Devcon®

Wear & Abrasion Solutions

Mining & Coal Preparation | Cement Processing | Coal-Fired Power Plants | Pulp & Paper | Steel Processing

ITW

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Product Technologies

Wearing Compounds

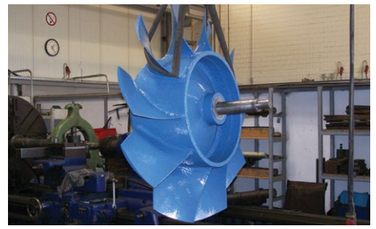
Specially formulated wear-resistant epoxy coatings that protect dry materials handling and storage equipment from sliding abrasion, impact and wear. These products are trowelable, non-sag putties available in large particulate, high impact, and high temperature formulas. Tile Adhesives are high strength, room temperature curing, trowelable adhesives that bond ceramic tiles to metal.

Belting and Rubber Repair Compounds

Flexible urethane structural technologies for repairing worn or damaged SBR conveyor belts, rubber lined equipment such as pipes and tanks in mines, quarries, and coal-fired power plants. These products are in a non-sag putty for patching and repairing linings along with self-leveling thixotropic versions that create a smooth surface for repairing conveyor belts.

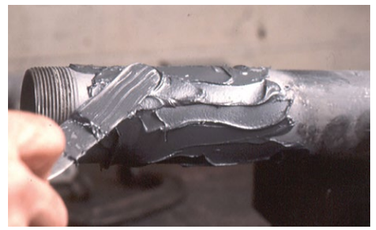
Corrosion Repair Compounds

Ceramic filled epoxy technology to make permanent repairs to pumps, shafts, pipes, and tanks where a corrosion-resistant polymer is needed to protect all metals against corrosion and erosion in slurry applications. These products apply easily with spray, a brush or in a creamy putty consistency that allows you to be back in service within 3-5 hours.



Metal Repair Epoxies

Metal-filled epoxy technology that allows for fast, economical, permanent repairs to power plant and mining equipment. The epoxies cure quickly; can be machined, tapped and corrosion resistant to harsh chemicals. These products are available in liquid formulas that can be used for mold patterns, holding fixtures and forming dies.



Wear-Resistant, Abrasion-Resistant Coatings

Specially formulated wear-resistant epoxy coatings that protect dry materials handling and storage equipment from abrasion, corrosion and wear. The DFense Blok™ product line is truly an advanced epoxy technology with quicker functional cure times and better abrasion resistance.

Devcon® DFense Blok™

An easy-to-mix bead-filled epoxy compound formulated to significantly outlast traditional wear and abrasion products while providing superior protection.

- 4X better abrasion resistance than competition
- 7X better drop impact strength than ceramic tile

Item #	Size
11330	30 lb

Devcon® DFense Blok™ Fast Cure (FC)

A bead-filled epoxy compound that allows equipment to be returned to service in 2 hours.

- Non-sagging, good adhesion
- Withstands operating temperature as high as 300°F

Item #	Size
11350	9 lb

Devcon® DFense Blok™ Quick Patch

The only ceramic bead-filled wear and abrasion resistant epoxy for emergency repair.

- Eliminates down-time with exceptionally fast cure
- Repairs holes, leaks and cracks

Item #	Size
11320	1 lb

Devcon® DFense Blok™ Surface Wetting Agent

A thixotropic epoxy gel system that improves the ease of application and cured adhesion properties of DFense Blok™.

- Zero wait time before applying DFense Blok™
- Orange color for easy visual inspection

Item #	Size
11340	1 lb

Devcon® DFense Blok™ Power Mixer

Recommended for most effective way to thoroughly mix DFense Blok™ Wearing Compound. Can be used with any of our 5 gallon pail wearing compounds.

- Durable steel paddle with three blades; 2X faster than drill-style mixers
- Plugs into standard 120V outlet

Item #	Size
11301	5 Gallon

Watch our Impact Test!

Technical Information

Physical Properties	Devcon® DFense Blok™	Devcon® DFense Blok™ Surface Wetting Agent	Devcon® DFense Blok™ Fast Cure (FC)	Devcon® DFense Blok™ Quick Patch
Color	Grey	Orange	Grey	Grey
Mix ratio by weight / volume resin:hardener	2:1 / 100:45	2:1/100:44	2:1/2:1	1:1/1:1
Mixed viscosity cP	Putty	Thixotropic Gel	Putty	Putty
Functional cure hours	4-5	4-5	2-3	30 minutes
Pot life minutes @ 75˚F	25	12-15	15	4
Specific volume inches³ /pound	12.6	24.7	13.5	14.89
Coverage per pound inches² @ 1/4" thickness	47	1860 @ 12mils	53	60
Cured hardness (ASTM D2240) Shore D	77	71	80	84
Cured shrinkage (ASTM D2566) inch/inch	0.0005	N/A	0.0008	0.0010
Adhesive tensile shear (ASTM D1002) psi	2,616	2,616	2,764	2,495
Compressive strength (ASTM D695) psi	7,145	5,032	7,178	6,166
Flexural strength (ASTM D790) psi	7,876	6,700	7,488	4,880
Coefficient of thermal expansion (ASTM D696)[(in)/(in x °F)] x 10^{-6}	29	N/A	33	31
Dielectric constant (ASTM D150)	49.0	N/A	45	51
Maximum continuous dry service temperature°F	300	300	300	200
Maximum continuous wet service temperature °F	140	N/A	140	N/A

Chemical Resistance	Devcon® DFense Blok™	Devcon® DFense Blok™ Surface Wetting Agent	Devcon® DFense Blok™ Fast Cure (FC)	Devcon® DFense Blok™ Quick Patch
ACIDS				
Acetic 10%	⊘	⊘	⊘	⊘
Hydrochloric 10%	◐	◐	◐	●
Sulfuric 10%	◐	◐	◐	●
ALCOHOLS				
Methanol	⊘	⊘	⊘	○
Isopropanol	○	○	⊘	○
KETONES				
Acetone	○	○	⊘	○
Methyl ethyl ketone	⊘	⊘	⊘	○
ALKALIS				
Ammonium hydroxide 20%	◐	◐	◐	●
Sodium hydroxide 10%	◐	◐	◐	●
HYDROCARBONS				
Gasoline (unleaded)	○	○	○	●
Mineral spirits	●	◐	◐	●
CHLORINATED HYDROCARBONS				
1-1-1 Trichloroethane	◐	◐	◐	●
SALTS				
Sodium chloride	◐	◐	◐	●
Trisodium phosphate	◐	◐	◐	●

Key: ● Excellent ◐ Very Good ○ Fair ⊘ Poor

Wear-Resistant, Abrasion-Resistant Coatings

Specially formulated wear-resistant epoxy coatings that protect dry materials handling and storage equipment from abrasion, corrosion and wear. These products are trowelable, non-sag putties available in large particulate, high impact, and high temperature formulas.

