhesives**

From a world leader in cyanoacrylate technology, Permatex® ZipGrip® Instant Adhesives are designed to handle the full range of OEM applications. This comprehensive line includes formulations for even the most specialized needs.



**Permatex® ZipGrip® General Purpose Instant Adhesives**

General Purpose formulations for bonding metals, plastics and rubber in all combinations. Gels are ideal for vertical or inverted surfaces. GPE 180 is ISO 10993 approved.

Item #	Container Size	P/N
70144	14 g bottle	GPE 3
70145	2 g tube	GPE 3
70161	1 lb bottle	GPE 3
70213	1/3 oz bottle	GPE 15
70350	1 oz bottle	GPE 30
70361	1 lb bottle	GPE 30
70450	1 oz bottle	GPE 100
70461	1 lb bottle	GPE 100
70650	1 oz bottle	GPE 180
70661	1 lb bottle	GPE 180
70750	1 oz bottle	GPE 1500
70761	1 lb bottle	GPE 1500

**Permatex® ZipGrip® General Purpose Instant Adhesives**

Product	Item Number	Container Size	Viscosity	Color	Type	Gap Filling	Adhesive Tensile Shear	Service Temperature	Cure Speed Steel-Plastic-Rubber
GPE 3 <sup>1</sup>	70144	14 g bottle	3 cP	Clear	Ethyl	0.003"	3,200 psi	-65 to 200°F	5-10 / 3-5 / <2 sec
	70145	2 g tube							
	70161	1 lb bottle							
GPE 15 <sup>1</sup>	70213	1/3 oz bottle	15 cP	Clear	Ethyl	0.005"	3,200 psi	-65 to 200°F	5-10 / 4-10 / <3 sec
GPE 30 <sup>1</sup>	70350	1 oz bottle	30 cP	Clear	Neomer Ethyl	0.004"	3,200 psi	-65 to 200°F	5-12 / 5-13 / <6 sec
	70361	1 lb bottle							
GPE 100 <sup>2</sup>	70450	1 oz bottle	100 cP	Clear	Ethyl	0.004"	3,200 psi	-65 to 200°F	10-20 / 10-20 / <5 sec
	70461	1 lb bottle							
GPE 180 <sup>3</sup>	70650	1 oz bottle	180 cP	Clear	Ethyl	0.006"	3,000 psi	-65 to 200°F	10-25 / 10-20 / <4 sec
	70661	1 lb bottle							
GPE 1500 <sup>3</sup>	70750	1 oz bottle	1,500 cP	Clear	Ethyl	0.008"	3,400 psi	-65 to 200°F	20-40 / 25-50 / <10 sec
	70761	1 lb bottle							

**Permatex® ZipGrip® Toughened Instant Adhesives**

Toughened ethyl versions are modified with elastomeric compounds to improve impact, peel and general toughness of cyanoacrylates. They also exhibit higher temperature and moisture resistance than standard formulas.

Item #	Container Size	P/N
72150	1 oz bottle	TE 1000
72161	1 lb bottle	TE 1000
72250	1 oz bottle	TE 2400
72261	1 lb bottle	TE 2400

**Permatex® ZipGrip® Toughened Instant Adhesives**

Product	Item Number	Container Size	Viscosity	Color	Type	Gap Filling	Adhesive Tensile Shear	Service Temperature	Cure Speed Steel-Plastic-Rubber
TE 1000 <sup>3</sup>	72150	1 oz bottle	1,000 cP	Clear	Ethyl	0.008"	3,700 psi	-65 to 280°F	25-40 / 25-50 / 20-50 sec
	72161	1 lb bottle							
TE 2400 <sup>3</sup>	72250	1 oz bottle	2,400 cP	Clear	Ethyl	0.009"	3,700 psi	-65 to 280°F	40-70 / 25-50 / 25-50 sec
	72261	1 lb bottle							

**Permatex® ZipGrip® Surface Insensitive Instant Adhesives**

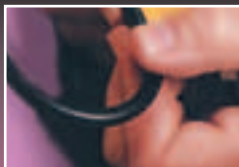
Surface Insensitive formulations overcome the problems of slow fixturing or no-cure caused by acidic surfaces or very dry environments. These formulations are ideal for difficult-to-bond surfaces.

Item #	Container Size	P/N
71150	1 oz bottle	SIE 100
71161	1 lb bottle	SIE 100
71940	20 g tube	SIE Gel

**Permatex® ZipGrip® Surface Insensitive Instant Adhesives**

Product	Item Number	Container Size	Viscosity	Color	Type	Gap Filling	Adhesive Tensile Shear	Service Temperature	Cure Speed Steel-Plastic-Rubber
SIE 100 <sup>2</sup>	71150	1 oz bottle	100 cP	Clear	Neomer Ethyl	0.005"	3,200 psi	-60 to 200°F	8-12 / 3-7 / <6 sec
	71161	1 lb bottle							
SIE Gel <sup>4</sup>	71940	20 g tube	Gel	Clear	Ethyl	0.010"	3,500 psi	-60 to 200°F	50-70 / 25-65 / 20-30 sec

NOTES: <sup>1</sup> Commercial Item Standard A-A-3097, Type II, Class 1  
<sup>2</sup> Commercial Item Standard A-A-3097, Type II, Class 2  
<sup>3</sup> Commercial Item Standard A-A-3097, Type II, Class 3  
<sup>4</sup> Commercial Item Standard A-A-3097, Type II, Class 5  
<sup>5</sup> Commercial Item Standard A-A-3097, Type II, Class 2 and ISO 10993 Approved



## Manual and Pneumatic Systems

Manual and pneumatic applicator guns with static nozzles mix as they dispense, eliminating premixing and ensuring precise bead control.

### Devcon® 50 ml Mark 5™ Dispensing System

Manual and pneumatic dispensing guns and custom-designed static mixing nozzles for 1:1 and 10:1 50 ml systems.

Item #	Dispensing Guns
74001	GP Manual (1:1 ratio and 2:1 ratio)
14280	Manual (1:1 and 10:1 ratio)
Mixing Nozzles	
14285	Ø .25" (1:1, 2:1 and 10:1 ratio)

### Devcon® 380 ml Coaxial Dispensing System

Manual and pneumatic dispensing guns and custom-designed static mixing nozzles for 10:1 380 ml coaxial systems.

Item #	Dispensing Guns
14409	Manual (10:1 ratio)
Mixing Nozzles	
14293	Ø .315" (10:1 ratio)

### Devcon® 400 ml Dispensing System

Manual and pneumatic dispensing guns and custom-designed static mixing nozzles for 1:1 400 ml systems and 4:1 400 ml systems.

Item #	Dispensing Guns
14401	GP Manual (1:1, 2:1 and 4:1 ratio)
14410	Manual (1:1 and 2:1 ratio)
14400	Pneumatic (1:1 and 2:1 ratio)
15043	Manual (4:1 ratio)
Mixing Nozzles	
14291	Ø .250" (1:1 ratio)
14293	Ø .315" (1:1 ratio)
14292	Ø .395" (1:1 and 10:1 ratio)
15047	Ø .394" (4:1 ratio)



### Devcon® 490 ml Dispensing System

Manual dispensing gun and custom-designed static mixing nozzles for 10:1 490 ml systems.

Item #	Dispensing Guns
Contact Devcon Tech Service	
Mixing Nozzles	
14287	Ø .375" (10:1 ratio)

### Devcon® 25 ml Syringe Dispensing System

Manual single component syringe dispensing system used with Devcon's Light-Cured adhesives.

Item #	Dispensing Guns
18000	Manual (single component)

### Mix Nozzle Selector Guide

Item Number	Element	Product Compatibility
<b>14285</b> (for Mark 5™ 1:1, 2:1 and 10:1 50 ml gun)	20 element 6.35 mm or Ø .250"	One Minute™, 5 Minute®, 2 Ton®, Epoxy Plus™ 25, HP 250, HP 250Q, 5 Minute® Gel, Plastic Welder™, Plastic Welder™ II, Flex Welder™, Metal Welder™
<b>14287</b> (for 490 ml 10:1 manual gun)	24 element 9 mm or Ø .375"	Composite Welder™ FS
<b>14291</b> (for 400 ml pneumatic gun only)	18 element 6 mm or Ø .250"	Smaller diameter for less waste for methacrylates / Plastic Welder™, Plastic Welder™ II, Flex Welder™, Flex Welder™ FC
<b>14292</b> (for 400 ml 1:1 manual or pneumatic gun)	18 element 10 mm or Ø .395"	One Minute™, 5 Minute®, 2 Ton®, Epoxy Plus™ 25, HP 250, HP 250Q, 5 Minute® Gel, Plastic Welder™, Plastic Welder™ II, Flex Welder™, Flex Welder™ FC, Food Grade Pot & Seal
<b>14293</b> (for 400 ml 1:1 manual or pneumatic gun) (for 380 ml 10:1 Coaxial manual or pneumatic gun)	32 element 8 mm or Ø .315"	Epoxy Plus™ 25, Cable Cast, Metal Welder™, Metal Welder™ II, Dev-Thane™ 5
<b>15047</b> (for 400 ml 4:1 manual or pneumatic gun)	24 element 10 mm or Ø .394"	Flexane® FC Rubber Repair Liquid, Flexane® FC Rubber Repair, Edge & Seal (T-35)





## Products for Both Maintenance/Repair and OEM Assembly

Certain products are hard to keep in stock because everyone in the plant—from production to maintenance—uses them routinely. Today, with its highly respected Permatex® brands, ITW Devcon offers field-proven products to improve reliability in both assembly and repair applications.



### Permatex® products for both Assembly and Repair include:

- ▼ Permatex® liquid and gel threadlockers to prevent fastener loosening caused by shock or vibration, and to protect against rust and corrosion
- ▼ Permatex® retaining compounds to secure and protect non-threaded assemblies
- ▼ Permatex® thread sealants to lubricate and protect threads and prevent leakage in both high-pressure and low-pressure systems
- ▼ Permatex® anaerobic and RTV silicone form-in-place gasket makers, dressings and general-purpose sealants





## Permatex® Liquid Threadlockers... Providing Threaded Fastener Reliability

Permatex® Threadlockers are superior to conventional lock washers, nylon inserts and other mechanical devices because they secure the entire fastener assembly against loosening from shock or vibration and maintain fastener clamping forces. Threadlockers also seal the threads against leakage and prevent rust and corrosion. Available in a variety of strengths and temperature ranges, threadlockers remain the most reliable way to lock and seal threaded fasteners of all shapes and sizes, either before or after assembly.



VS.



### PERMATEX® THREADLOCKER

Entire threaded area filled with threadlocker.  
ONE DROP FITS ALL!  
Threads sealed—moisture can't get inside.

### LOCK WASHER

Contact only under bolt—bolt can vibrate loose.  
Must use right size.  
Threads open—moisture can get in causing corrosion.



## Permatex® Liquid Threadlockers

Product	Item Number	Container Size	Typical Use	Color	Viscosity cP	Break/Prevail Torque in-lbs <sup>1</sup>	Temperature Range	Fixture Time <sup>2</sup> / Full Cure	Fixture with Primer	Specific Gravity
Permatex® Low Strength Threadlocker PURPLE	22250	50 ml bottle	Up to 1/4" (6mm)	Purple	1,200/5,000 Thixotropic	62/27	-65° to 300°F (-54° to 149°C)	20 min/ 24 hrs	5 min	1.05
	22225	250 ml bottle								
Permatex® Medium Strength Threadlocker BLUE	24210	10 ml bottle	1/4" to 3/4" (6-20mm)	Blue	1,200/6,000 Thixotropic	115/53	-65° to 300°F (-54° to 149°C)	20 min/ 24 hrs	5 min	1.00
	24250	50 ml bottle								
	24225	250 ml bottle								
Permatex® Surface Insensitive Threadlocker BLUE	24350	50 ml bottle	1/4" to 3/4" (6-20mm)	Blue	2,250/12,000 Thixotropic	180/62	-65° to 300°F (-54° to 149°C)	20 min/ 24 hrs	5 min	1.08
	24325	250 ml bottle								
Permatex® Permanent Strength Threadlocker RED	26210	10 ml bottle	3/8" to 1" (10-25mm)	Red	1,800/5,000 Thixotropic	189/275	-65° to 300°F (-54° to 149°C)	20 min/ 24 hrs	5 min	1.10
	26250	50 ml bottle								
	26225	250 ml bottle								
	26201	1 L bottle								
Permatex® High Strength Threadlocker RED	27110	10 ml bottle	3/8" to 1" (10-25mm)	Red	500	230/225	-65° to 300°F (-54° to 149°C)	20 min/ 24 hrs	5 min	1.10
	27150	50 ml bottle								
	27125	250 ml bottle								
Permatex® High Temperature Threadlocker RED	27250	50 ml bottle	3/8" to 1 1/2" (10-38mm)	Red	10,000	180/270	-65° to 450°F (-54° to 232°C)	30 min/ 24 hrs	5 min	1.11
	27225	250 ml bottle								
Permatex® Large Diameter Threadlocker RED	27750	50 ml bottle	1" and over (25mm+)	Red	7,000	250/200	-65° to 300°F (-54° to 149°C)	60 min/ 24 hrs	5 min	1.12
	27725	250 ml bottle								
Permatex® Penetrating Grade Threadlocker GREEN	29050	50 ml bottle	#2 to 1/2" (2.2-12mm)	Green	12	90/310	-65° to 300°F (-54° to 149°C)	20 min/ 24 hrs	3 min	1.08
	29025	250 ml bottle								

NOTES: <sup>1</sup> .375" x 16 phosphate steel    <sup>2</sup> Fixture strength is equivalent to 20% of full cure strength



**Permatex® Threadlockers...  
Exceptional Performance, Reliability and Value**



**Permatex® Medium Strength Threadlocker BLUE**



All-purpose, medium strength threadlocker. Ideal for all nut and bolt applications 1/4" to 3/4" (6mm to 20mm). Eliminates need for stocking expensive lock nuts and lock washers. Locks and seals while preventing parts from loosening due to vibration. Protects threads from corrosion. Removable with hand tools for easy disassembly. MIL-SPEC (S-46163A), Type II, Grade N.

