

Epoxy Resin Putty is a very versatile repair putty used for a variety of repair and reconditioning tasks. It is a two-part epoxy putty manufactured from epoxy resin with mineral fillers. This putty has a 1:1 mix ratio (which makes mixing simple) and can be kneaded by hand. Once it is mixed, it will bond well to most materials and surfaces and set to form a tough, hard mass that is very long lasting.

Once it is applied and cured, Epoxy Resin Putty will withstand temperatures up to 200°C. It can also be machined (drilled, sanded, ground) and painted. Weicon Epoxy Resin Putty adheres to metal, wood, glass, rubber, ceramics, concrete and most plastics. It is resistant to petrol, oil, ester, saltwater and most acids and lye's.

Epoxy Resin Putty has excellent mechanical and electrical properties. This allows it to be used for repairs around electrical connections and devices as it possesses excellent dielectric strength. It also has a low thermal conductivity rating which allows it to provide some thermal insulation when required.

This epoxy putty can be used to cover and fill gaps of up to 15mm in a single curing cycle. It cures at room temperature (in just 3 hours) and exhibits very little shrinkage while curing (approximately 0.005%).

Typical Applications

- Reconditioning and rebuilding damaged metal, plastic or epoxy glass surfaces and components
- Reconditioning damaged threaded holes
- Creating an anchoring point for screws and hooks
- Repairs to worn or damaged shafts, bearings, pumps and casings
- Filling unwanted holes, gaps, crevices and cracks
- Making moulds, samples and epoxy parts
- Balancing electrical motors
- Repairs to light metal and diecast parts in the marine, automotive and transport sectors
- Repairs to damaged tools and hardware
- Model making
- Sealing pipes and tanks
- Reconditioning uneven and worn surfaces



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Important

The values listed here and the information presented should not be treated as a substitute for specific technical advice. We cannot warrant the products performance or suitability for particular applications.

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Technical Details

Properties

Basis	Epoxy Resin and Mineral Fillers
Mix Ratio	1:1
Density of the Mixture	2 g/cm ³
Pot Life at 200g of Material At 20°C	30 Min.
Viscosity of the Mixture	Paste
Processing Temperature	+10°C to 35°C
Curing Temperature	+6°C to 40°C
Colour After Curing	Green
Gap Covering Power (Max.)	15mm
Mechanical Strength (50%) When Curing at 20°C	2 Hours
Final Strength (100%) When Curing at 20°C	3 Hours
Mean Compressive Strength at 25°C (ASTM D 1002)	80 MPa
Mean Tensile Strength at 25°C (ASTM D 1002)	30 MPa
Mean Flexural Strength at 25°C (ASTM D 1002)	56 MPa
Mean E-Modul at 25°C (ASTM D 1002)	4,000 – 6,000 MPa
Shore Hardness at 25°C (ASTM D 1706)	87 Shore D
Shrinkage	0.005%
Pressure Resistance (DIN 53281-83)	80 N/mm ²
Thermoforming Resistance	+95°C
Temperature Resistance	-35°C to +200°C
Electrical Resistance (IEC 60.093)	10 ¹⁵ Ω/cm
Dielectric Strength (IEC 60.243)	14 kV/mm

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Chemical Resistance of Epoxy Resin Putty After Curing