Devcon® Wear Guard™ Fine Load

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

- Withstands operating temperatures as high as 300°F
- Outstanding resistance to a wide range of chemicals

Item #	Size
11470	30 lb

Devcon® Wear Guard™ Ultra

Alumina ceramic bead-filled epoxy system with outstanding abrasion resistance for severe service conditions.

- Outstanding Wear Resistance
- Extends Equipment Operating Cycles

Item #	Size
11475	30 lb

Devcon® Combo Wear FC

High-tech, three-component (2 bead sizes plus silicon carbide) compound for repairing process equipment quickly and returning it to service in as little as 1-1/2 hours..

- Excellent adhesion to metal, ceramic and concrete surfaces
- Ideal for cracks in large coal fuel lines

Item #	Size
11450	9 lb

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".

- Trowels onto overhead or vertical surfaces without sagging
- Ideal for repairing scrubbers, ash handling systems, pipe elbows, screens, and chutes

Item #	Size
11490	30 lb

Devcon® Wear Guard™ High

High density micro alumina ceramic bead-filled epoxy system with a flexible additive for superior impact and abrasion resistance.

- Non sagging putty in a creamy consistency
- High compression and impact strength

Item #	Size
11460	30 lb

Devcon® Wear Guard™ High Temp

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

- Heat-cured, trowelable system that gives up to 30% improvement over conventional wear compounds
- Withstands continuous service temperatures to 450°F

Item #	Size
11483	24 lb

Devcon® Tile Adhesive

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

- Bonds ceramic tile to vertical, curved, and overhead surfaces and repairs loose ceramic tiles
- Excellent chemical resistance to acids and alkalis

Item #	Size
11495	20 lb

Physical Properties	Devcon® Wear Guard™ Fine Load	Devcon® Wear Guard™ High Load	Devcon® Wear Guard™ High Temp	Devcon® Wear Guard™ High Impact	Devcon® Wear Guard™ Ultra	Devcon® Combo Wear FC (Fast Cure)	Devcon® Tile Adhesive
Color	Grey	Grey	Grey	Dark Grey	Grey	Grey	White
Mix ratio by weight /volume resin:hardener	2:1 / 2:1	2:1 / 2:1	13.7:1 / 6:1	2.5:1 / 2.5:1	2.15:1:5.65[2]	2:1 / 2:1	1.1:1 / 1:1
Mixed viscosity cP	Putty	Putty	Putty	Putty	Putty	Putty	Putty
Functional cure hours	3	3	Heat Cured	6-8	16	1.5-3	8-12
Pot life minutes @ 75°F	30	30	120	30	20	7	240
Specific volume inches³/pound	12.6	12.9	14.3	12.4	11.4	13.6	19.2
Coverage per pound inches² @ 1/4" thickness	50	50	60	50	46	54	76.8
Cured hardness (ASTM D2240) Shore D	87	87	87	85	87	87	81
Cured shrinkage (ASTM D2566) inch/inch	0.0006	0.0006	0.0010	0.0006	0.0004	0.0008	0.0010
Adhesive tensile shear (ASTM D1002) psi	1,375	1,474	2,300	2,567	1,565	1,450	1,945
Compressive strength (ASTM D695) psi	11,000	11,000	13,200	7,250	13,910	11,000	9,620
Flexural strength (ASTM D790) psi	7,190	7,140	8,220	6,144	8,735	7,140	5,480
Coefficient of thermal expansion (ASTM D696) [(in)/(in x °F)] x 10^{-6}	34	29	27	34	26	34	14
Dielectric constant (ASTM D150)	46.0	41.0	38.0	46.0	40.0	41.0	46.0
Maximum continuous dry service temperature °F	300	300	450	300	250	300	200
Maximum continuous wet service temperature °F	140	140	150	140	120	140	N/A

NOTES: [2] *Three-part system, beads separate*

Chemical Resistance	Devcon® Wear Guard™ Fine Load	Devcon® Wear Guard™ High Load	Devcon® Wear Guard™ High Temp	Devcon® Wear Guard™ High Impact	Devcon® Wear Guard™ Ultra	Devcon® Combo Wear FC (Fast Cure)	Devcon® Tile Adhesive
ACIDS	⊘	⊘	⊘	⊘	⊘	⊘	⊘
Acetic 10%	◐	◐	●	◐	◐	○	◐
Hydrochloric 10%	◐	◐	●	◐	●	◐	◐
Sulfuric 10%							
ALCOHOLS	⊘	⊘	○	⊘	⊘	⊘	⊘
Methanol	⊘	⊘	○	⊘	⊘	○	○
Isopropanol							
KETONES	⊘	⊘	○	⊘	⊘	⊘	⊘
Acetone	⊘	⊘	○	⊘	⊘	◐	◐
Methyl ethyl ketone							
ALKALIS	●	●	●	●	●	●	●
Ammonium hydroxide 20%	●	●	●	●	●	●	●
Sodium hydroxide 10%							
HYDROCARBONS	●	●	●	●	●	○	○
Gasoline (unleaded)	●	●	●	●	●	●	●
Mineral spirits							
CHLORINATED HYDROCARBONS	◐	◐	●	◐	◐	◐	◐
1-1-1 Trichloroethane							
SALTS	◐	◐	●	◐	◐	◐	◐
Sodium chloride	◐	◐	●	◐	◐	◐	◐
Trisodium phosphate							

Key: ● Excellent ◐ Very Good ○ Fair ⊘ Poor

Elevated Temperature, Wear-Resistant Coatings

Innovative wear-resistant epoxy coating that is designed to protect equipment against high temperature erosion, corrosion and abrasion. Long-lasting protection in both wet and dry environments upto 300°F/ 148°C. Room temperature cure eliminates the need for oven bake cure. Trowelable, non-sag putty. Smooth with water.