Item #	Container Size
24210	10 ml bottle, carded
24250	50 ml bottle
24225	250 ml bottle

**Permatex® High Strength Threadlocker RED**

High strength threadlocker for heavy-duty applications 3/8" to 1" (10mm to 25mm). Especially well suited for permanently locking studs. Locks against vibration loosening. Removable with heat and hand tools. MIL-SPEC (S-46163A), Type I, Grade K.

Item #	Container Size
27110	10 ml bottle, carded
27150	50 ml bottle
27125	250 ml bottle

**Permatex® Permanent Strength Threadlocker RED**



A permanent, high strength threadlocker that is applied to fasteners 3/8" to 1" (10mm to 25mm) in size before assembly. Designed for securing parts that must withstand heavy shock, vibration or extreme chemical or environmental conditions. Localized heat and hand tools are required to separate parts. MIL-SPEC (S-46163A), Type II, Grade O.

Item #	Container Size
26210	10 ml bottle, carded
26250	50 ml bottle
26225	250 ml bottle
26201	1 L bottle

**Permatex® Penetrating Grade Threadlocker GREEN**



A low viscosity threadlocking liquid that wicks along the threads of preassembled fasteners to secure them in place. Since it is applied after assembly, preventive maintenance procedures are simplified. Ideal for fasteners ranging from #2 to 1/2" (2.2 to 12mm) in size. Localized heating and hand tools are needed for disassembly. MIL-SPEC (S-46163A), Type III, Grade R.

Item #	Container Size
29050	50 ml bottle
29025	250 ml bottle

**Permatex® Low Strength Threadlocker PURPLE**



Low strength threadlocker designed for fasteners under 1/4" (6mm) that require occasional adjustment. Removable with hand tools for easy disassembly. MIL-SPEC (S-46163A), Type II, Grade M.

Item #	Container Size
22250	50 ml bottle
22225	250 ml bottle

**Permatex® Surface Insensitive Threadlocker BLUE**

Medium/High strength threadlocker for general-purpose applications. Especially well-suited for 1/4" to 3/4" (6mm to 20mm) fasteners that have a slight oil film. Prevents vibration loosening.

Item #	Container Size
24350	50 ml bottle
24325	250 ml bottle

**Permatex® Large Diameter Threadlocker RED**

A high strength adhesive for locking and sealing large bolts and studs 1" (25mm+) or larger in diameter. Heat may be required to weaken bond before parts can be disassembled. MIL-SPEC (S-46163A), Type I, Grade L.

Item #	Container Size
27750	50 ml bottle
27725	250 ml bottle

**Permatex® High Temperature Threadlocker RED**

Hi-temp/hi-strength threadlocker for heavy-duty applications. Prevents bolts 3/8" to 1 1/2" (10mm to 38mm) from loosening due to shock, severe vibration and heat stress. Suited for temperatures up to 450°F (232°C). Removable with heat and hand tools.

Item #	Container Size
27250	50 ml bottle
27225	250 ml bottle



## Permatex® GEL TWIST™ and GEL SQUEEZE™ Threadlockers... TRUE Threadlocking Innovation!

Permatex® Threadlocker Gels are the true innovation in threadlocking! Available in Medium Strength BLUE Gel and High Strength RED Gel, the unique Permatex® GEL TWIST™ and GEL SQUEEZE™ applicators leave the threadlocker where you want it... on the part! No more liquid drips or solid stick globs to deal with. No more mess to clean or costly waste to worry about. Permatex® Threadlocker Gels eliminate these hassles while still providing "liquid quality" application reliability.



### Permatex® Medium Strength Threadlocker BLUE Gel



An all-purpose, medium strength blue threadlocker gel that reliably secures all nut and bolt applications 1/4" to 1" (6mm to 25mm). Locks and seals while preventing parts from loosening due to vibration. Protects threads from corrosion. Removable with hand tools for easy disassembly.

Item #	Container Size	🇨🇦
24005	5 g GEL SQUEEZE™ tube, carded	24205
24010	10 g GEL TWIST™ applicator, carded	24215

### Permatex® High Strength Threadlocker RED Gel



A high strength threadlocker red gel for heavy-duty applications. Ideal for reliably securing all permanent nut and bolt applications 3/8" to 1" (10mm to 25mm) and greater. Locks and seals while preventing parts from loosening due to vibration. Protects threads from corrosion. Requires heat or special tools for removal.

Item #	Container Size	🇨🇦
27005	5 g GEL SQUEEZE™ tube, carded	26205
27010	10 g GEL TWIST™ applicator, carded	27115



### Permatex® GEL TWIST™ and GEL SQUEEZE™ Threadlockers

Product	Item Number	Container Size	Typical Use	Color	Viscosity cP	Break / Preval Torque in-lbs <sup>1</sup>	Temperature Range	Fixture Time <sup>2</sup> / Full Cure	Specific Gravity
Permatex® Medium Strength Threadlocker BLUE Gel	24005	5 g GEL SQUEEZE™ Tube	1/4" to 1" (6-25mm)	Blue	75,000/900,000 Thixotropic	115/53	-65° to 300°F (-54° to 149°C)	15 min/24 hrs	1.15
	24010	10 g GEL TWIST™ Applicator							
Permatex® High Strength Threadlocker RED Gel	27005	5 g GEL SQUEEZE™ Tube	3/8" to 1" (10-25mm) and greater	Red	75,000/900,000 Thixotropic	175/230	-65° to 300°F (-54° to 149°C)	15 min/24 hrs	1.13
	27010	10 g GEL TWIST™ Applicator							

NOTES: <sup>1</sup> .375" x 16 phosphate steel <sup>2</sup> Fixture strength is equivalent to 20% of full cure strength

🇨🇦 Ordering number in Canada







### Permatex® Retaining Compounds

Permatex® Retaining Compounds are designed to bond non-threaded, cylindrical, metal assemblies by filling the voids between close-fitting metal parts. Retaining Compounds harden to create a solid, one-piece assembly. Retaining Compounds can be used to lock keyways, secure splines, augment press fits and strengthen interference fits. Use them to prevent wear on new components, or restore the fit to worn or out-of-tolerance parts. Retaining Compounds seal joints against leakage and prevent fretting and corrosion. Formulated in a variety of viscosities, strength characteristics, gap-filling abilities and temperature ranges, Permatex® Retaining Compounds can solve even the most difficult retaining applications.

#### Permatex® Bearing Mount for Close Fits

A low viscosity, rapid-curing anaerobic adhesive that augments the strength of press fit assemblies. Prevents fretting and corrosion. Up to 3,000 psi holding power. MIL-SPEC (R-46082B), Type I.

Item #	Container Size
60950	50 ml bottle
60925	250 ml bottle

#### Permatex® High Temperature Sleeve Retainer

High temperature (up to 400°F / 204°C) anaerobic adhesive that secures slip and press fit assemblies. Up to 3,000 psi holding power. Restores fit to worn or out-of-tolerance assemblies. Prevents fretting and corrosion. MIL-SPEC (R-46082B), Type II.

Item #	Container Size
64050	50 ml bottle

#### Permatex® Bearing Mount for Relaxed Fits



High strength, medium viscosity anaerobic adhesive for slip fit assemblies. Provides 3,500 psi shear strength on steel. Prevents fretting and corrosion. Fixture time is 10 minutes at room temperature.

Item #	Container Size
68050	50 ml bottle
68025	250 ml bottle

#### Permatex® Maximum Temperature Bearing Mount

Maximum temperature (up to 450°F / 232°C) anaerobic retaining adhesive for close fitting cylindrical joints. Provides excellent resistance at elevated temperatures.

Item #	Container Size
62050	50 ml bottle
62001	1 L bottle

#### Permatex® Bearing Mount for Worn Parts

A creamy, non-running gel that can be applied onto cylindrical parts to fill surface imperfections and repair worn areas. It contains no metal, but once assembled, hardens to a strength that often doubles that of a press fit. Use to salvage worn metallic parts or to keep machinery running until new parts arrive. Product remaining outside the joint does not dry, allowing for easy clean up. Use to 300°F (149°C). Can bond cylindrical assemblies, particularly where gaps approach 0.50 mm.

Item #	Container Size
66050	50 ml tube, carded



#### Permatex® Retaining Compounds

Product	Item Number	Container Size	Color	Maximum Diametral Gap Fill	Viscosity cP	Shear Strength psi	Temperature Range	Fixture Time/ Full Cure (on Steel)	Specific Gravity
Permatex® Bearing Mount For Close Fits	60950	50 ml bottle	Green	.005"	125	3,000	-65° to 300°F (-54° to 149°C)	10 min/ 24 hrs	1.10
	60925	250 ml bottle							
Permatex® Maximum Temperature Bearing Mount	62050 62001	50 ml bottle 1 L bottle	Green	.015"	8,500	3,800	-65° to 450°F (-54° to 232°C)	1 hr/ 24 hrs	1.16
Permatex® High Temperature Sleeve Retainer	64050	50 ml bottle	Green	.007"	600	3,000	-65° to 400°F (-54° to 204°C)	1 hr/ 24 hrs	1.12
Permatex® Bearing Mount For Worn Parts	66050	50 ml tube	Silver	.020"	1,200,000	3,000	-65° to 300°F (-54° to 149°C)	10 min/ 1-2 hrs	1.13
Permatex® Bearing Mount For Relaxed Fits	68050	50 ml bottle	Green	.015"	1,250	3,800	-65° to 300°F (-54° to 149°C)	10 min/ 24 hrs	1.10
	68025	250 ml bottle							





## Permatex® Thread Sealants

Permatex® Thread Sealants seal and secure metal pipes and fittings. By filling the space between threaded metal parts, Thread Sealants prevent leakage caused by vibration loosening, tape shredding, solvent evaporation, damaged threads and temperature cycling. Designed for low- and high-pressure applications, Thread Sealants seal instantly for online low-pressure testing. When fully cured, they seal to the burst strength of most piping systems. The high lubricating properties of Permatex® Thread Sealants ease assembly and prevent galling of the threads. For system repairs, parts may be disassembled with basic hand tools.

### Permatex® High Performance Thread Sealant



Formulated specifically for metal, tapered pipe thread fittings. High Performance Thread Sealant replaces tapes and pipe dopes. Cures rapidly to withstand 10,000 psi. Prevents galling and protects mated threaded areas from rust and corrosion. Contains PTFE.

Item #	Container Size	🇨🇦
56521	50 ml tube, carded	19545
56525	250 ml tube	

### Permatex® High Temperature Thread Sealant

Locks and seals threaded fittings. Resists leakage, vibration loosening, moisture, hydraulic fluids and diesel fuels. Lubricates threads for easy assembly and disassembly. Won't shred or tear like tape. Parts may be repositioned up to 4 hours after application. Contains PTFE. Temperature range from -65°F to 400°F (-54°C to 204°C).

Item #	Container Size	🇨🇦
59235	50 ml tube, carded	17358
59225	250 ml tube	

### Permatex® Maximum Temperature Thread Sealant

A high performance, solvent resistant sealant that locks and seals metal tapered pipe threads and fittings. Specifically formulated for aluminum, stainless steel, galvanized metal and other inert metals. Temperature range -65°F to 400°F (-54°C to 204°C). Contains PTFE.

Item #	Container Size
56750	50 ml tube, carded
56725	250 ml tube



### Permatex® Thread Sealants

Product	Item Number	Container Size	Color	Viscosity cP	Seal to Operating Pressure	Temperature Range	Specific Gravity
Permatex® High Performance Thread Sealant	56521	50 ml tube	White	300,000	4 hrs	-65° to 300°F (-54° to 149°C)	1.10
	56525	250 ml tube					
Permatex® High Temperature Thread Sealant	59235	50 ml tube	White	350,000	4 hrs	-65° to 400°F (-54° to 204°C)	1.21
	59225	250 ml tube					
Permatex® Maximum Temperature Thread Sealant	56750	50 ml tube	White	300,000	4 hrs	-65° to 400°F (-54° to 204°C)	1.10
	56725	250 ml tube					
Permatex® Thread Sealant w/PTFE	80632	4 oz can	White	55,000	Instant/Non-Curing	-65° to 300°F (-54° to 149°C)	1.12
	80633	16 oz can					
Permatex® Pneumatic/Hydraulic Sealant	54550	50 ml bottle	Purple	14,000	4 hrs	-65° to 300°F (-54° to 149°C)	1.02
Permatex® Pipe Joint Compound	80045	16 oz bottle	Black	40,000	Instant/Non-Curing	-65° to 400°F (-54° to 204°C)	1.28

🇨🇦 Ordering number in Canada



**Permatex® Thread Sealant with PTFE**

Economical general-purpose fitting sealant. Outperforms tapes and pipe dopes. Seals and resists pressure in air, oil, diesel fuel and hydraulic systems. Remains pliable at high and low temperatures. Temperature range -65°F to 300°F (-54°C to 149°C); resists common shop fluids.

Item #	Container Size	P/N	🇨🇦
80632	4 oz can	14H	80510
80633	16 oz can	14D	

**Permatex® Pneumatic/Hydraulic Sealant**

Designed for locking and sealing high pressure hydraulic and pneumatic systems. Contains no fillers or particles which could contaminate system fluids, foul valves or clog fine filters and screens. Reliably cures on "as received" fasteners and controlled locking strength affords easy disassembly.

Item #	Container Size
54550	50 ml bottle

**Permatex® Pipe Joint Compound**

Universal sealant. Lubricates and seals threaded joints on water, oil and fuel lines. Temperature range -65°F to 400°F (-54°C to 204°C); resists common shop fluids.

Item #	Container Size	P/N
80045	16 oz bottle	51D



**Activators**

**Permatex® Surface Prep™ Activator for Anaerobics**



Speeds cure of Permatex® Threadlockers, Thread Sealants, Retaining Compounds and Anaerobic Gasket Makers. Recommended for use during cold weather. General purpose solvent for preparing parts and surfaces. ▲ NFPA Fire Code 30B: Level 1.

Item #	Container Size
24163	6 oz aerosol can, 4.5 oz net wt



🇨🇦 Ordering number in Canada



## Specialty Adhesives

High-performance adhesives for specialized applications.

### Permatex® Clear RTV Silicone Adhesive Sealant



General-purpose, clear RTV sealant. Seals, bonds, repairs, mends and secures glass, metal, plastics, fabric, vinyl, weather stripping and vinyl tops. May be applied to horizontal or vertical surfaces. Waterproof and flexible. Temperature range -75°F to 400°F (-59°C to 204°C); resists oil, water, weather, vibration, grease and more. Nonpaintable. MIL-A-46106B, Type I.