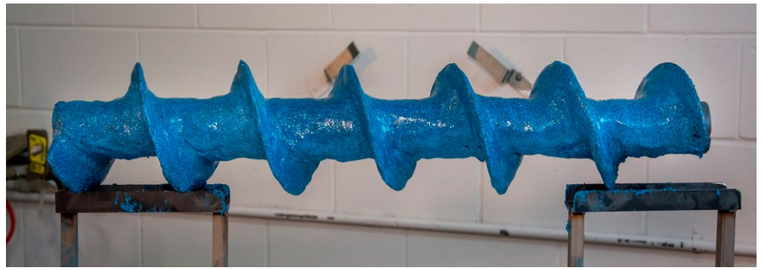
Devcon® Wear Guard™ 300RTC

Alumina ceramic bead-filled epoxy system with outstanding wear resistance for high temperature environments.

- Withstands elevated service temperatures, wet and dry conditions, up to 300°F / 148°C
- Room temperature cure eliminates need for post-bake cure
- Sag-free application
- Excellent chemical resistance
- Smooth with water
- Easy to mix and apply
- Low exothermic reaction

Item #	Size
11430	30 lb

Typical Properties	
Color	Blue
Mix Ratio by Weight	2:1
Mixed Viscosity	Putty
Functional Cure	16 Hours
Pot Life	50 - 70 Minutes
Compressive Strength	12,500 psi (86.18 MPa)
Coverage	50 in^2 / lb (711.2 cm^2/kg) @ 0.25”
Specific volume inches/ pound	2.2
Cured Hardness	85 Shore D
Cured Shrinkage inch/ inch	.00054
Adhesive Tensile shear, psi	600 psi @ 300°F / 150°C
Flexural Strength, psi	5,000
Coefficient of thermal expansion x 10^{-6}	43.6
Dielectric Constant	3.3
Temperature Resistance	Dry / Wet 300°F / 150°C



Easy to mix

Easy to apply

Smooth with water

Belting & Rubber Repair

Flexible urethane technologies for repairing worn or damaged SBR conveyor belts, rubber lined equipment such as pipes and tanks in mines, quarries, and coal-fired power plants. These products are in a non-sag putty for patching and repairing linings along with self-leveling thixitropic versions that create a smooth surface for repairing conveyor belts.

Devcon® R-Flex®

A self-leveling urethane compound for repairing holes, tears, gouges, and protecting clips, on conveyor belts.

- Functional cure in 90 minutes
- High adhesion with surface pull of the SBR rubber
- Kit includes fluorescent surface conditioner for dark environments

Item #	Size
15550	4 lb
15656	1.5 lb

Before: R-Flex® Repair

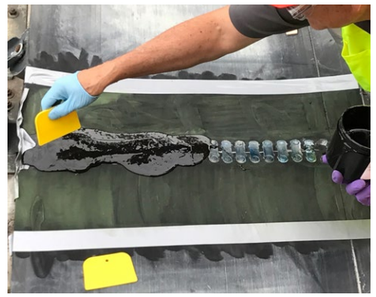
After: R-Flex® Repair Belt Running Strong

Devcon® Flexane® 80 Putty

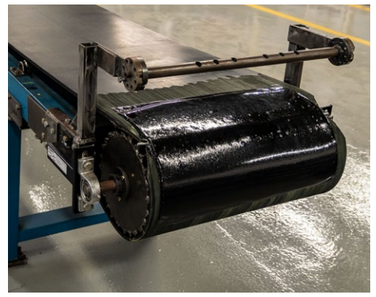
Trowelable urethane for repairing and lining process equipment exposed to wear, abrasion, vibration or expansion and contraction.

- Service temperatures to 180°F in dry environments and 120°F in wet environments
- Bonds to metal, concrete, rubber, wood, and fiberglass surfaces

Item #	Size
15820	1 lb
15850	4 lb



Before: R-Flex® Clip Repair



After: R-Flex® Clip Repair

Devcon® Flexane® Brushable

High-performance brushable urethane for protection against abrasion and impact.

- Excellent for repairing/coating rubber-lined pumps, tanks and valves
- Applies in thicknesses of 50 mils in one application

ABS TYPE APPROVED PRODUCT

Item #	Size
15350	1 lb

Devcon® Flexane® High Performance Putty

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

- Cures to a tough (tear strength 400 pli), resilient rubber compound (Hardness 78 Shore A)
- Bonds to metal, rubber, wood, fiberglass, and concrete

Item #	Size
15330	1 lb

Technical Information

Physical Properties	Devcon® R-Flex®	Devcon® Flexane® 80 Putty	Devcon® Flexane® Brushable	Devcon® Flexane® High Performance Putty
Color	Black	Black	Black	Black
Mix ratio by weight resin:hardener	88:12	72:28	80:20	94:6
Mixed viscosity cP	Putty	Putty	40,000	Putty
Pot life minutes @ 75°F	4	20	45	10
Specific volume inches³/pound	27.4	23.5	26.0	23.5
Coverage per pound inches² @ 1/4" thickness	440 (4lb) / 110 (1.5lb)	94	104	94
Functional cure hours	1 1/2	12	18	16
Demolding time hours	N/A	N/A	N/A	N/A
Cured hardness (ASTM D2240) Shore A	87	87	86	78
Cured shrinkage (ASTM D2566) inch/inch	NA	0.0014	0.232	0.12[2]
Tensile strength (ASTM D412) psi	1,462	1,700	3,500	4,500
Tear resistance (ASTM D624) pli	375	300	400	400
Abrasion resistance weight loss[1]	270	280	90	140
Maximum elongation (ASTM D412) %	420	300	600	600
Dielectric strength (ASTM D149) volts/mil	350	350	340	350
Maximum continuous wet service temperature °F	120	120	120	120
Maximum continuous dry service temperature °F	180	180	180	180

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

Chemical Resistance	Devcon® R-Flex®	Devcon® Flexane® 80 Putty	Devcon® Flexane® Brushable	Devcon® Flexane® High Performance Putty
ACIDS	◐	⊘	⊘	⊘
Acetic 10%	○	◐	○	○
Hydrochloric 10%	○	◐	○	○
Sulfuric 10%	○	◐	○	○
Sulfuric 50%	○	◐	○	○
Phosphoric 10%				
ALCOHOLS	⊘	⊘	⊘	⊘
Methanol	⊘	⊘	⊘	⊘
Isopropanol				
KETONES	⊘	⊘	⊘	⊘
Acetone	⊘	⊘	⊘	⊘
Methyl ethyl ketone				
ALKALIS	◐	◐	◐	◐
Ammonium hydroxide 20%	◐	◐	◐	◐
Sodium hydroxide 10%				
HYDROCARBONS	○	⊘	⊘	⊘
Gasoline (unleaded)	○	⊘	⊘	⊘
Mineral spirits				
SALTS	◐	◐	◐	◐
Sodium chloride	◐	◐	◐	◐
Trisodium phosphate	◐	◐	◐	◐
Aluminum sulfate 10%	◐	◐	◐	◐
Sodium carbonate 10%				

Key: ● Excellent ◐ Very Good ○ Fair ⊘ Poor

Belting & Rubber Repair

Flexible urethane technologies for repairing worn or damaged SBR conveyor belts, rubber lined equipment such as pipes and tanks in mines, quarries, and coal-fired power plants. These products are in a non-sag putty for patching and repairing linings along with self-leveling thixitropic versions that create a smooth surface for repairing conveyor belts.

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)
- Cures at room temperature to a semi-rigid rubber material

Item #	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 (Shore A 97)
- Requires only a five hour demolding time

Item #	Size
15250	1 lb
15260	10 lb

Devcon® Flexane® Primer

Required for maximum adhesion of Flexane® products.

- FL-10 Primer for all metals.
- FL-20 Primer for rubber, wood, fiberglass and concrete.

Item #	Size
15980	4 oz (FL-10)
15260	4 oz (FL-20)

Devcon® Flex-Add™

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

- Creates a lower durometer castable urethane
- Can match existing hardness of rubber

Item #	Size
15940	8 oz

Devcon® Liquid Release Agent

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

- Produces a high gloss finish
- Facilitates the accurate duplication of intricate details

ABS TYPE APPROVED PRODUCT

Item #	Size
19600	1 pt

Devcon® Flexane® FC Liquid

A convenient, time-saving method of filling expansion joints and repairing rubber.

- 8-minute working time
- No-mess dispensing with fast, easy, 400ml reusable cartridges
- Dispenser: #15043 (manual) Nozzle #15047

Item #	Size
15050	400 ml cartridge

Devcon® Flexane® Fast Cure Putty

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

- 8-minute working time
- No-mess dispensing with fast, easy, 400ml reusable cartridges
- Dispenser: #15043 (manual) Nozzle #15047

Item #	Size
15049	400 ml cartridge

Technical Information

Physical Properties	Devcon® Flexane® 80 Liquid	Devcon® Flexane® 94 Liquid	Devcon® Flexane® Fast Cure Putty	Devcon® Flexane® Fast Cure Liquid
Color	Black	Black	Black	Grey
Mix ratio by weight resin:hardener	77:23	69:31	80:20	80:20
Mixed viscosity cP	10,000	6,000	Putty	5,800
Pot life minutes @ 75°F	30	10	8	8
Specific volume inches^3/pound	26.5	26.5	23.5	26.5
Coverage per pound inches^2 @ 1/4" thickness	106	106	94	106
Functional cure hours	16	16	3	2
Demolding time hours	10	5	N/A	N/A
Cured hardness (ASTM D2240) Shore A	87	97	88	94
Cured shrinkage (ASTM D2566) inch/inch	0.0018	0.0014	0.0014	0.0018
Tensile strength (ASTM D412) psi	2,100	2,800	2,400	3,300
Tear resistance (ASTM D624) pli	350	415	275	430
Abrasion resistance weight loss[1]	285	330	220	330
Maximum elongation (ASTM D412) %	650	500	500	450
Dielectric strength (ASTM D149) volts/mil	350	350	350	350
Maximum continuous dry service temperature °F	180	180	120	120
Maximum continuous wet service temperature °F	120	120	180	180

NOTES: [1] Taber H-18 wheel (mg/1,000 revolutions @ 1,000 gram load)

Chemical Resistance	Devcon® Flexane® 80 Liquid	Devcon® Flexane® 94 Liquid	Devcon® Flexane® Fast Cure Putty	Devcon® Flexane® Fast Cure Liquid
ACIDS				
Acetic 10%	⊘	⊘	⊘	⊘
Hydrochloric 10%	◐	◐	◐	◐
Sulfuric 10%	◐	◐	◐	◐
Sulfuric 50%	◐	◐	◐	◐
Phosphoric 10%	◐	◐	◐	◐
ALCOHOLS				
Methanol	⊘	⊘	⊘	⊘
Isopropanol	⊘	⊘	⊘	⊘
KETONES				
Acetone	⊘	⊘	⊘	⊘
Methyl ethyl ketone	⊘	⊘	⊘	⊘
ALKALIS				
Ammonium hydroxide 20%	◐	◐	◐	◐
Sodium hydroxide 10%	◐	◐	◐	◐
HYDROCARBONS				
Gasoline (unleaded)	⊘	⊘	⊘	⊘
Mineral spirits	⊘	⊘	⊘	⊘
SALTS				
Sodium chloride	◐	◐	◐	◐
Trisodium phosphate	◐	◐	◐	◐
Aluminum sulfate 10%	◐	◐	◐	◐
Sodium carbonate 10%	◐	◐	◐	◐

Key: ● Excellent ◐ Very Good ○ Fair ⊘ Poor

Corrosion Repair Compounds

Ceramic filled epoxy technology used to make permanent repairs to pumps, shafts, pipes, and tanks where a corrosion-resistant polymer is needed to protect all metals against corrosion and erosion in slurry applications. These products apply easily with spray, a brush or trowel.

Devcon® Titanium Putty

High-performance, nonrusting titanium-reinforced epoxy putty for making repairs that can be precision machined.

- Withstands heavy loads in harsh chemical evironments
- High compressive strength

Item #	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.

- Temperature range up to 350°F
- Excellent for filling voids and rebuilding metal castingsone application

Item #	Size
11700	3 lb

Devcon® Ceramic Repair Compound

Trowelable, alumina-filled epoxy compound with a 45-minute pot life and larger kit size for bigger jobs of rebuilding, smoothing and protecting processing equipment.