Item #	Container Size	P/N	🇨🇦
80050	3 oz tube, carded	66BR	80533
81913	7.25 oz Automatic Tube®		
85913	7.25 oz PowerBead™ can		
80855	11 oz cartridge	66C	80834

### Permatex® Black Silicone Adhesive Sealant

General-purpose, black RTV sealant. Seals, bonds, repairs, mends and secures glass, metal, plastics, fabric, vinyl, weather stripping and vinyl tops. May be applied to horizontal or vertical surfaces. Waterproof and flexible. Temperature range -75°F to 450°F (-59°C to 232°C); resists oil, water, weather, vibration, grease and more. Nonpaintable. MIL-A-46106B, Type I.

Item #	Container Size	P/N	🇨🇦
81158	3 oz tube, carded	16BR	81237
81173	12.9 oz cartridge	16C	81238

### Permatex® Super Weatherstrip Adhesive

A professional, high strength weatherstrip adhesive ideal for bonding a variety of common materials. Permanently bonds weatherstrip and a variety of neoprene and other materials. Withstands temperature extremes. Waterproof. Resists gasoline, antifreeze, kerosene and most solvents.

Item #	Container Size	P/N	🇨🇦
81731	5 fl oz tube, boxed	80	17361

### Permatex® Black Super Weatherstrip Adhesive

A professional, black weatherstrip adhesive that blends with black weather stripping for less clean-up. Withstands temperature extremes. Resistant to gasoline, kerosene, antifreeze and most solvents. Permanently bonds all weather stripping. A superior adhesive for bonding a variety of common materials.

Item #	Container Size	P/N
81850	5 fl oz tube, boxed	82

### Permatex® Fast Cure Epoxy

Convenient premeasured epoxy mixer cups. No mess, no guess, no waste. Ideal for bonding glass, hard plastics, rubber and metal. Bonds in 5-15 minutes. Grey adhesive has excellent chemical resistance. Fills porosities and can be used to build up worn parts.

Item #	Container Size	🇨🇦
21425	4 g mixer cups	21431



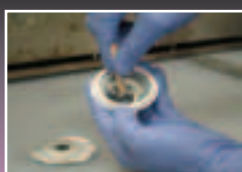
### Devcon® Duco® Cement

Clear all-purpose waterproof household glue. Ideal for china, glass, plastic, wood and metal and is fast-drying.

Item #	Container Size
6245	1 fl oz



🇨🇦 Ordering number in Canada





## Permatex® Gasket Makers

Permatex®, the leader in form-in-place gasket makers, gasket dressings and general-purpose sealants for over a century, has an extensive selection of anaerobics, RTV silicones and solvent-based products to meet all your gasketing and sealing needs.

### Anaerobic Gasket Makers

- Rigid assemblies
- Designed to eliminate movement
- Gaps up to 0.050" primed
- High chemical resistance
- Maximum temperature of 400°F

### RTV Silicone Gasket Makers

- Instant seal with the Right Stuff®
- Flexible joints
- Use with dissimilar materials
- Gaps up to 0.250"
- Temperatures to 600°F



### Permatex® PowerBead™... the ultimate dispensing system

- Makes application quick and easy
- Provides smooth flow and bead
- Extended, rigid nozzle gives pinpoint control
- Patented vertically-actuated valve design eliminates clogging
- Product flow is easily regulated without finger fatigue
- Permatex® branded cushion-grip shows you have chosen the best



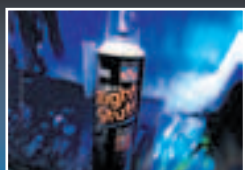


## Permatex® Gasket Makers

Product	Item Number	Color	Maximum Gap Fill	Typical Use	Temperature Range	Flange Type	Cure Type	Specific Gravity
<b>Permatex® the Right Stuff® Gasket Maker</b>	25224, 29208, 85224, 33694	Black	0.25"	High adhesion, instant seal	-75° to 450°F (-59° to 232°C), 500°F (260°C) intermittent	Rigid or Flexible	Elastomeric Rubber	1.31
<b>Permatex® Ultra Black® Maximum Oil Resistance Gasket Maker</b>	82180, 82080, 85080, 24105	Metallic Black	0.25"	Increased oil resistance, noncorrosive	-65° to 400°F (-54° to 204°C), 500°F (260°C) intermittent	Rigid or Flexible	Silicone (Oxime)	1.26
<b>Permatex® Ultra Copper® Maximum Temperature RTV Silicone Gasket Maker</b>	81878, 82751	Metallic Copper	0.25"	High temperature, noncorrosive	-65° to 600°F (-54° to 316°C), 700°F (371°C) intermittent	Rigid or Flexible	Silicone (Oxime)	1.05
<b>Permatex® Ultra Blue® RTV Silicone Gasket Maker</b>	81724, 85519, 81725	Metallic Blue	0.25"	Increased oil resistance, noncorrosive	-65° to 400°F (-54° to 204°C), 500°F (260°C) intermittent	Rigid or Flexible	Silicone (Oxime)	1.30
<b>Permatex® Ultra Grey® Gasket Maker</b>	82194, 82195	Metallic Grey	0.25"	High durometer for more rigid flanges	-65° to 450°F (-54° to 232°C), 500°F (260°C) intermittent	Rigid or Flexible	Silicone (Oxime)	1.50
<b>Permatex® Sensor-Safe Blue RTV Silicone Gasket Maker</b>	80022, 81860, 85860, 80628	Blue	0.25"	General-purpose sealing	-65° to 400°F (-54° to 204°C), 500°F (260°C) intermittent	Rigid or Flexible	Silicone (Acetoxyl)	1.30
<b>Permatex® High-Temp Red RTV Silicone Gasket Maker</b>	81160, 81915, 85915, 81409	Red	0.25"	High temperature general-purpose sealing	-65° to 600°F (-54° to 316°C), 650°F (343°C) intermittent	Rigid or Flexible	Silicone (Acetoxyl)	1.05
<b>Permatex® Anaerobic Flange Sealant</b>	51531, 51580	Dark Purple	0.010" (0.050" primed)	For flexible applications	-65° to 300°F (-54° to 149°C)	Rigid	Anaerobic	1.10
<b>Permatex® Anaerobic Gasket Maker</b>	51817, 51813, 51845	Red	0.010" (0.050" primed)	For all metals including aluminum flanges	-65° to 300°F (-54° to 149°C)	Rigid	Anaerobic	1.13

### The Right Stuff® Application Instructions

1. Clean and dry parts.
2. Apply a continuous bead of the Right Stuff® to one surface, surrounding all bolt holes.
3. Assemble parts within 5 minutes, tightening bolts to recommended torque levels. Material will fill any surface imperfection. Equipment can be returned to service immediately. No waiting.



# Ultra Series



## Permatex® the Right Stuff® Gasket Maker



Heavy-bodied, black, elastomeric rubber provides instant seal. Superior flexibility and adhesion accommodates joint movement. Excellent oil resistance. Noncorrosive. Low odor. Low volatility. Temperature range of -75°F to 450°F (-59°C to 232°C) continuous, 500°F (260°C) intermittent. Not recommended for use on parts that will be in contact with gasoline.

Item #	Container Size	Canada
25224	7 oz Automatic Tube®	
85224	7.5 oz PowerBead™ can	26015
29208	5 oz cartridge	
33694	10.1 fl oz cartridge	
29247	short caulking gun	



Canada Ordering number in Canada

## Permatex® Ultra Black® Gasket Maker

Fast-curing formula. Sensor-safe, low odor, noncorrosive. Fills gaps of up to 0.25" when fully cured. Meets performance specs of OE silicone gaskets. Retains high flexibility, oil resistant properties through use of a patented adhesion system. Temperature range -65°F to 400°F (-54°C to 204°C) continuous, 500°F (250°C) intermittent. Resists common fluids and excessive vibration.

Item #	Container Size	Canada
82180	3.35 oz tube, carded	59803
82080	8.75 oz Automatic Tube®	
85080	9.5 oz PowerBead™ can	
24105	13 oz cartridge	59813

## Permatex® Ultra Grey® Gasket Maker

Designed for high torque applications requiring a unique RTV gasket. Fills gaps of up to 0.25" when fully cured. Low odor, noncorrosive. Outstanding oil and coolant resistance. Temperature range -65°F to 450°F (-54°C to 232°C) continuous, 500°F (250°C) intermittent. Resists common fluids and excessive vibration.

Item #	Container Size	Canada
82194	3.5 oz tube, carded	18572
82195	13 oz cartridge	

## Permatex® Ultra Copper® RTV Silicone Gasket Maker

Premium silicone designed to provide reliable, tough, flexible formed-in-place gaskets for mechanical assemblies. Temperature range -65°F to 600°F (-54°C to 316°C) continuous, 700°F (371°C) intermittent.

Item #	Container Size	P/N	Canada
81878	3 oz tube, carded	101BR	17914
82751	300 ml cartridge		

## Permatex® Ultra Blue® RTV Silicone Gasket Maker



Fills gaps up to 0.25" when fully cured. Sensor-safe, low odor, noncorrosive. Outstanding oil resistance and joint movement values. Eight times more flexible than cork/composite gaskets; three times more oil resistant than conventional silicones. Temperature range -65°F to 400°F (-54°C to 204°C) continuous, 500°F (250°C) intermittent. Resists common fluids and excessive vibration.

Item #	Container Size	P/N	Canada
81724	3.35 oz tube, carded	77BR	81805
85519	9.5 oz PowerBead™ can		
81725	13 oz cartridge	77C	17359



## Permatex® Sensor-Safe Blue RTV Silicone Gasket

The original Permatex® blue makes reliable “formed-in-place” gaskets that resist shrinking, cracking and migrating. Product cures to a strong, flexible rubber that seals flanges against leakage and resists oil and other shop fluids. Coat pre-cut gaskets to increase reliability. Temperature range -65°F to 400°F (-54°C to 204°C) continuous, 500°F (250°C) intermittent. Low volatility. Fills gaps to 0.25" when fully cured.

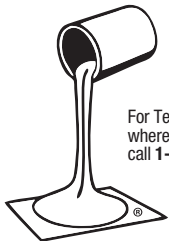
Item #	Container Size	P/N	🇨🇦
80022	3 oz tube, carded	6BR	80506
81860	7.25 oz Automatic Tube®	6MA	
85860	7.25 oz PowerBead™ can		
80628	12.9 oz cartridge	6C	80580

## Permatex® High-Temp Red RTV Silicone Gasket



Formulated for high-temp applications. It replaces almost any cut gasket by making reliable “formed-in-place” gaskets that resist cracking, shrinking and migrating caused by thermal cycling. Coat pre-cut gaskets to increase reliability. Temperature range -65°F to 600°F (-54°C to 316°C) continuous, 650°F (343°C) intermittent. Fills gaps to 0.25" when fully cured. MIL-A-46106 B.

Item #	Container Size	P/N	🇨🇦
81160	3 oz tube, carded	26BR	81311
81915	7.25 oz Automatic Tube®		
85915	7.25 oz PowerBead™ can		
81409	11 oz cartridge	26C	81312



For Technical Information or information on where to buy Devcon® and Permatex® products, call 1-800-933-8266 or visit [www.devcon.com](http://www.devcon.com)

## Anaerobic Gasket Makers

### Permatex® Anaerobic Gasket Maker



Ideal for on-the-spot and emergency repairs, or when a conventional gasket is out of stock. This single component, thixotropic gasket maker cures rapidly for a medium strength, solvent resistant seal that resists temperatures up to 300°F (149°C) and fills gaps to 0.050" (primed). Can be used on a variety of metal surfaces including aluminum. Parts disassemble easily even after extended service.

Item #	Container Size	🇨🇦
51817	6 ml tube, carded	
51813	50 ml tube, carded	19550
51845	300 ml cartridge	

### Permatex® Anaerobic Flange Sealant

Flexible gasketing material ideal for use on rigid, machined flanges. Withstands temperatures to 300°F (149°C). Fills gap of 0.050" (primed) and eliminates the need for preformed gaskets. Ideal for flanges that move in service.

Item #	Container Size	🇨🇦
51531	50 ml tube	17369
51580	300 ml cartridge	



🇨🇦 Ordering number in Canada





## Urethane Casting Compounds

Castable, nonshrinking liquid urethanes for producing flexible molds, holding fixtures and linings as well as low-volume or discontinued parts.

### Devcon® Flexane® 80 Liquid

Medium-viscosity (10,000 cP) urethane fills voids completely and faithfully reproduces mold detail. Cures to semi-rigid rubber (Shore A 87).

Item #	Container Size
15800	1 lb
15810	10 lb

### Devcon® Flexane® 94 Liquid

Low-viscosity (6,000 cP) urethane fills voids completely and faithfully reproduces mold detail. Similar to Flexane® 80 Liquid, but cures to a rigid rubber (Shore A 97).

Item #	Container Size
15250	1 lb
15260	10 lb

### Devcon® Edge & Seal (T-35)

Liquid urethane for edging fabric felt belting used in the papermaking industry as well as potting and encapsulating.

Item #	Container Size	Dispenser	Nozzle
DF039	400 ml cartridge	15043 (manual)	15047

### Devcon® Flex-Add™

Used with Flexane® 80 Liquid to produce a more flexible urethane.

Item #	Container Size
15940	8 oz

### Devcon® Flexane® Accelerator

Shortens the cure time of Flexane® products even in temperatures as low as 32°F (0°C).

Item #	Container Size
15990	12 oz

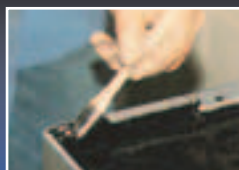
### Devcon® Liquid Release Agent

Silicone release agent produces high-gloss finish, prevents sticking of and damage to Flexane® parts during demolding.

Item #	Container Size
19600	1 pt



Indicates that either the manual or pneumatic dispenser listed to the right may be used with that size cartridge.