- Temperature range up to 350°F
- Excellent for filling voids and rebuilding metal castings

Item #	Size
11730	32 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, and erosion.

- Temperature range up to 350°F
- Brushable Ceramic white is NSF 61 Certified.

Item #	Size
11760	2 lb (red)
11765	2 lb (blue)
11767	12 lb (blue)
11770	2 lb (white)

Devcon® EZ-Spray Ceramic

Sprayable, solvent-free, high performance ceramic-filled epoxy for sealing, protecting and repairing surfaces subject to erosion, corrosion and wear. Significantly reduces equipment repair time with easy-to-use delivery system.

- Temperature resistance to 175°C
- Excellent chemical resistance.

Item #	Size
11781	1,000 ml (Blue)

Physical Properties	Devcon® Titanium Putty	Devcon® Brushable Ceramic Red, Blue	Devcon® Brushable Ceramic White	Devcon® Ceramic Repair Putty	Devcon® Ceramic Repair Compound	Devcon® EZ-Spray Ceramic
Color	Grey	Red, Blue	White	Dark Blue	Dark Blue	Blue
Mix ratio by weight / volume resin:hardener	4.3:1 / 3:1	5.6:1 / 3.4:1	8:5:1 / 5:6:1	7:1 / 4.3:1	4.7:1 / 3.3/1	5.0:1 / 3:1
Mixed viscosity cP	Putty	32,000	40,000	Putty	Putty	30,000
Functional cure hours	16	16	16	16	16	16
Pot life minutes @ 75°F	21	40	21	25	45	40
Specific volume inches³/pound	11.7	16.9	16.5	16.4	17.9	17.1
Coverage per pound inches² @ 1/4" thickness	47	7.8[1]	7.6[1]	66	72	7.9[1]
Cured hardness (ASTM D2240) Shore D	87	85	84	86	86	85
Cured shrinkage (ASTM D2566) inch/inch	0.0010	0.0020	0.0020	0.0022	0.0024	0.0020
Adhesive tensile shear (ASTM D1002) psi	2,000	2,000	2,000	2,000	2,231	2,000
Compressive strength (ASTM D695) psi	15,200	13,700	13,200	12,700	10,240	13,700
Flexural strength (ASTM D790) psi	7,700	8,000	8,000	6,475	5,870	8,000
Modulus of elasticity (ASTM D638) psi x 10^5	9.5	8.0	8.0	8.1	8.1	8.0
Coefficient of thermal expansion (ASTM D696) [(in)/(in x °F)] x 10^{-6}	22	25.6	27.5	23.8	24.2	25.6
Thermal conductivity (ASTM C177) [(cal x cm)/(sec x cm2 x °C)] x 10^{-3}	1.95	19	19	1.88	1.72	19
Dielectric constant (ASTM D150)	44.8	38.7	38.7	41.0	41.0	38.7
Dielectric strength (ASTM D149) volts/mil	56	382	382	370	350	382
Maximum continuous dry service temperature °F	350	350	350	350	350	350
Maximum continuous wet service temperature °F	150	150	150	150	150	150

NOTES: 1 Coverage (feet2 @ 15mils)

Chemical Resistance	Devcon® Titanium Putty	Devcon® Brushable Ceramic Red, Blue	Devcon® Brushable Ceramic White	Devcon® Ceramic Repair Putty	Devcon® Ceramic Repair Compound	Devcon® EZ-Spray Ceramic
ACIDS Acetic 10% Hydrochloric 10% Sulfuric 10%	⊘ ● ◐	⊘ ● ◐	⊘ ● ◐	⊘ ● ◐	⊘ ● ◐	⊘ ● ◐
ALCOHOLS Methanol Isopropanol	● ●	● ●	● ●	● ●	● ●	● ●
KETONES Acetone Methyl ethyl ketone	⊘ ⊘	⊘ ⊘	⊘ ⊘	⊘ ⊘	⊘ ⊘	⊘ ⊘
ALKALIS Ammonium hydroxide 20% Sodium hydroxide 10%	● ●	● ●	● ●	● ●	● ●	● ●
HYDROCARBONS Gasoline (unleaded) Mineral spirits	● ●	◐ ●	◐ ●	● ●	● ●	● ●
CHLORINATED HYDROCARBONS 1-1-1 Trichloroethane	●	●	●	●	●	●
SALTS Sodium chloride Trisodium phosphate	● ●	● ●	● ●	● ●	● ●	● ●

Key: ● Excellent ◐ Very Good ○ Fair ⊘ Poor

Metal Repair Epoxies

Metal-filled epoxy technology that allow for fast economical permanent repairs to power plant and mining equipment. They can be machined, tapped and drilled, and corrosion resistant to harsh chemicals. These products are available in pourable versions that can be used to provide accurate detail reproductions for short run prototype mold patterns, holding fixtures and forming dies.

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 #	Size
10110	1 lb
10120	4 lb

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 #	Size
10210	1 lb
10220	4 lb

Devcon® Aluminum Putty (F)

Aluminum-filled epoxy putty for dependable nonrusting repairs to aluminum castings, machinery and equipment.

- Can be machined drilled or tapped using conventional metalworking tools
- Widely used in HVAC applications, it conforms to requirements of MIL-PRF-24176C, Type II

Item #	Size
10610	1 lb
10620	3 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.

- Bonds to ferrous and non-ferrous metals
- NSF 61 Certified

Item #	Size
10270	1 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
- Mixes, applies, and cures at temperatures as low as 40°F

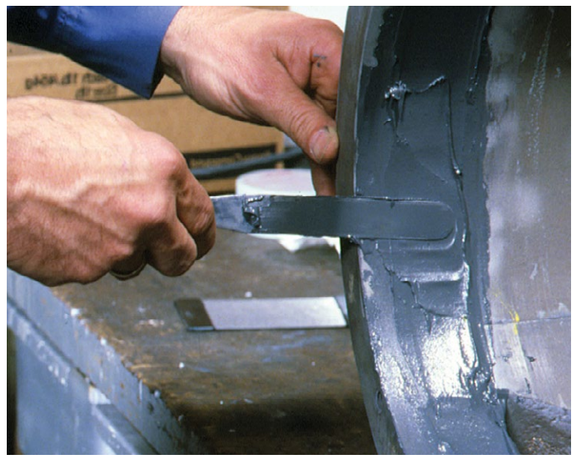
Item #	Size
10240	1 lb

Devcon® Aluminum Liquid (F-2)

Aluminum-filled pourable epoxy for making molds, patterns and holding fixtures.