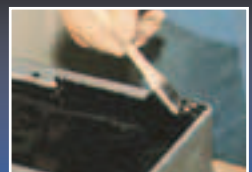
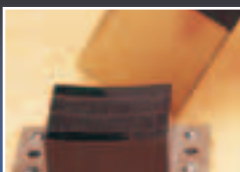


Physical Properties	Flexane® 80 Liquid	Flexane® 94 Liquid	Edge & Seal (1-35)
<b>Color</b>	Black	Black	Black
<b>Mix ratio by weight</b> <small>resin:hardener</small>	77:23	69:31	80:20
<b>Mixed viscosity</b> <small>cP</small>	10,000	6,000	5,000
<b>Pot life</b> <small>minutes @ 75F</small>	30	10	3
<b>Specific volume</b> <small>inches<sup>3</sup>/pound</small>	26.5	26.5	26.5
<b>Coverage per pound</b> <small>inches<sup>2</sup> @ 1/4" thickness</small>	106	106	106
<b>Functional cure</b> <small>hours</small>	16	16	1.5
<b>Demolding time</b> <small>hours</small>	10	5	N / A
<b>Cured hardness (ASTM D2240)</b> <small>Shore A</small>	87	97	94
<b>Cured shrinkage (ASTM D2566)</b> <small>inch/inch</small>	0.0018	0.0014	0.0014
<b>Tensile strength (ASTM D412)</b> <small>psi</small>	2,100	2,800	3,300
<b>Tear resistance (ASTM D624)</b> <small>pli</small>	350	415	430
<b>Abrasion resistance</b> <small>weight loss<sup>1</sup></small>	285	330	250
<b>Maximum elongation (ASTM D412)</b> <small>%</small>	650	500	450
<b>Dielectric strength (ASTM D149)</b> <small>volts/mil</small>	350	350	350
<b>Maximum continuous service temperature</b> <small>°F wet</small>	120	120	120
<b>Maximum continuous service temperature</b> <small>°F dry</small>	180	180	180

NOTES: <sup>1</sup> Taber H-18 wheel (mg / 1,000 revolutions @ 1,000 gram load)

Key: ● Excellent ● Very Good ○ Fair ⊖ Poor

Chemical Resistance	Flexane® 80 Liquid	Flexane® 94 Liquid	Edge & Seal (1-35)
<b>ACIDS</b>			
Acetic 10%	⊖	⊖	○
Hydrochloric 10%	●	●	○
Sulfuric 10%	●	●	○
Sulfuric 50%	●	●	○
Phosphoric 10%	●	●	○
<b>ALCOHOLS</b>			
Methanol	⊖	⊖	⊖
Isopropanol	⊖	⊖	⊖
<b>KETONES</b>			
Acetone	⊖	⊖	⊖
Methyl ethyl ketone	⊖	⊖	⊖
<b>ALKALIS</b>			
Ammonium hydroxide 20%	●	●	●
Sodium hydroxide 10%	●	●	●
<b>HYDROCARBONS</b>			
Gasoline (unleaded)	⊖	⊖	⊖
Mineral spirits	⊖	⊖	⊖
<b>SALTS</b>			
Sodium chloride	●	●	●
Trisodium phosphate	●	●	●
Aluminum sulfate 10%	●	●	●
Sodium carbonate 10%	●	●	●



## Urethane Repair Compounds

Flexible urethane compounds for repairing worn or damaged belting and rubber surfaces subject to wear, impact, abrasion, vibration or expansion.

### Devcon® Flexane® 80 Putty

Trowelable urethane for repairing and lining process equipment exposed to wear, abrasion, vibration or expansion/contraction.

Item #	Container Size
15820	1 lb
15850	4 lb

### Devcon® Flexane® High Performance Putty

Trowelable lining for maximum protection against abrasion, gouging and impact.

Item #	Container Size
15330	1 lb

### Devcon® Flexane® Fast Cure Putty

Black Flexane® Fast Cure thickens to a putty in seconds providing superior flexibility, elongation and adhesion to rubber. Ideal for belt repairs.

Item #	Container Size	Dispenser	Nozzle
15049	400 ml cartridge	15043 (manual)	15047

### Devcon® Flexane® Fast Cure Liquid

Grey Flexane® Fast Cure Liquid is a convenient, time-saving method of filling expansion joints and repairing rubber.

Item #	Container Size	Dispenser	Nozzle
15050	400 ml cartridge	15043 (manual)	15047

### Devcon® Flexane® Brushable

High-performance brushable urethane for protection against abrasion and impact. Excellent for repairing/coating rubber-lined pumps, tanks and valves.

Item #	Container Size
15350	1 lb

### Devcon® Flexane® Belt Repair Kit

An ideal solution for making fast, permanent emergency repairs to damaged conveyor belts, rubber rollers or other rubber parts.

Item #	Container Size
15165	Kit

### Devcon® Cable Cast FR

Flame-retardant urethane for encapsulating/insulating cable jackets; provides superior environmental protection. MSHA approved for the mining industry.

Item #	Container Size	Dispenser	Nozzle
15051	400 ml cartridge	14410 (manual)	14292
		14400 (pneumatic)	14292
15000	Jacket Repair Kit	—	—

### Devcon® Flexane® Primers

Required for maximum adhesion of Flexane® products.

FL-10 Primer for all metals.

FL-20 Primer for rubber, wood, fiberglass and concrete.

FL-40 Primer for rubber. Ensures ultimate peel strength (greater than 80 psi).

Item #	Primer	Container Size
15980	FL-10	4 oz
15985	FL-20	4 oz
15984	FL-40	4 oz



| Indicates that either the manual or pneumatic dispenser listed to the right may be used with that size cartridge.

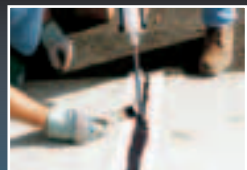


Physical Properties	Flexane® 80 Putty	Flexane® High Performance Putty	Flexane® Fast Cure Putty	Flexane® Fast Cure Liquid	Flexane® Brushable	Cable Cast FR	Flexane® Belt Repair Kit
<b>Color</b>	Black	Black	Black	Grey	Black	Black	Black
<b>Mix ratio by weight</b> <small>resin: hardener</small>	72:28	94:6	80:20	80:20	80:20	63:37	72:28
<b>Mixed viscosity</b> <small>cP</small>	Putty	Putty	Putty	5,800	40,000	10,000	Putty
<b>Pot life</b> <small>minutes @ 75°F</small>	20	10	8	8	45	10	25
<b>Specific volume</b> <small>inches<sup>3</sup>/pound</small>	23.5	23.5	23.5	26.5	26.0	22.6	23.5
<b>Coverage per pound</b> <small>inches<sup>2</sup> @ 1/4" thickness</small>	94	94	94	106	104	90	94
<b>Functional cure</b> <small>hours</small>	12	16	3	2	24	12	12
<b>Demolding time</b> <small>hours</small>	N / A	N / A	N / A	N / A	N / A	N / A	N / A
<b>Cured hardness</b> (ASTM D2240) <small>Shore A</small>	87	78	88	94	86	83	87
<b>Cured shrinkage</b> (ASTM D2566) <small>inch/inch</small>	0.0014	0.12 <sup>2</sup>	0.0014	0.0018	0.23 <sup>2</sup>	0.0014	0.0014
<b>Tensile strength</b> (ASTM D412) <small>psi</small>	1,700	4,500	2,400	3,300	3,500	2,600	1,700
<b>Tear resistance</b> (ASTM D624) <small>pli</small>	300	400	275	430	400	325	280
<b>Abrasion resistance</b> <small>weight loss<sup>1</sup></small>	280	140	220	330	90	NA	300
<b>Maximum elongation</b> (ASTM D412) <small>%</small>	300	600	500	450	600	800	300
<b>Dielectric strength</b> (ASTM D149) <small>volts/mil</small>	350	350	350	350	340	300	350
<b>Maximum continuous wet service temperature</b> <small>°F</small>	120	120	120	120	120	120	120
<b>Maximum continuous dry service temperature</b> <small>°F</small>	180	180	180	180	180	180	180

NOTES: <sup>1</sup> Taber H-18 wheel (mg / 1,000 revolutions @ 1,000 gram load)    <sup>2</sup> Due to solvent loss

Key: ● Excellent    ● Very Good    ○ Fair    ○ Poor

Chemical Resistance	Flexane® 80 Putty	Flexane® High Performance Putty	Flexane® Fast Cure Putty	Flexane® Fast Cure Liquid	Flexane® Brushable	Cable Cast FR	Flexane® Belt Repair Kit
<b>ACIDS</b>							
Acetic 10%	○	○	○	○	○	●	○
Hydrochloric 10%	●	○	●	●	○	●	●
Sulfuric 10%	●	○	●	●	○	○	●
Sulfuric 50%	●	○	●	●	○	○	●
Phosphoric 10%	●	○	●	●	○	○	●
<b>ALCOHOLS</b>							
Methanol	○	○	○	○	○	○	○
Isopropanol	○	○	○	○	○	○	○
<b>KETONES</b>							
Acetone	○	○	○	○	○	○	○
Methyl ethyl ketone	○	○	○	○	○	○	○
<b>ALKALIS</b>							
Ammonium hydroxide 20%	●	●	●	●	●	●	●
Sodium hydroxide 10%	●	●	●	●	●	●	●
<b>HYDROCARBONS</b>							
Gasoline (unleaded)	○	○	○	○	○	○	○
Mineral spirits	○	○	○	○	○	○	○
<b>SALTS</b>							
Sodium chloride	●	●	●	●	●	●	●
Trisodium phosphate	●	●	●	●	●	●	●
Aluminum sulfate 10%	●	●	●	●	●	●	●
Sodium carbonate 10%	●	●	●	●	●	●	●

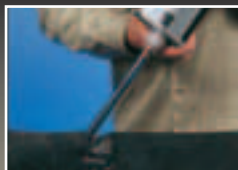
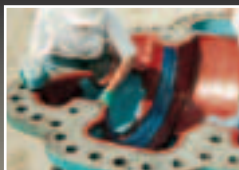


## Products to Extend the Life of Your Processing Equipment

More than 50 years ago, Devcon introduced Plastic Steel®, a tough, steel-filled epoxy putty, as an alternative to welding and brazing. Today, with the addition of several well-known Permatex® product lines, ITW Devcon boasts one of the world's most comprehensive offerings of maintenance and repair products. All these products can be easily applied by plant maintenance personnel with minimal training.

### Devcon® and Permatex® MRO products include:

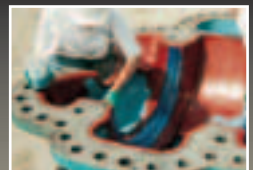
- ▼ Metal repair epoxies designed to extend the life of critical process equipment
- ▼ Flexane® urethanes for rubber repair
- ▼ Protective coatings that reduce damage from wear and abrasion
- ▼ Floor Savers™ repair systems for repairing, protecting and skid-proofing facility floors
- ▼ Compounds for sealing and removing gaskets
- ▼ Emergency repair products for repairing and returning equipment to service in minutes
- ▼ Anti-seize and specialty lubricants
- ▼ General-purpose and specialty parts cleaners
- ▼ Fast Orange® waterless lotion and pumice hand cleaners





**MRO Product Selector Guide**

MRO Applications	Plastic Steel® Putty (A)	Aluminum Putty (F)	Plastic Steel® (B)/ Aluminum Liquid (F-2)	Titanium Putty	Stainless Steel Putty (ST)	Ceramic Repair Putty	Brushable Ceramic	Wear Guard™ High-Temp / High Impact	Wear Guard™ High-Load, Fine Load / Combo Wear	Magic Bond™ Epoxy Putty	Underwater Repair Putty (UW)
Acid Resistant Coating				▼		▼	▼				
Casting Repair	▼	▼		▼	▼						▼
Chemical Resistant Products / Coatings				▼		▼	▼				
Chocking, Leveling Compound			▼								
Coating (Impact, Abrasion)				▼		▼	▼	▼	▼		
Condenser Tube Sheet Coating						▼	▼		▼		
Corrosion Resistant Coating						▼	▼	▼	▼		
Cyclones								▼	▼		
Epoxy (Fast-Cure Repairs)										▼	
Fans / Exhauster Fan Blades						▼		▼	▼		
Holding Fixtures (Making Molds)			▼								
Hoppers (Rebuild & Coat)							▼	▼	▼		
Leaks (Drums, Pipes, Tanks)	▼			▼						▼	▼
Lining Coal Chutes								▼	▼		
Machinable Repair Material	▼	▼	▼	▼	▼						
Meat and Poultry Plants	▼			▼	▼		▼				
Pipe Elbow Coatings / Linings								▼	▼		
Pulverizers / Mills								▼	▼		
Pump Repairs - Slurry				▼		▼			▼		
Pump Repairs - Water				▼		▼	▼				▼
Rebuild Worn Threads / Keyways / Metal	▼		▼	▼							
Repairing Engine Blocks	▼			▼							
Shaft Repairs				▼							
Tank Linings						▼	▼				▼
Tank Repairs (Holes)	▼			▼						▼	▼
Valve Rebuild / Repairs	▼	▼		▼		▼	▼				
Wet / Damp Surface Bonding										▼	▼



## The Key to Successful Repairs

Proper surface preparation and thorough cleaning are essential for the successful application of Devcon repair products and protective coatings.



### General Surface Preparation

In general, the following steps will help you properly prepare a surface prior to applying Devcon products:

- 1) Make sure the surface is completely dry. Moisture will adversely affect the strength of the bond to the surface.
- 2) Remove all surface contamination (paint, rust and grime) by abrasive blasting, sanding or other mechanical means.
- 3) Degrease with Devcon Cleaner Blend 300.
- 4) Abrade the surface to roughen it and create a surface profile.
- 5) Use the appropriate Devcon primer.

For detailed surface preparation procedures, refer to the appropriate substrate category.



### Metal

To properly prepare a metal surface:

- 1) If the surface is oily or greasy, degrease it with Devcon Cleaner Blend 300.
- 2) Abrasive-blast the surface with 25-40 grit (or coarser) to produce a good surface profile. If you cannot abrasive-blast the surface, use a 60 grit or coarser sandpaper to achieve a similar result.
- 3) Immediately coat the metal surface with Flexane® FL-10 Primer to prevent it from rusting.
- 4) Make repairs as soon as possible after blasting the substrate to avoid oxidation or flash rusting.

### Aluminum Surfaces

Oxidation on aluminum surfaces reduces epoxy adhesion. This oxidation film must be removed before repairing aluminum with Devcon Metal Repair Epoxies.

To properly prepare an aluminum surface:

- 1) Remove oxidation by mechanical means such as grit-blasting or by chemical means such as acid etching.
- 2) Follow the General Surface Preparation guidelines.



### Rubber

To properly prepare a rubber surface:

- 1) Abrade the surface using a rubber rasp or a grinder with a wire wheel to produce a good surface profile. (Oils and contaminants imbedded in the rubber surface are typically released in this process.)
- 2) Remove all oil and grease from the rubber surface with Devcon Cleaner Blend 300 and an abrasive pad.
- 3) Wipe the surface with a clean, lint-free cloth continuously until black residue is no longer picked up by the white cloth.
- 4) Prime the surface as follows:

*Rubber to metal:* Coat all metal surfaces (including stainless steel and aluminum) with two coats of Flexane® FL-10 Primer. The primer will significantly improve adhesion of Devcon products to metal.

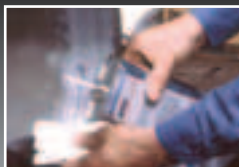
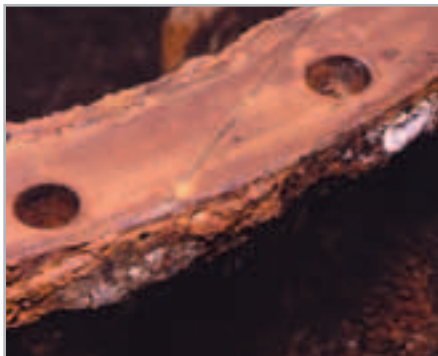
*Rubber to metal (for immersion service):* Coat any metal that will be immersed in an aqueous solution with Flexane® FL-10 Primer and Flexane® FL-20 Primer. First apply the FL-10 Primer and let dry for 60 minutes. Next, coat with the FL-20 Primer. Let dry for 30 minutes before applying the Devcon product.

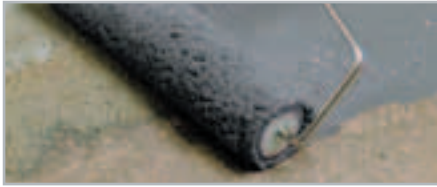
*Rubber to rubber:* Coat all gum rubbers, neoprene or cured urethanes with a thin coat of Flexane® FL-20 Primer. For ultimate peel strength, use FL-40 Primer (on rubber only).

*Rubber to concrete:* Coat concrete with Flexane® FL-20 Primer. Multiple coats may be necessary because concrete is very porous. Let the primer dry for 30 minutes between coats.

*Rubber to wood or fiberglass:* Coat these surfaces with Flexane® FL-20 Primer. Soft woods will require a second coat due to their absorption characteristics.

When bonding rubber to other surfaces, contact Devcon Technical Service for a recommendation on primers and surface preparation procedures.





## Concrete

To properly prepare a concrete surface:

- 1) Degrease the surface with Devcon Cleaner Blend 300 or any water-based emulsifying cleaner and rinse thoroughly. Multiple cleanings may be necessary. Power washers or steam cleaners are very effective and can reduce the number of passes needed to clean the surface. Let the surface dry thoroughly before proceeding.
- 2) Remove any cap-curing agents that were applied to the concrete when it was poured. These agents form a dense, impenetrable finish, making it almost impossible for coatings to adhere to them.
- 3) Shot blast (Blastrac®) the concrete to create a porous surface profile. This will improve surface “wetting” and coating or repair product adhesion.



## Wet Surfaces

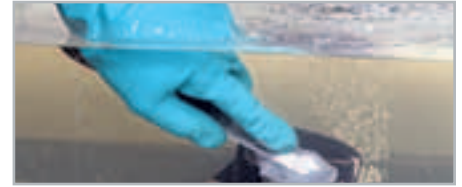
In general, Devcon repair products and protective coatings will not adhere to wet surfaces.

To properly repair a wet surface:

- 1) Review the General Surface Preparation guidelines.
- 2) Thoroughly dry the surface. (If you are using Devcon Underwater Repair Putty (UW), refer to Underwater Surfaces section.)
- 3) Stop all leaks or seepage as follows:
  - ▼ Shut off the flow or pressure;
  - ▼ Fit a wooden peg or a sheet metal screw into the hole; or
  - ▼ Stuff wax, cork, plumber’s caulk, Mortite or a cloth into the opening.

If the leak is caused by corrosion, the sidewall might be weak. Open the orifice until sound metal is exposed and the wall is thick enough to be plugged.

- 4) Remove surface condensation (sweating) or dampness with a heat gun or similar device.



## Underwater Surfaces

To properly prepare an underwater surface:

- 1) Remove all dirt, barnacles, flaking paint or algae/seaweed from the surface.
- 2) Wipe the surface with a clean cloth to remove any film. Although you cannot degrease underwater, wiping and turning a clean cloth will often remove any film from the surface.
- 3) Abrade the surface if possible. (Use a file or other mechanical means.)
- 4) Remove oxidation by mechanical means such as high-pressure water or grit-blasting, or by chemical means such as acid etching.

### Devcon Technical Service:

If you have questions, please contact Devcon Technical Service:

**1-800-933-8266**

Blastrac® is a registered trademark of Blastrac, NA.





**Devcon Metal Repair Putties**

Metal-filled epoxy putties allow fast, economical, permanent repairs to plant and equipment; cure quickly; and resist corrosion and harsh chemicals.



**Devcon® Plastic Steel® Putty (A)**

The original metal-filled epoxy putty, it is ideal for repairing areas where welding or brazing would be impractical. Can be drilled, tapped and machined. Conforms to the requirements of MIL-PRF-24176C, Type I.



Item #	Container Size
10110	1 lb
10120	4 lb
10130	25 lb

**Devcon® Titanium Putty**

High-performance, nonrusting titanium-reinforced epoxy putty for making repairs that can be precision machined. Withstands heavy loads in harsh chemical environments. Conforms to the requirements of MIL-PRF-24176C, Type I.



Item #	Container Size
10760	1 lb
10770	2 lb

**Devcon® Ceramic Repair Putty**

Trowelable, alumina-filled epoxy compound for rebuilding, smoothing and protecting processing equipment exposed to corrosion, erosion, cavitation, chemicals and acids. Conforms to the requirements of MIL-PRF-24176C, Type I.



Item #	Container Size
11700	3 lb
11730	32 lb

**Devcon® Plastic Steel® 5 Minute® Putty (SF)**

Fast-curing, steel-filled epoxy for emergency repairs at temperatures as low as 40°F. Repaired parts can be returned to service within one hour.



Item #	Container Size
10240	1 lb

**Devcon® Stainless Steel Putty (ST)**

Stainless steel-filled epoxy putty for patching, repairing and rebuilding stainless steel surfaces as well as food processing equipment.



Item #	Container Size
10270	1 lb

**Devcon® Wear Resistant Putty (WR-2)**

Smooth, nonrusting, all-purpose epoxy compound for repairs requiring smooth, high-slip finishes (such as lathe beds).

Item #	Container Size
11410	1 lb
11420	3 lb

**Devcon® Aluminum Putty (F)**

Aluminum-filled epoxy putty for dependable nonrusting repairs to aluminum castings, machinery and equipment. Widely used in HVAC applications, it conforms to requirements of MIL-PRF-24176C, Type II.



Item #	Container Size
10610	1 lb
10620	3 lb

**Devcon® Bronze Putty (BR)**

Bronze-filled epoxy putty for repairing bronze and brass bushings, castings and parts.

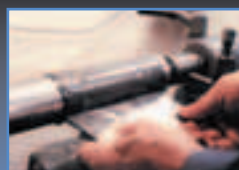
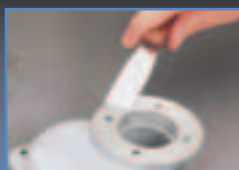
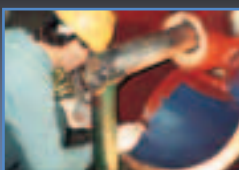


Item #	Container Size
10260	1 lb



For Technical Information or information on where to buy Devcon® and Permatex® products, call 1-800-933-8266 or visit [www.devcon.com](http://www.devcon.com)

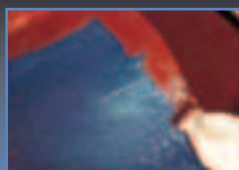
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American Bureau of Shipping



Physical Properties	Plastic Steel® Putty (A)	Plastic Steel® 5 Minute® Putty (SF)	Aluminum Putty (F)	Stainless Steel Putty (ST)	Bronze Putty (BR)	Titanium Putty	Ceramic Repair Putty	Wear Resistant Putty (WR-2)
<b>Color</b>	Dark Grey	Dark Grey	Aluminum	Grey	Bronze	Grey	Dark Blue	Dark Grey
<b>Mix ratio by weight / volume</b> <small>resin:hardener</small>	9:1 / 2.5:1	1.7:1 / 1:1	9:1 / 4:1	11:1 / 3.75:1	9:1 / 3:1	4.3:1 / 3:1	7:1 / 4.3:1	9:1 / 4:1
<b>Mixed viscosity</b> <small>cP</small>	Putty	Putty	Putty	Putty	Putty	Putty	Putty	Putty
<b>Functional cure</b> <small>hours</small>	16	1	16	16	16	16	16	16
<b>Pot life</b> <small>minutes @ 75°F</small>	45	5	60	58	35	21	25	45
<b>Specific volume</b> <small>inches³/pound</small>	11.9	12.2	17.5	12.4	12.4	11.7	16.4	13.9
<b>Coverage per pound</b> <small>inches² @ 1/4" thickness</small>	48	49	70	50	50	47	66	56
<b>Cured hardness</b> (ASTM D2240) <small>Shore D</small>	85	85	85	85	85	87	90	85
<b>Cured shrinkage</b> (ASTM D2566) <small>inch/inch</small>	0.0006	0.0006	0.0008	0.0010	0.0010	0.0010	0.0022	0.0005
<b>Adhesive tensile shear</b> (ASTM D1002) <small>psi</small>	2,800	2,026	2,600	2,385	2,680	2,000	2,000	2,200
<b>Tensile strength</b> (ASTM D638) <small>psi</small>	3,220	3,100	3,680	3,340	2,640	4,000	3,900	4,300
<b>Compressive strength</b> (ASTM D695) <small>psi</small>	8,260	10,400	8,420	8,400	8,540	15,200	12,700	9,800
<b>Flexural strength</b> (ASTM D790) <small>psi</small>	5,600	7,680	6,760	5,280	6,180	7,700	6,475	6,500
<b>Modulus of elasticity</b> (ASTM D638) <small>psi x 10³</small>	8.5	7.5	8.0	8.0	8.0	9.5	9.0	7.5
<b>Coefficient of thermal expansion</b> (ASTM D696) <small>[(in)/(in x °F)] x 10⁻⁴</small>	48	34	29	34	33	22	17	32
<b>Thermal conductivity</b> (ASTM C177) <small>[(cal x cm)/(sec x cm² x °C)] x 10⁻³</small>	1.37	2.65	1.73	1.23	1.57	1.95	1.88	1.67
<b>Dielectric constant</b> (ASTM D150) <small>1 kHz</small>	67.5	35.0	21.4	75.0	75.0	44.8	41.0	6.3
<b>Dielectric strength</b> (ASTM D149) <small>volts/mil</small>	30	30	100	30	25	56	370	400
<b>Maximum continuous dry service temperature</b> <small>°F</small>	250	200	250	250	250	350	350	250

Key: ● Excellent ● Very Good ○ Fair ○ Poor

Chemical Resistance	Plastic Steel® Putty (A)	Plastic Steel® 5 Minute® Putty (SF)	Aluminum Putty (F)	Stainless Steel Putty (ST)	Bronze Putty (BR)	Titanium Putty	Ceramic Repair Putty	Wear Resistant Putty (WR-2)
<b>ACIDS</b>								
Acetic 10%	○	○	○	○	○	○	○	○
Hydrochloric 10%	●	○	●	●	●	●	●	●
Sulfuric 10%	●	○	●	●	●	●	●	●
<b>ALCOHOLS</b>								
Methanol	○	○	○	○	○	●	●	○
Isopropanol	○	○	○	○	○	●	●	○
<b>KETONES</b>								
Acetone	○	○	○	○	○	○	○	○
Methyl ethyl ketone	○	○	○	○	○	○	○	○
<b>ALKALIS</b>								
Ammonium hydroxide 20%	●	○	○	●	●	●	●	●
Sodium hydroxide 10%	●	○	○	●	●	●	●	●
<b>HYDROCARBONS</b>								
Gasoline (unleaded)	●	●	●	●	●	●	●	●
Mineral spirits	●	●	●	●	●	●	●	●
<b>CHLORINATED HYDROCARBONS</b>								
Perchloroethylene	●	○	●	●	●	●	●	○
1-1-1 Trichloroethane	●	○	●	●	●	●	●	●
<b>SALTS</b>								
Sodium chloride	●	○	●	●	●	●	●	●
Trisodium phosphate	●	○	●	●	●	●	●	●



**Liquids and Metal Casting Compounds**

Pourable epoxy compounds provide accurate detail reproduction and are ideal for making molds, patterns, holding fixtures and forming dies.



**Devcon® Plastic Steel® Liquid (B)**

A pourable steel-filled epoxy that provides accurate detail reproduction in making holding fixtures, light gauge forming dies and molds. Can be drilled, tapped and machined. Qualifies under Federal Specification MMM-A-1754, Adhesive/Sealing.



Item #	Container Size
10210	1 lb
10220	4 lb
10230	25 lb

**Devcon® Brushable Ceramic**

When applied in a 15-20 mil coating, this low-viscosity, alumina-filled, brushable epoxy compound produces a smooth, protective barrier against wear, abrasion, corrosion, erosion and chemical attack.



Item #	Container Size
11760	2 lb (red)
11762	12 lb (red)
11763	55 lb (red)
11765	2 lb (blue)
11767	12 lb (blue)
11768	55 lb (blue)
11770	2 lb (white)

Approved by  
American Bureau of Shipping



**Devcon® Aluminum Liquid (F-2)**

Aluminum-filled pourable epoxy for making molds, patterns and holding fixtures. It can be drilled, tapped and machined and qualifies under Federal Specification MMM-A-1754, Adhesive/Sealing.