- It can be drilled, tapped and machined
- Hardens in just over 1 hour; cures in 16 hours
- Qualifies under Federal Specification MMM-A-1754, Adhesive/Sealing

Item #	Size
10710	1 lb
10720	3 lb



Physical Properties	Devcon® Plastic Steel® Putty (A)	Devcon® Plastic Steel® Liquid (B)	Devcon® Plastic Steel® 5 Minute® Putty (SF)	Devcon® Stainless Steel Putty (ST)	Devcon® Aluminum Putty (F)	Devcon® Aluminum Liquid (F-2)
Color	Dark Grey	Dark Grey	Dark Grey	Grey	Aluminum	Aluminum
Mix ratio by weight / volume resin:hardener	9:1 / 2.5:1	9:1 / 3:1	1.7:1 / 1:1	11:1 / 3.75:1	9:1 / 4:1	9:1 / 5:1
Mixed viscosity cP	Putty	15 / 25,000	Putty	Putty	Putty	15 / 25,000
Functional cure hours	16	16	1	16	16	16
Pot life minutes @ 75°F	45	45	5	58	60	75
Specific volume inches³/pound	11.9	13.1	12.2	12.4	17.5	17.5
Coverage per pound inches² @ 1⁄4" thickness	48	52	49	50	70	70
Cured hardness (ASTM D2240) Shore D	85	85	85	85	85	85
Cured shrinkage (ASTM D2566) inch/inch	0.0006	0.0006	0.0006	0.0010	0.0008	0.0009
Adhesive tensile shear (ASTM D1002) psi	2,800	2,800	2,026	2,385	2,600	2,700
Compressive strength (ASTM D695) psi	8,260	10,200	10,400	8,400	8,420	9,820
Flexural strength (ASTM D790) psi	5,600	7,480	7,680	5,280	6,760	7,180
Modulus of elasticity (ASTM D638) psi x 10^5	8.5	8.5	7.5	8.0	8.0	7.5
Coefficient of thermal expansion (ASTM D696) [(in)/(in x °F)] x 10^{-6}	48	38	34	34	29	50
Thermal conductivity (ASTM C177) [(cal x cm)/(sec x cm² x °C)] x 10^{-3}	1.37	1.39	2.65	1.23	1.73	1.58
Dielectric constant (ASTM D150)	67.5	67.5	35.0	75.0	21.4	8.6
Dielectric strength (ASTM D149) volts/mil	30	30	30	30	100	100
Maximum continuous dry service temperature °F	250	250	200	250	250	250
Maximum continuous wet service temperature °F	120	120	N/A	120	120	120

Chemical Resistance	Devcon® Plastic Steel® Putty (A)	Devcon® Plastic Steel® Liquid (B)	Devcon® Plastic Steel® 5 Minute® Putty (SF)	Devcon® Stainless Steel Putty (ST)	Devcon® Aluminum Putty (F)	Devcon® Aluminum Liquid (F-2)
ACIDS						
Acetic 10%	⊘	⊘	⊘	⊘	⊘	⊘
Hydrochloric 10%	◐	◐	○	◐	◐	◐
Sulfuric 10%	◐	◐	○	◐	◐	◐
ALCOHOLS						
Methanol	⊘	⊘	⊘	⊘	○	⊘
Isopropanol	⊘	⊘	⊘	⊘	⊘	⊘
KETONES						
Acetone	⊘	⊘	⊘	⊘	⊘	⊘
Methyl ethyl ketone	⊘	⊘	⊘	⊘	⊘	⊘
ALKALIS						
Ammonium hydroxide 20%	◐	◐	○	◐	⊘	○
Sodium hydroxide 10%	◐	◐	○	◐	○	○
HYDROCARBONS						
Gasoline (unleaded)	◐	◐	◐	◐	◐	◐
Mineral spirits	◐	◐	◐	◐	◐	◐
CHLORINATED						
HYDROCARBONS	◐	◐	○	◐	◐	◐
1-1-1 Trichloroethane						
SALTS						
Sodium chloride	◐	◐	○	◐	◐	◐
Trisodium phosphate	◐	◐	○	◐	◐	◐

Key: ● Excellent ◐ Very Good ○ Fair ⊘ Poor

Metal Repair Epoxies

Metal-filled epoxy technology that allow for fast economical permanent repairs to power plant and mining equipment. They can be machined, tapped and drilled, and corrosion resistant to harsh chemicals. These products are available in pourable versions that can be used to provide accurate detail reproductions for short run prototype mold patterns, holding fixtures and forming dies.

Devcon® Wear Resistant Putty (WR-2)

Smooth, non-rusting, all-purpose epoxy putty for repairs requiring low-friction finishes, such as machine lathe beds.

- Bonds to steel, iron, aluminum, ceramic, concrete, brass, and some plastics
- Contains wear-resistant fillers for low riction applications

Item #	Size
11410	1 lb
11420	3 lb

Devcon® Cleaner Blend 300

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

- Needs no rinsing; leaves no residue
- Evaporates fast

Item #	Size
19510	1 pt

Devcon® FasMetal™

High-performance, alumina-filled epoxy for making fast, dependable emergency repairs to leaks in pipes.

- Hardens in 5 minutes
- Economical and convenient

ABS TYPE APPROVED PRODUCT

Item #	Size
10780	1 lb

Devcon® Wet Surface Repair Putty Repair (UW)

High-performance technology for repairing, patching, and rebuilding equipment in habitually wet environments, including under water.