Item #	Container Size
10710	1 lb
10720	3 lb

**Devcon® Liquid Release Agent**

Silicone release agent prevents Devcon's epoxy and urethane compounds from sticking to patterns or mold surfaces.



Item #	Container Size
19600	1 pt

**Devcon® HVAC Repair (Special F)**

Aluminum-filled epoxy for repairing worn or fatigued metals. Ideal for repairing copper compressor coils.

Item #	Container Size
19770	6.5 oz

**Devcon® FasMetal™**

High-performance, alumina-filled epoxy for making quick, permanent emergency repairs to pipes, chutes, tanks and bearing housings.

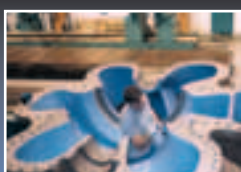


Item #	Container Size
10780	.75 lb

**Devcon® Cleaner Blend 300**

Safe, multi-purpose, nontrichloroethane based degreaser for removing heavy grease and oil from metal surfaces. Excellent general-purpose degreaser.

Item #	Container Size
19510	1 pt

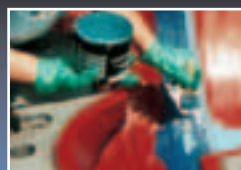


Physical Properties	Plastic Steel® Liquid (B)	Aluminum Liquid (F-2)	HVAC Repair (Special F)	FasMetal™	Brushable Ceramic	
<b>Color</b>	Dark Grey	Aluminum	Grey	Grey	Red, Blue	White
<b>Mix ratio by weight / volume</b> <i>resin:hardener</i>	9:1 / 3:1	9:1 / 5:1	0.9:1 / 1:1	1.07:1 / 1:1	5.6:1 / 3.4:1	8.5:1 / 5.6:1
<b>Mixed viscosity</b> <i>cP</i>	15 / 25,000	15 / 25,000	40,000	Putty	32,000	40,000
<b>Functional cure</b> <i>hours</i>	16	16	16	1	16	16
<b>Pot life</b> <i>minutes @ 75°F</i>	45	75	60	4	40	21
<b>Specific volume</b> <i>inches<sup>3</sup>/pound</i>	13.1	17.5	16.1	17.2	16.5	16.5
<b>Coverage per pound</b> <i>inches<sup>2</sup> @ 1/4" thickness</i>	52	70	64	69	7.6'	7.6'
<b>Cured hardness</b> <b>(ASTM D2240)</b> <i>Shore D</i>	85	85	85	90	90	87
<b>Cured shrinkage</b> <b>(ASTM D2566)</b> <i>inch/inch</i>	0.0006	0.0009	0.0008	0.0093	0.0020	0.0020
<b>Adhesive tensile shear</b> <b>(ASTM D1002)</b> <i>psi</i>	2,800	2,700	2,500	2,000	2,000	2,000
<b>Tensile strength</b> <b>(ASTM D638)</b> <i>psi</i>	4,900	5,000	3,720	3,145	3,800	3,800
<b>Compressive strength</b> <b>(ASTM D695)</b> <i>psi</i>	10,200	9,820	8,420	12,700	15,200	15,200
<b>Flexural strength</b> <b>(ASTM D790)</b> <i>psi</i>	7,480	3,540	6,260	7,700	8,000	8,000
<b>Modulus of elasticity</b> <b>(ASTM D638)</b> <i>psi x 10<sup>3</sup></i>	8.5	7.5	7.8	8.5	9.0	9.0
<b>Coefficient of thermal expansion</b> <b>(ASTM D696)</b> <i>[(in)/(in x °F)] x 10<sup>-4</sup></i>	38	50	29	32	19	19
<b>Thermal conductivity</b> <b>(ASTM C177)</b> <i>[(cal x cm)/(sec x cm<sup>2</sup> x °C)] x 10<sup>-3</sup></i>	1.39	1.58	1.73	2.04	1.92	1.92
<b>Dielectric constant</b> <b>(ASTM D150)</b> <i>1 kHz</i>	67.5	8.6	21.4	18.6	38.7	38.7
<b>Dielectric strength</b> <b>(ASTM D149)</b> <i>volts/mil</i>	30	100	100	370	382	382
<b>Maximum continuous dry service temperature</b> <i>°F</i>	250	250	250	250	350	350

NOTES: <sup>1</sup> Coverage (feet<sup>2</sup> @ 15 mils)

Key: ● Excellent ● Very Good ○ Fair ○ Poor

Chemical Resistance	Plastic Steel® Liquid (B)	Aluminum Liquid (F-2)	HVAC Repair (Special F)	FasMetal™	Brushable Ceramic
<b>ACIDS</b>					
Acetic 10%	○	○	○	○	○
Hydrochloric 10%	●	●	●	○	●
Sulfuric 10%	●	●	●	○	●
<b>ALCOHOLS</b>					
Methanol	○	○	○	○	●
Isopropanol	○	○	○	○	●
<b>KETONES</b>					
Acetone	○	○	○	○	○
Methyl ethyl ketone	○	○	○	○	○
<b>ALKALIS</b>					
Ammonium hydroxide 20%	●	○	○	○	●
Sodium hydroxide 10%	●	○	○	○	●
<b>HYDROCARBONS</b>					
Gasoline (unleaded)	●	●	●	●	●
Mineral spirits	●	●	●	●	●
<b>CHLORINATED HYDROCARBONS</b>					
Perchloroethylene	●	●	●	○	●
1-1-1 Trichloroethane	●	●	●	○	●
<b>SALTS</b>					
Sodium chloride	●	●	●	○	●
Trisodium phosphate	●	●	●	○	●





**Trowelable and Brushable Wearing Compounds**

Nonsagging, alumina bead-filled coatings that protect dry materials handling and storage equipment from abrasion, corrosion and wear.

**Devcon® Wear Guard™ High Load**

Alumina ceramic bead-filled epoxy system with outstanding abrasion resistance for severe service conditions with particulate greater than 1/8".

Item #	Container Size
11491	9 lb
11490	30 lb

**Devcon® Wear Guard™ High Temp**

High-density, ceramic bead-filled epoxy system for maximum wear and abrasion resistance in high-temperature applications.

Item #	Container Size
11480	30 lb

**Devcon® Wear Guard™ High Impact**

High-density, micro-alumina ceramic bead-filled epoxy system with flexible polymers for superior adhesion and protection against extreme impact and flexing.

Item #	Container Size
11460	30 lb

**Devcon® Wear Guard™ Fine Load**

High-density, micro-alumina ceramic bead-filled epoxy system for protecting equipment that handles particulate smaller than 1/8".

Item #	Container Size
11470	30 lb

**Devcon® Wear Guard™ Ultra**

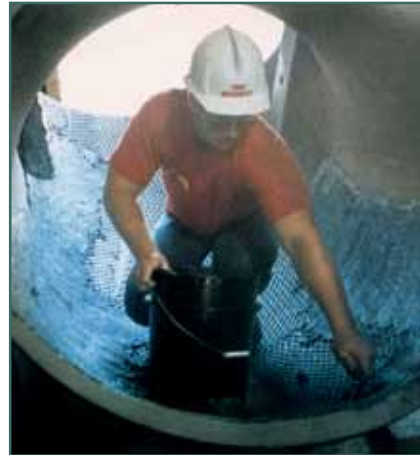
Alumina ceramic bead-filled epoxy system with outstanding abrasion resistance for severe conditions. Ideal for environments experiencing extreme wear.

Item #	Container Size
11475	30 lb

**Devcon® Combo Wear FC (Fast Cure)**

High-tech, three-component compound for quickly repairing processing equipment and returning it to service in as little as 1 1/2 hours.

Item #	Container Size
11450	9 lb



**Devcon® Wear Guard™ Epoxy Primer FC**

Primer system to enhance adhesion of all Wear and Abrasion compounds.

Item #	Container Size
11478	1.75 lb

**Devcon® Brushable Ceramic**

When applied in a 15-20 mil coating, this low-viscosity, alumina-filled, brushable epoxy compound produces a smooth, protective barrier against wear, abrasion, corrosion, erosion and chemical attack.



Item #	Container Size
11760	2 lb (red)
11762	12 lb (red)
11763	55 lb (red)
11765	2 lb (blue)
11767	12 lb (blue)
11768	55 lb (blue)
11770	2 lb (white)

**Devcon® Carbide Putty**

Silicone carbide-filled epoxy putty for economical protection against sliding wear and abrasion. Ideal for mining applications.

Item #	Container Size
10050	3 lb
10080	20 lb

**Devcon® High-Performance Backing Compound**

High-strength epoxy liquid for use in rod, ball, pebble and autogenous mills, as well as in cone and gyratory crushers.

Item #	Container Size
11170	20 lb

**Devcon® Tile Adhesive**

High-strength, trowelable adhesive that cures at room temperature.

Item #	Container Size
11495	20 lb

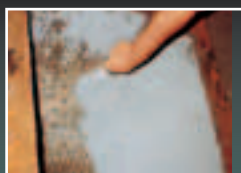


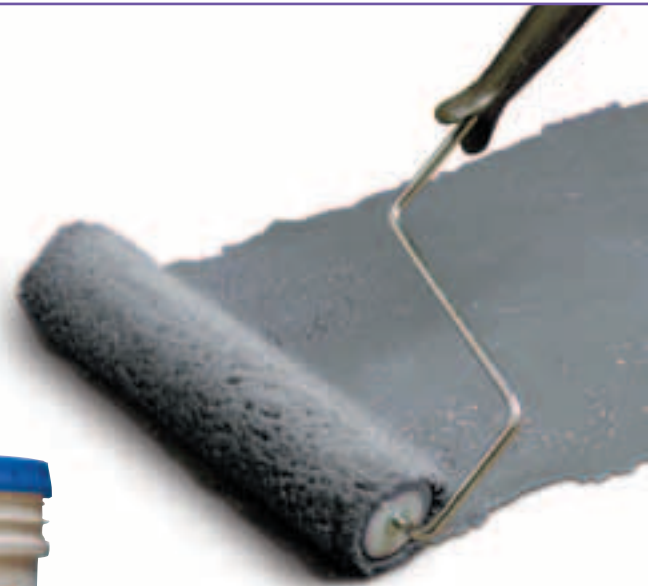
Physical Properties	Wear Guard™ High Load	Wear Guard™ High Temp	Wear Guard™ High Impact	Wear Guard™ Fine Load	Wear Guard™ Ultra	Combo Wear FC (Fast Cure)	Brushable Ceramic	High Performance Backing Compound	Tile Adhesive	Carbide Putty
<b>Color</b>	Grey	Grey	Dark Grey	Grey	Grey	Grey	Red, Blue	Red	Light Grey	Grey
<b>Mix ratio by weight / volume resin:hardener</b>	2:1 / 2:1	13.7:1 / 6:1	2.5:1 / 2.5:1	2:1 / 2:1	2.15:1:5.65 <sup>1</sup>	2:1 / 2:1	5.6:1 / 3.4:1	100:5.94 / 9.9:1	1.1:1 / 1:1	8:1 / 4:1
<b>Mixed viscosity cP</b>	Putty	Putty	Putty	Putty	Putty	Putty	32,000	10,320	Putty	Putty
<b>Functional cure hours</b>	6-8	Heat Cured	6-8	6-8	16	2-3	16	8	12	16
<b>Pot life minutes @ 75°F</b>	30	120	30	30	20	7	40	56	240	50
<b>Specific volume inches<sup>3</sup>/pound</b>	12.9	14.3	12.4	12.4	11.4	12.4	16.5	17.2	19.2	15.9
<b>Coverage per pound inches<sup>2</sup> @ 1/4" thickness</b>	50	60	50	50	44	50	7.6 <sup>2</sup>	349 <sup>3</sup>	76.8	64
<b>Cured hardness (ASTM D2240) Shore D</b>	87	87	85	87	87	87	90	92	81	85
<b>Cured shrinkage (ASTM D2566) inch/inch</b>	0.0006	0.0010	0.0006	0.0014	0.0004	0.0005	0.0020	0.0006	0.0010	0.0009
<b>Adhesive tensile shear (ASTM D1002) psi</b>	1,375	2,300	2,567	1,375	1,425	1,450	2,000	2,000	2,890	1,350
<b>Tensile strength (ASTM D638) psi</b>	4,210	4,600	4,220	4,300	4,260	4,300	3,800	7,687	2,640	2,640
<b>Compressive strength (ASTM D695) psi</b>	11,000	13,200	7,250	11,000	13,910	11,000	15,200	18,850	9,620	8,160
<b>Flexural strength (ASTM D790) psi</b>	7,140	8,220	6,144	7,190	7,220	7,140	8,000	11,500	5,480	5,480
<b>Modulus of elasticity (ASTM D638) psi x 10<sup>3</sup></b>	8.5	8.5	3.36	8.5	8.5	8.0	9.0	9.5	8.0	8.0
<b>Coefficient of thermal expansion (ASTM D696) [(in)/(in x °F)] x 10<sup>-4</sup></b>	32	27	34	34	26	34	19	22	14	14
<b>Thermal conductivity (ASTM C177) [(cal x cm)/(sec x cm<sup>2</sup> x °C)] x 10<sup>-3</sup></b>	1.75	2.14	1.81	1.81	1.78	1.75	1.92	N / A	1.25	1.25
<b>Dielectric constant (ASTM D150) 1 kHz</b>	41.0	38.0	46.0	46.0	40.0	41.0	38.7	N / A	46.0	25.0
<b>Dielectric strength (ASTM D149) volts/mil</b>	340	310	340	340	330	340	382	N / A	320	200
<b>Maximum continuous dry service temperature °F</b>	300	450	300	300	300	300	350	250	200	250

NOTES: <sup>1</sup> Three-part system, beads separate    <sup>2</sup> Coverage in feet<sup>2</sup> @ 15 mils    <sup>3</sup> Coverage in inches<sup>2</sup> / 20.4 pound unit