- Non-rusting; easy-to-mix and apply
- Eliminates the need for substrate to be thoroughly dry before repair

Item #	Size
11801	1 lb

Devcon® Liquid Release Agent

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

- Produces a high gloss finish
- Facilitates the accurate duplication of intricate details

ABS TYPE APPROVED PRODUCT

Item #	Size
19600	1 pt

Physical Properties	Devcon® Bronze Putty (BR)	Devcon® Wear Resistant Putty (WR-2)	Devcon® Wet Surface Repair Putty (UW)	Devcon® FasMetal™
Color	Bronze	Dark Grey	Grey	Grey
Mix ratio by weight / volume resin:hardener	9:1 / 3:1	9:1 / 4:1	1.4:1 / 1:1	1.07:1 / 1:1
Mixed viscosity cP	Putty	Putty	Putty	Putty
Functional cure hours	16	16	24	1
Pot life minutes @ 75°F	35	45	45	4
Specific volume inches³/pound	12.4	13.9	17.0	17.2
Coverage per pound inches² @ 1/4" thickness	50	56	68	69
Cured hardness (ASTM D2240) Shore D	85	85	82	90
Cured shrinkage (ASTM D2566) inch/inch	0.0010	0.0005	0.0020	0.0093
Adhesive tensile shear (ASTM D1002) psi	2,680	2,200	2,685	2,000
Compressive strength (ASTM D695) psi	8,540	9,800	5,625	12,700
Flexural strength (ASTM D790) psi	6,180	6,500	4,990	7,700
Modulus of elasticity (ASTM D638) psi x 10^5	8.0	7.5	7.5	8.5
Coefficient of thermal expansion (ASTM D696) [(in)/(in x °F)] x 10^{-6}	33	32	18	32
Thermal conductivity (ASTM C177) [(cal x cm)/(sec x cm^2 x °C)] x 10^{-3}	1.57	1.67	1.41	2.04
Dielectric constant (ASTM D150)	75.0	6.3	8.6	18.6
Dielectric strength (ASTM D149) volts/mil	25	400	150	370
Maximum continuous dry service temperature °F	250	250	250	250
Maximum continuous wet service temperature °F	120	120	120	N/A

Chemical Resistance	Devcon® Bronze Putty (BR)	Devcon® Wear Resistant Putty (WR-2)	Devcon® Wet Surface Repair Putty (UW)	Devcon® FasMetal™
ACIDS				
Acetic 10%	⊘	⊘	⊘	⊘
Hydrochloric 10%	◐	◐	○	◐
Sulfuric 10%	◐	◐	○	◐
ALCOHOLS				
Methanol	⊘	⊘	⊘	⊘
Isopropanol	⊘	⊘	⊘	⊘
KETONES				
Acetone	⊘	⊘	⊘	⊘
Methyl ethyl ketone	⊘	⊘	⊘	⊘
ALKALIS				
Ammonium hydroxide 20%	◐	◐	◐	◐
Sodium hydroxide 10%	◐	◐	◐	◐
HYDROCARBONS				
Gasoline (unleaded)	◐	◐	◐	◐
Mineral spirits	◐	◐	◐	◐
CHLORINATED HYDROCARBONS				
1-1-1 Trichloroethane	◐	◐	◐	○
SALTS				
Sodium chloride	◐	◐	◐	○
Trisodium phosphate	◐	◐	◐	○

Key: ● Excellent ◐ Very Good ○ Fair ⊘ Poor

Crusher Backing

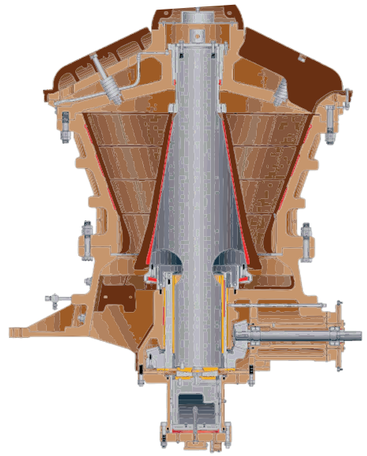
Devcon® offers a unique combination of crusher backing and concave sealing solutions. Devcon Korrobond 65 is used as shock absorbing compound in cone crushing machines. This formulation is used to produce a low viscosity, tough and flexible backing material which reinforces and supports crusher wear parts, absorbs and dampens impact of the liner to the crusher, and servers as a damper when subjected to impact and shock.

Devcon® Korrobond 65

High-strength liquid epoxy with the necessary resiliency to withstand forces generated by crushers and mills. It serves as a backing and reinforcing layer between machine parts and as a damper when subjected to impact and shock loads.

- 100% solids - no solvents
- High compression and impact strength
- Negligible shrink
- Easy to pour; easy to use
- Low exothermic reaction

Item #	Size
81065R	20.4 lb
81065H	1.5 lb
81070R	40.9 lb
81070H	3 lb



Physical Properties	Devcon® Korrobond 65
Color	Light Grey
Mix ratio by weight / volume resin:hardener	13.3:1 / 7:1
Mixed viscosity cP	>20,000 CPs
Functional cure hours	8-10
Pot life minutes @ 75°F	15-20
Specific volume inches³/pound	17.2
Cured hardness (ASTM D2240) Shore D	85
Cured shrinkage (ASTM D2566) inch/inch	0.01%
Adhesive tensile shear (ASTM D1002) psi	> 354 Kg/m2
Compressive strength (ASTM D695) psi	135 +/-7 Mpa / 19,500 +/-1000 PSI
Flexural strength (ASTM D790) psi	9.983
Side Impact (in - lbs)	98
Maximum continuous dry service temperature °F	250
Maximum continuous wet service temperature °F	120

Chemical Resistance	Devcon® Korrobond 65
Ammonia	●
Cutting Oil	●
Gasoline (Unleaded)	○
Hydrochloric 10%	◐
Hydrochloric 36%	○
Mineral Spirits	●
Potassium Hydroxide 20%	●
Potassium Hydroxide 40%	●
Sodium Chloride Brine	●
Xylene	●

Key: ● Excellent ◐ Very Good ○ Fair ⊘ Poor

Surface Preparation

Epoxies on Metal:

1) Thoroughly clean the surface with Devcon® Cleaner Blend 300 or any appropriate non residual solvent cleaner eg. Acetone, MEK to remove all oil, grease and dirt.

2) Grit blast surface area following at least ISO 8501 SA 2½ (Very Thorough Blast Cleaning) and or SSPC-SP 10 (Near White Metal). When grit blasting is not possible the surface may be prepared following SSPC-SP 3 until at least “Condition A” is achieved. The required surface profile depth is 3-5 mils (75-125µm).