Key: ● Excellent    ● Very Good    ○ Fair    ○ Poor

Chemical Resistance										
<b>ACIDS</b>										
Acetic 10%	○	○	○	○	○	○	○	○	○	○
Hydrochloric 10%	●	●	●	●	●	●	●	●	●	○
Sulfuric 10%	●	●	●	●	●	●	●	○	●	○
<b>ALCOHOLS</b>										
Methanol	○	○	○	○	○	○	●	○	○	○
Isopropanol	○	○	○	○	○	○	●	○	○	○
<b>KETONES</b>										
Acetone	○	○	○	○	○	○	○	○	○	○
Methyl ethyl ketone	○	○	○	○	○	○	○	○	○	○
<b>ALKALIS</b>										
Ammonium hydroxide 20%	●	●	●	●	●	●	●	●	●	●
Sodium hydroxide 10%	●	●	●	●	●	●	●	●	●	●
<b>HYDROCARBONS</b>										
Gasoline (unleaded)	●	●	●	●	●	○	●	○	○	●
Mineral spirits	●	●	●	●	●	●	●	○	○	●
<b>CHLORINATED</b>										
<b>HYDROCARBONS</b>										
Perchloroethylene	○	●	○	○	○	○	●	○	○	○
1-1-1 Trichloroethane	○	●	○	○	○	○	●	○	○	○
<b>SALTS</b>										
Sodium chloride	○	●	○	○	○	○	●	○	○	○
Trisodium phosphate	○	●	○	○	○	○	●	○	○	○





**Floor Repair and Resurfacing Product Selector Guide**

Flooring Applications	Floor Patch™	Floor Patch™ FC	Ultra Quartz™	Floor Patch™ Resurfacer	Deep Pour Grout™	Concrete Crack Repair	Epoxy Concrete Sealer	Epoxy Coat™ 7000 Non VOC	Epoxy Coat™ 7000 AR	Floor Grip™
Acid-Resistant Coating			▼				▼		▼	
Anchoring Bolts in Concrete	▼	▼			▼					
Anti-Skid Floors/Ramps/Docks										▼
Chemical Containment Coatings			▼				▼		▼	
Chocking Equipment					▼					
Coatings (Impact, Abrasion)							▼	▼	▼	
Crack Filling						▼				
Expansion Joints	▼					▼				
Floor Coating							▼	▼	▼	
Floor Hole-Filling & Patching	▼	▼								
Floor Resurfacing (Up to 1")			▼	▼						
Leveling Equipment					▼					
Leveling Floors	▼			▼	▼					
Metal Coatings									▼	▼
Non-Skid Floor Coating (with Safe-T-Grit™)							▼	▼		
Wet / Damp Surface Coatings	▼	▼	▼				▼			▼



### Floor Repair/Patching Compounds

100% solids epoxy-based polymers for patching, rebuilding and resurfacing concrete, brick, stucco and block.



#### Devcon® Floor Patch™

All-purpose, easy-to-mix and apply concrete patching compound. With a compressive strength of 8,000 psi, Floor Patch™ provides three times the typical strength of concrete.

Item #	Container Size
13100	10 lb
13120	40 lb

#### Devcon® Floor Patch™ Resurfacer

A three-part filled epoxy system for concrete floors where aggregate is exposed. This self-leveling product mixes easily, is ideal for repairing damaged concrete and rebuilding to depths of 1/4" to 1".

Item #	Container Size
13130	41 lb



#### Devcon® Floor Patch™ FC (Fast-Cure)

With this fast-curing version of Floor Patch™, repaired areas can be back in service in 3 hours.

Item #	Container Size
13110	10 lb

#### Devcon® Floor Savers™ Concrete Crack Repair

A self-leveling urethane compound designed to repair cracks and gaps in concrete – quickly and easily. Grey in color and cartridge fits in a standard caulking gun.

Item #	Container Size
13400	250 ml cartridge



#### Devcon® Ultra Quartz™

Heavy-duty, trowelable premium floor patching system with excellent chemical resistance. System includes a primer for superior adhesion to cured concrete or other surfaces.

Item #	Container Size
13550	35 lb

#### Devcon® Deep Pour Grout™

Filled epoxy grout for pouring machinery mounting pads to 6" deep and rebuilding worn concrete. Easy to mix and self-leveling.

Item #	Container Size
13800	50 lb

### Anti-Skid Additives

Granular additives used with Devcon floor coatings to produce anti-slip surfaces for worker safety.

#### Devcon® Safe-T-Grit™

Additive that can be mixed into any floor coating to produce a non-skid surface. Stays in suspension and prevents accidental slips and falls.

Item #	Container Size
12570	2 lb

#### Devcon® Floor Grip™

Heavy-duty epoxy compound with silicone carbide granules produces an exceptional non-skid surface on walkways, ramps, loading docks and stairs. Excellent adhesion to concrete, brick, steel, aluminum and wet surfaces. Can be applied at temperatures as low as 40°F.

Item #	Container Size
13090	2 gal

### Floor Coatings

Epoxy floor coatings for protecting plant floors, platforms, walkways and ramps against acids, alkalis and solvents.

#### Devcon® Epoxy Coat™ 7000 Non VOC

100% solids self-leveling coating for smooth or mildly spalled concrete. Produces an attractive, durable, chemical-resistant finish. Silica aggregate can be added to rebuild floors by 1/16" or more.

Item #	Container Size
12710	2 gal

#### Devcon® Epoxy Coat™ 7000 AR (Acid Resistant)

Novolac non-VOC epoxy coating provides superior resistance to concentrated acids (including 98% sulfuric) and chemicals. Excellent adhesion to concrete surfaces. Ideal for use around chemical storage tanks, dike walls and containment areas.

Item #	Container Size
12750	2 gal



#### Devcon® Epoxy Concrete Sealer

Self-leveling, non-VOC clear epoxy sealer can be used as a primer on damp surfaces. Easily applied by brush, roller or squeegee at temperatures as low as 40°F. Outstanding resistance to chemicals, acids, alkalis and hydrocarbons.

Item #	Container Size
12560	2 gal



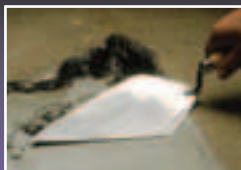




Physical Properties	Floor Patch™	Floor Patch™ FC	Ultra Quartz™	Floor Patch™ Resurfacer	Deep Pour Grout™	Concrete Crack Repair	Epoxy Concrete Sealer	Epoxy Coat™ 7000 Non VOC	Epoxy Coat™ 7000 AR	Floor Grip™/ Safe-T-Grit™
Coverage per unit <i>feet<sup>2</sup> @ thickness</i>	18 @ 0.25" / 40 lb unit	4.5 @ 0.25" / 10 lb unit	13 @ 0.25" / 35 lb unit	568 inches <sup>3</sup> / 41 lb unit	640 inches <sup>3</sup> / 50 lb unit	20.3 Lft @ 0.25" / 250 mils	400 @ 8 mils	400 @ 8 mils	200 @ 16 mils	200 @ 16 mils
Mixed viscosity <i>cP</i>	Putty	Putty	Putty	5,000	13,000	3,250	2,000	2,000	3,600	2,000
Minimum application temperature <i>°F</i>	60 ~ 90	60 ~ 90	60 ~ 90	50 ~ 90	50 ~ 90	50 ~ 90	40 ~ 90	55 ~ 90	60 ~ 90	40 ~ 90
Pot life <i>minutes @ 75°F</i>	45	15	60	40	40	1.5	60	55	36	50
Functional cure <i>hours</i>	16	3	16	16	16	45	24	24	24	24
Cured hardness (ASTM D2240) <i>Shore D</i>	85	85	95	85	87	53	85	85	85	85
Maximum continuous service temperature <i>°F</i>	250	250	250	180	180	250	180	180	200	250
% Solids	100	100	100	100	100	100	100	100	100	100

Key: ● Excellent ● Very Good ○ Fair ○ Poor

Chemical Resistance	Floor Patch™	Floor Patch™ FC	Ultra Quartz™	Floor Patch™ Resurfacer	Deep Pour Grout™	Concrete Crack Repair	Epoxy Concrete Sealer	Epoxy Coat™ 7000 Non VOC	Epoxy Coat™ 7000 AR	Floor Grip™/ Safe-T-Grit™
<b>ACIDS</b>										
Acetic 10%	○	○	○	○	○	N/A	○	○	○	○
Hydrochloric 10%	●	●	●	○	●	N/A	●	●	●	●
Sulfuric 10%	●	●	●	○	●	N/A	●	●	●	●
<b>ALCOHOLS</b>										
Methanol	○	○	○	○	○	N/A	○	○	○	○
Isopropanol	○	○	○	○	○	N/A	○	○	○	○
<b>KETONES</b>										
Acetone	○	○	○	○	○	N/A	○	○	○	○
Methyl ethyl ketone	○	○	○	○	○	N/A	○	○	○	○
<b>ALKALIS</b>										
Ammonium hydroxide 20%	●	●	●	●	●	N/A	●	●	●	●
Sodium hydroxide 10%	●	●	●	●	●	N/A	●	●	●	●
<b>HYDROCARBONS</b>										
Gasoline (unleaded)	●	●	●	○	●	N/A	●	●	●	●
Mineral spirits	●	●	●	○	●	N/A	●	●	●	●
<b>CHLORINATED HYDROCARBONS</b>										
Perchloroethylene	○	○	●	○	○	N/A	●	●	○	●
1-1-1 Trichloroethane	○	○	●	○	○	N/A	●	●	○	●
<b>SALTS</b>										
Sodium chloride	●	●	●	●	●	N/A	●	●	●	●
Trisodium phosphate	●	●	●	●	●	N/A	●	●	●	●



## Emergency Repair Products

These epoxy compounds cure rapidly — even under water — to form strong, permanent repairs, minimizing spills due to leaks or accidental punctures as well as remediation costs.

### Devcon® Magic Bond™ Epoxy Putty

Seals leaks and repairs gouges in steel, aluminum, wood, fiberglass, concrete and ceramics. Two-color stick ensures thorough mixing. Cures rock-hard in 30 minutes. Can be painted, sanded, machined, tapped or drilled.

**Item # Container Size**  
11600 4 oz stick

### Devcon® Zip Patch™

Easy-to-use adhesive patch kit for permanent water-proof repairs to pipes, tanks and drums. Hardens in minutes at room temperature.

**Item # Container Size**  
11500 4" x 9" patch

### Devcon® Underwater Repair Putty (UW)

Water-resistant putty for repairing, patching and rebuilding equipment in underwater or habitually wet environments.

**Item # Container Size**  
11800 1 lb

### Devcon® Magic Sorb™ Spill Cleanup Products

Ideal for containment and cleanup of chemical, acid and hydrocarbon spills.

**Item # Container Size**  
48000 Bag 25 lb  
48100 Sock 3" diameter x 42"

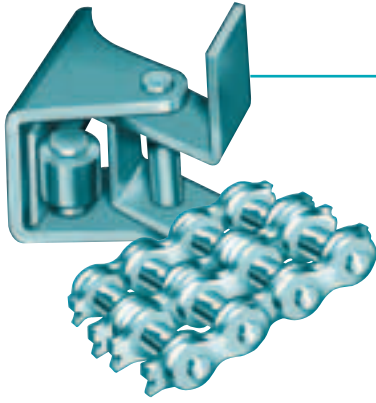


Physical Properties	Magic Bond™ Epoxy Putty	Zip Patch™	Underwater Repair Putty (UW)
<b>Color</b>	Light Grey	Brown	Grey
<b>Mix ratio by weight / volume</b> <i>resin:hardener</i>	N / A	N / A	1.4:1 / 1:1
<b>Mixed viscosity</b> <i>cP</i>	Putty	17,000	Putty
<b>Functional cure</b> <i>hours</i>	1	1	24
<b>Pot life</b> <i>minutes @ 75°F</i>	20	5	45
<b>Specific volume</b> <i>inches<sup>3</sup>/pound</i>	15.3	N / A	17.0
<b>Coverage per pound</b> <i>inches<sup>2</sup> @ 1/4" thickness</i>	61	N / A	68
<b>Cured hardness (ASTM D2240)</b> <i>Shore D</i>	83	70	82
<b>Cured shrinkage (ASTM D2566)</b> <i>inch/inch</i>	0.0030	0.0010	0.0020
<b>Adhesive tensile shear (ASTM D1002)</b> <i>psi</i>	920	2,400	2,685
<b>Tensile strength (ASTM D638)</b> <i>psi</i>	2,450	10,000	2,760
<b>Compressive strength (ASTM D695)</b> <i>psi</i>	12,000	N / A	5,625
<b>Flexural strength (ASTM D790)</b> <i>psi</i>	4,280	19,000	4,990
<b>Modulus of elasticity (ASTM D638)</b> <i>psi x 10<sup>5</sup></i>	7.0	2.9	7.5
<b>Coefficient of thermal expansion (ASTM D696)</b> <i>[(in)/(in x °F)] x 10<sup>-6</sup></i>	21	64	18
<b>Thermal conductivity (ASTM C177)</b> <i>[(cal x cm)/(sec x cm<sup>2</sup> x °C)] x 10<sup>-3</sup></i>	1.24	1.71	1.41
<b>Dielectric constant (ASTM D150)</b> <i>1 kHz</i>	28.1	43.5	8.6
<b>Dielectric strength (ASTM D149)</b> <i>volts/mil</i>	300	250	150
<b>Maximum continuous dry service temperature</b> <i>°F</i>	250	200	250

Key: ● Excellent ○ Very Good ○ Fair ○ Poor

Chemical Resistance			
<b>ACIDS</b>			
Acetic 10%	○	○	○
Hydrochloric 10%	○	●	○
Sulfuric 10%	○	●	○
<b>ALCOHOLS</b>			
Methanol	○	○	○
Isopropanol	○	○	○
<b>KETONES</b>			
Acetone	○	○	○
Methyl ethyl ketone	○	○	○
<b>ALKALIS</b>			
Ammonium hydroxide 20%	○	○	○
Sodium hydroxide 10%	○	○	○
<b>HYDROCARBONS</b>			
Gasoline (unleaded)	○	○	○
Mineral spirits	○	○	○
<b>CHLORINATED HYDROCARBONS</b>			
Perchloroethylene	○	○	○
1-1-1 Trichloroethane	○	○	○
<b>SALTS</b>			
Sodium chloride	○	○	○
Trisodium phosphate	○	○	○





## Permatex® Anti-Seize & Lubricants

Permatex® Anti-Seize Compounds protect mated metal parts against in-service rusting, corrosion, friction and galling. Made to serve the demanding needs of even the most severe industrial environments. They reduce wrench torque and ease assembly and disassembly of threaded, slip-fit and press-fit connections. Depend on Permatex® Anti-Seizes to reduce friction and wear, even at temperatures up to 2,400°F (1,316°C).

Permatex® Lubricants and Penetrants are formulated to protect and lubricate a wide array of parts and components.

### Permatex® Anti-Seize Lubricant

A heavy-duty blend of aluminum, copper and graphite lubricants in a petroleum base. Use during assembly to prevent galling, corrosion and seizing and to assure easier disassembly. An inert formulation, it will not evaporate or harden in extreme temperatures. Salt-, corrosion- and moisture-resistant. Temperature range -60°F to 1,600°F (-51°C to 871°C). Non-aerosol version meets MIL-SPEC A-907. ▲ NFPA Fire Code 30B: Level 3 (aerosol).

Item #	Container Size	P/N	🇨🇦
80071	4 oz brush-top bottle		80558
80078	8 oz brush-top bottle	133K	
81464	12 oz aerosol can, 8.5 oz net wt	133MA	
80208	16 oz brush-top bottle	767	17511

### Permatex® Copper Anti-Seize Lubricant

A premium quality copper anti-seize and thread lubricant that may be used to prevent seizing, corrosion and galling where high temperature conditions exist. Temperature range -30°F to 1,800°F (-34°C to 982°C). Provides good electrical conductivity. Meets MIL-SPEC A-907.

Item #	Container Size	🇨🇦
09128	8 oz brush-top bottle	09127
31163	16 oz brush-top bottle	09124

### Permatex® Nickel Anti-Seize Lubricant

Copper-free anti-seize lubricant that protects metal parts from seizing and galling at temperatures up to 2,400°F (1,316°C). Ideal for use under conditions of extreme pressure and temperature and with stainless steel, titanium and nickel alloys.

Item #	Container Size	P/N
77124	8 oz brush-top bottle	771
77164	16 oz brush-top bottle	771

### Permatex® Food Grade Anti-Seize Lubricant



A non-drying, non-metallic, PTFE-fortified synthetic-based lubricant that is NSF registered H1, and Kosher approved. Protects metal parts from rust, corrosion, seizing and galling up to 900°F (482°C). Use on threaded connections to lubricate, seal and prevent galling, wear and friction. Also lubricates machine parts, press fits, shafts and more. Effective on stainless steel, aluminum, iron, galvanized copper, brass, plastic and fiberglass.

Item #	Container Size
82448	8 oz brush-top bottle

### Permatex® Dielectric Grease

Protects electrical connections and wiring from salt, dirt and corrosion. Extends the life of bulb sockets. Prevents voltage leakage around any electrical connection. Also prevents spark plugs from fusing to boots. Required for modern high-energy ignition systems.

Item #	Container Size	🇨🇦
22058	3 oz tube, carded	22064



🇨🇦 Ordering number in Canada





## Gasket Sealants and Remover



### Permatex® Form-A-Gasket® No. 1 Sealant

Reliable paste-like gasket sealant/dressing/coating. Form-A-Gasket® No. 1 sets quickly. Recommended for rigid, permanent assemblies. Use to 400°F (204°C). Resistant to gasoline and other solvents. Conforms to MIL-S-45180 D, Type I.

Item #	Container Size	P/N
80003	11 oz tube, boxed	1C

### Permatex® Form-A-Gasket® No. 2 Sealant

Reliable paste-like gasket sealant/dressing/coating. Form-A-Gasket® No. 2 sets more slowly to a pliable film best suited for non-rigid, vibrating assemblies. Use to 400°F (204°C). Resistant to gasoline and other solvents. Conforms to MIL-S-45180 D, Type II.

Item #	Container Size	P/N	🇨🇦
80015	1.5 oz tube, carded	2AR	
80016	3 oz tube, carded	2BR	80500
80011	11 oz tube, boxed	2C	

### Permatex® Aviation Form-A-Gasket® No. 3 Sealant

Non-hardening liquid gasket sealant/dressing/coating is a thin, brushable dressing or sealer for close-fitting parts. Suitable for continuous temperatures to 400°F (204°C). Resistant to antifreeze, aviation fuels, high-detergent oils and lubricants. Conforms to MIL-S-45180 D, Type III.

Item #	Container Size	P/N	🇨🇦
80017	16 fl oz bottle	3D	80502

### Permatex® 1372 High Temperature Form-A-Gasket® Sealant

Slow setting, non-hardening, high temperature sealant. Especially recommended for heavy-duty applications. Temperature range -65°F (-54°C) to 600°F (315°C) intermittent. Resists common shop fluids.

Item #	Container Size
80088	7 fl oz tube, boxed

### Permatex® High Tack™ Spray-A-Gasket® Sealant

Red colored, all-purpose sealant that holds even the heaviest of gaskets in place during assembly. Seals and bonds rubber, cork, paper, felt and metal gaskets. Sets quickly to a very tacky film. Suitable to 500°F (260°C). Contains no ozone-depleting compounds. Resists gasoline, oil, kerosene, propane and butane. ▲ NFPA Fire Code 30B: Level 3.

Item #	Container Size	P/N	🇨🇦
80065	12 oz aerosol can/ 9 oz net wt	99MA	80546

### Permatex® Low VOC Gasket Remover

Removes all solvent-based, anaerobic and formed-in-place gaskets as well as gasket sealant products. Non-flammable, low VOC formula. Fast-foaming action and bottle-top brush-tip allow easy cleaning. This product is NOT recommended for silicone gaskets.

Item #	Container Size
80645	4 oz brush-top bottle

## Specialty Maintenance

Permatex® products for specialized maintenance as well as specially packaged products for general maintenance.

### Permatex® Prussian Blue

Aids precision fitting of machined surfaces. Locates high spots on bearings, valves and other close-to-tolerance components. Non-drying. Easy cleanup.

Item #	Container Size	P/N	🇨🇦
80038	.75 fl oz tube	35V	80518



### Permatex® Counterman's Choice Medium Strength Threadlocker Blue

An all-purpose, medium strength threadlocker. Ideal for all nut and bolt applications 1/4" to 3/4" (6mm to 20mm).

Item #	Container Size
09978	1 g pouch

### Permatex® Counterman's Choice High Strength Threadlocker Red

A permanent, high strength threadlocker that is applied to fasteners 3/8" to 1" (10mm to 25mm) in size before assembly.

Item #	Container Size
09979	1 g pouch

### Permatex® Counterman's Choice Anti-Seize Lubricant

Heavy-duty blend of aluminum, copper and graphite lubricants in a petroleum base. Use during assembly to prevent galling, corrosion and seizing.

Item #	Container Size
09975	5 g pouch

🇨🇦 Ordering number in Canada

🇨🇦 Ordering number in Canada





**Permatex® Hand Cleaners**

You need a waterless hand cleaner that really cleans – without turning your hands into sandpaper. You need the strength to remove grease, grime, paint, adhesives and all other soils your working hands get into – plus conditioners to prevent your hands from cracking and drying out. Permatex® hand cleaners are the choice of working hands. For over 50 years, Permatex® has offered high-quality hand cleaners and has maintained a leadership position through innovation and a concern for users’ needs. Wherever hands are getting dirty, there’s a place for Permatex® hand cleaners. To meet your growing needs, Permatex® offers a broad selection of product formulations and sizes.



**Permatex® Fast Orange® Pumice and Smooth Lotion Hand Cleaners**

Industrial grade, biodegradable\*, waterless, petroleum solvent-free hand cleaner. It contains no harsh chemicals, mineral oils or ammonia that can sting cuts and abrasions. Pure, fresh-smelling natural citrus power does the cleaning while aloe, lanolin, glycerin and jojoba condition and protect skin. Fast Orange® gently deep cleans the toughest dirt and grease.

**Pumice Lotion**

Item #	Container Size	🇨🇦
25108	7.5 fl oz bottle	20857
25116	15 fl oz squeeze bottle	20859
25219	1 gallon bottle w/pump	20861
25104†	1 gallon flat-top bottle	

**Smooth Lotion**

Item #	Container Size	🇨🇦
23108	7.5 fl oz bottle	20851
23116	15 fl oz squeeze bottle	20853
23218	1 gallon bottle w/pump	20855
23104†	1 gallon flat-top bottle	



🇨🇦 Ordering number in Canada  
 \* Biodegradable according to 40 CFR 796.3240  
 † For use with 95140 Universal Dispenser



### Permatex® Fast Orange® Hand Cleaner Wipes

Fast Orange® Hand Cleaner Wipes remove the toughest grease, tar, grime, ink, paints, sealants, adhesives and other difficult soils. Each pre-moistened wipe has a textured surface on one side that is ideal for cleaning heavy-duty soils from hands, tools and work areas. The wipes also have a smooth side for general purpose cleaning.

Item #	Container Size
25072	72-count bucket

### DL® Permatex® Trounce® Lotion and Hand Cleaner

Pleasantly scented with fine ground pumice for deep scrubbing to remove the most difficult soils. This fast-acting formula won't irritate hands or leave a greasy residue. Professional strength.

Item #	Container Size
21218	1 gallon bottle w/pump



### Universal Dispenser

The 95140 Universal dispenser allows for metered use of all Permatex® Hand Cleaners in professional size containers (noted with †). Consistently controls the amount of hand cleaner dispensed, cutting down on unnecessary waste. Designed to offer years of trouble-free, repeated use.

Item #	Container Size
95140	universal dispenser

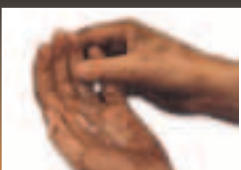
### Wall-Mounted Wire Bracket

Convenient wall-mounted wire bracket for out-of-the-way storage of your favorite gallon of Permatex® hand cleaner.

Item #	Container Size
90128	wire bracket



† For use with 95140 Universal Dispenser



Item #	Page	Item #	Page	Item #	Page	Item #	Page	Item #	Page								
09128	46	11478	40	14258	8	14415	6	18300	12	25104	48	56725	21	74001	15	81878	26
09975	47	11480	40	14260	6	14417	6	18301	12	25108	48	56750	21	77BR	26	81913	23
09978	47	11490	40	14265	6	14500	9	18305	12	25116	48	59225	21	77C	26	81915	27
09979	47	11491	40	14270	6	14501	9	18306	12	25219	48	59235	21	767	46	82	23
1C	47	11495	40	14272	8	14503	9	18401	12	25224	26	6BR	27	771	46	82080	26
14D	22	11500	45	14277	6	14510	9	18402	12	26201	18	6C	27	77124	46	82180	26
14H	22	11600	45	14278	6	14630	6	18406	12	26210	18	6MA	27	77164	46	82194	26
16BR	23	11700	36	14280	15	14900	9	18705	12	26225	18	66BR	23	80	23	82195	26
16C	23	11730	36	14285	15	15000	30	18706	12	26250	18	66C	23	80003	47	82448	46
101BR	26	11760	38	14287	15	15043	15	19510	38	27005	19	60925	20	80011	47	82751	26
133K	46	11762	38	14291	15	15047	15	19600	28	27010	19	60950	20	80015	47	85080	26
133MA	46	11763	38	14292	15	15049	30	19650	10	27110	18	62001	20	80016	47	85224	26
10050	40	11765	38	14293	15	15050	30	19770	38	27125	18	62050	20	80017	47	85519	26
10080	40	11767	38	14300	10	15051	30	2AR	47	27150	18	6245	23	80022	27	85860	27
10110	36	11768	38	14310	6	15165	30	2BR	47	27225	18	64050	20	80038	47	85913	23
10120	36	11770	38	14315	6	15250	28	2C	47	27250	18	66050	20	80045	22	85915	27
10130	36	11800	45	14320	10	15260	28	26BR	27	27725	18	68025	20	80050	23	99MA	47
10210	38	12560	43	14324	10	15330	30	26C	27	27750	18	68050	20	80065	47	90128	49
10220	38	12570	43	14330	10	15350	30	21218	49	29025	18	70144	14	80071	46	95140	49
10230	38	12710	43	14340	10	15800	28	21425	23	29050	18	70145	14	80078	46	DA007	6
10240	36	12750	43	14345	10	15810	28	22058	46	29208	26	70161	14	80088	47	DA012	6
10260	36	13090	43	14350	6	15820	30	22225	18	29247	26	70213	14	80208	46	DA032	6
10270	36	13100	43	14355	6	15850	30	22250	18	3D	47	70350	14	80628	27	DA033	10
10610	36	13110	43	14360	6	15940	28	23104	48	35V	47	70361	14	80632	22	DA034	10
10620	36	13120	43	14363	10	15980	30	23108	48	31163	46	70450	14	80633	22	DA051	6
10710	38	13130	43	14366	10	15984	30	23116	48	33694	26	70461	14	80645	47	DA052	6
10720	38	13400	43	14367	10	15985	30	23218	48	48000	45	70650	14	80855	23	DA160	10
10760	36	13550	43	14385	10	15990	28	24005	19	48100	45	70661	14	81158	23	DA290	10
10770	36	13800	43	14386	10	18000	15	24010	19	51D	22	70750	14	81160	27	DA291	10
10780	38	14165	10	14387	10	18100	12	24105	26	51531	27	70761	14	81173	23	DA295	10
11170	40	14166	10	14388	10	18101	12	24163	22	51580	27	71150	14	81409	27	DA307	10
11410	36	14200	6	14389	10	18200	12	24210	18	51813	27	71161	14	81464	46	DA309	10
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11470	40	14251	6	14409	15	18206	12	24350	18	56521	21	72250	14	81850	23	DF039	28
11475	40	14255	6	14410	15	18210	12	25072	49	56525	21	72261	14	81860	27		







## MSDS / TDS

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You can also access MSDSs and TDSs from our website: [www.devcon.com](http://www.devcon.com).

## Warranty

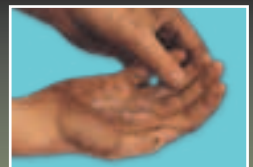
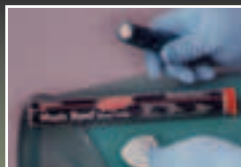
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Devcon will replace any material found to be defective. Because storage, handling and application of this material are beyond its control, Devcon accepts no liability for the results obtained.

## Disclaimer

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All information is based on laboratory testing and is not intended for design purposes. ITW Devcon makes no representations or warranties of any kind concerning this data.





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