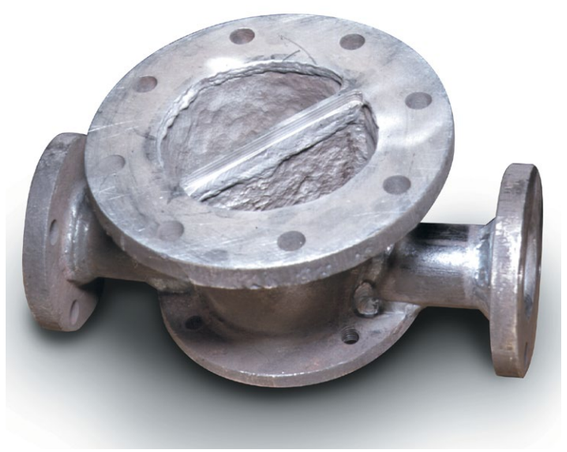
NOTE: For metals exposed to sea water or other salt solution, grit-blast and high-pressure-water-blast the area, then leave overnight to allow any salts in the metal to “sweat” to the surface. Repeat blasting to “sweat out” all soluble salts. The salt contamination level is recommended to not exceed z20mg/m² (2µg/cm²).

3) Clean surface again with Devcon® Cleaner Blend 300 or any appropriate non residual solvent cleaner eg. Acetone, MEK. To remove all traces of oil, grease, dust or other foreign substances from the substrate. Dust contamination level should not exceed Level 2 prior coating applications in accordance to ISO 8502-3.

4) Abrade the surface to roughen it and create a surface profile.

WORKING CONDITIONS: Ideal application temperature is 55°F to 90°F (13- 32°C). In cold working conditions, directly heat repair area to 100-110°F (38-43oC) prior to applying epoxy and maintain at this temperature during product cure to dry off any moisture, contamination or solvents, as well as to achieve maximum performance properties. It’s not recommended to apply the product when the temperature of the substrate is less than 5°F (3°C) above the Dewpoint, or the Relative Humidity is higher than 85%.

Before



After

Epoxies on Concrete:

CONCRETE & MASONRY: Begin with a sound, clean, dry and roughened, oil-free application surface, as it is essential to the success and performance of this product.

For proper surface preparation, refer to Concrete or Masonry Surface Preparation as detailed by: SSP/NACE SSPC-SP13/ NACE 6, or ICRI No. 310.2R, CSP 1-3. for proper surface preparation guidelines. As seen in the Application section below, a primer sealer is required. Atmospheric: SSPC-SP13/ NACE 6, or ICRI No. 310.2R, CSP 1-3 Immersion: SSPC-SP13/NACE 6-4.3.1 or 4.3.2 or ICRI No. 310.2R, CSP 1-5.

NEW POURED CONCRETE, allow to fully cure (28 days @ 70°F (21°C)) prior to application. Remove any curing membrane by sanding or etching with a strong detergent. Remove any laitance if present. OLD CONCRETE, thoroughly clean surface with a grease-cutting detergent to remove grease and oils, and remove any loose or unsound concrete by chipping, scarifying, shotblasting, sanding, or grinding. Proceed as for new poured concrete.

PREVIOUSLY COATED CONCRETE, applications should be considered short term because the coating system is only as strong as its weakest component. Remove any peeling or degraded paint by sanding or using a paint stripper. For intact paint, thoroughly clean the surface with a strong detergent, then lightly sand to remove any gloss. Treat any areas worn down to the original concrete as bare concrete.

Flexanes:

For **METAL SURFACES,** thoroughly clean area to be repaired, rebuilt, or lined with Devcon® Cleaner Blend 300 or any appropriate non residual solvent cleaner eg. Acetone, MEK to remove all oil, grease and dirt. Roughen surface by grinding with a coarse wheel or an abrasive disc pad. To prime this surface, apply a coat of Devcon FL-10 Primer and allow to dry tack-free for 5-15 minutes. If the metal surface requires maximum tear resistance or is exposed to moisture, or if submerged in water, use Devcon® FL-10 and Devcon® FL-20 Primer.

For **RUBBER SURFACES,** thoroughly clean area with an abrasive pad and Devcon® Cleaner Blend 300. Surface can also be roughened with a grinding wheel so that it is coarse and free from oil and dirt that may clog the “pores” of the rubber. Wipe or roughen surface with Cleaner Blend 300 or any appropriate non residual solvent cleaner eg. Acetone, MEK until the cloth no longer picks up the colour of the rubber. The rubber should appear new or deeper in colour. To prime this surface, apply a coat of Devcon® FL-20 Primer and allow to dry tack- free for 15-20 minutes.

For **MAXIMUM ADHESION,** sandblast the surface with an angular abrasive until a minimum depth profile of 2-3 mils is met. Blast to near-white finish specification SSPC-SP10 (Steel Structure Painting Council). Prime surface immediately after sandblasting to prevent oxidation.

Agency Approvals

Specification	Product	Part #	Size
MIL-PRF-24176C, Type I	Plastic Steel® Putty (A)	10110, 10120, 10130	1 lb, 4 lb, 25 lb
MIL-PRF-24176C, Type I	Titanium Putty	10760, 10770	1 lb, 2 lb
MIL-PRF-24176C, Type I	Ceramic Repair Putty	11700	3 lb
MIL-PRF-24176C, Type II	Aluminum Putty (F)	10610, 10620	1 lb, 3 lb
MMM-A-1754	Plastic Steel® Liquid (B)	10210, 10220, 10230	1 lb, 4 lb, 25 lb
MMM-A-1754	Aluminum Liquid (F-2)	10710, 10720	1 lb, 3 lb
ABS	Flexane® Brushable	15350	1 lb
ABS	Plastic Steel® Putty (A)	10110, 10120, 10130	1 lb, 4 lb, 25 lb
ABS	Plastic Steel® 5 Minute® Putty (SF)	10240	1 lb
ABS	Titanium Putty	10760, 10770	1 lb, 2 lb
ABS	Stainless Steel Putty (ST)	10270	1 lb
ABS	Ceramic Repair Putty	11700	3 lb
ABS	Plastic Steel® Liquid (B)	10210, 10220, 10230	1 lb, 4 lb, 2 5lb
ABS	Aluminum Liquid (F2)	10710, 10720	1 lb, 3 lb
ABS	Brushable Ceramic Red	11760, 11762	2 lb, 12 lb
ABS	Brushable Ceramic Blue	11765, 11767	2 lb, 12 lb
ABS	Brushable Ceramic White	11770	2 lb
NSF/ANSI 61	Stainless Steel Putty	10270	1 lb
NSF/ANSI 61	Brushable Ceramic White	11770	2 lb

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