Acetic Acid Dilute (<5%)	+	Hydrocarbons (Aromatic)	-
Acetone	O	Hydrochloric Acid (<10%)	+
Alkalis (Basic Minerals)	+	Hydrochloric Acid (10-20%)	+
Amyl Acetate	+	Hydrofluoric Acid Dilute	O
Amyl Alcohols	+	Hydrogen Peroxide (<30%)	+
Anhydrous Ammonia (25%)	+	Impregnating Oils	+
Barium Hydroxide	+	Magnesium Hydroxide	+
Butyl Acetate	+	Maleic Acid	+
Butyl Alcohol	+	Methanol (Methyl Alcohol, <85%)	O
Calcium Hydroxide (slaked lime)	+	Milk of Lime	+
Carbolic Acid (Phenol)	-	Naphthalene	-
Carbon Disulphide	+	Naphthene	-
Carbon Tetrachloride	+	Nitric Acid (<5%)	O
Caustic Potash Solution	+	Oils, Vegetable and Animal	+
Chlorinated Water	+	Oxalic Acid (<25%)	+
Chloroacetic Acid	-	Paraffin	+
Chloroform	O	Perchloroethylene	O
Chlorosulphonic Acid	-	Petrol (92-100 Octane)	+
Chromic Acid	+	Phosphoric Acid (<5%)	+
Chroming Baths	+	Phthalic Acid	+
Creosote Oil	-	Phthalic Acid Anhydride	+
Cresylic Acid	-	Potassium Hydroxide (Caustic Potash, 0-20%)	+
Crude Oil	+	Soda Lye	+
Crude Oil Products	+	Sodium Bicarbonate (Sodium Hydrogen Carbonate)	+
Diesel Fuel Oil	+	Sodium Carbonate (Soda)	+
Ethanol < 85% (Ethyl Alcohol)	O	Sodium Chloride (Cooking Salt)	+
Ethyl Alcohol	O	Sodium Hydroxide (Caustic Soda, <20%)	O
Ethyl Benzole	-	Sulphur Dioxide	+
Ethyl Ether	+	Sulphuric Acid (<5%)	O
Exhaust Gases	+	Tannic Acid Dilute (<7%)	+
Formic Acid (>10%)	-	Tetralin	O
Glycerine	+	Toulene	-
Glycol	O	Trichloroethylene	O
Grease, Oils and Waxes	+	Turpenetine Substitute (White Spirit)	+
Heating Oil, Diesel	+	Xylene	-
Humic Acid	+		
Hydrobromic Acid (<10%)	+		
Hydrocarbons (Aliphatic)	+		

+ = Resistant

O = Resistant for a Limited Time

- = Not Resistant

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Preparation of the Surface

To ensure that Epoxy Resin Putty bonds to the surface you want it to, it is very important to ensure the surface is clean and dry (Cleaner S Spray, Surface Cleaner or Plastic Cleaner may be ideal). If possible, smooth surfaces should be roughened as this will increase adhesive power.

Cast parts, which have been exposed to sea water for a long time, should be treated with special care as they might contain inorganic salts. It is possible that these salts reach the surface and absorb moisture, thus starting the formation of rust (rust bubbles under the protective coating). It is therefore suggested that such parts are heated or exposed to flame after sand blasting.

If adhesion is not desired, a separating agent must be used. For smooth surfaces, Weicon Mould Release Agent (silicone free) or Weicon Silicone Spray may be suitable. For porous surfaces, Weicon Mould Release Agent Was P 500 is more suitable.

It is suggested that you begin the application of Weicon Resin Putty immediately after surface pre-treatment to avoid oxidation and instantaneous rust formation.

Processing

Epoxy Resin Putty covers gaps up to a maximum of 15mm per application. The pot life given is for a material quantity of approximately 200 grams at room temperature. If larger quantities are used, the curing time will be faster due to the typical reaction heat of epoxy resins (exothermic reaction). Similarly, higher ambient temperatures shorten the cure time (as a rule of thumb, every 10°C increase above room temperature will halve working time and cure time). Temperatures below +16°C will extend working time and cure time considerably while below around +5°C no reaction will occur.

Physiological properties / health and safety at work

Weicon Epoxy Resin Putty, when properly handled and completely cured, are toxicologically harmless. When using this product, the physical, safety, technical, toxicological and ecological data and regulations in the SDS must be observed.

Storage

When stored unopened and in normal climatic conditions (20°C) Epoxy Resin Putty has a minimum shelf-life of 18 months. Storage in direct sunlight should be avoided.

Available Sizes

Weicon Epoxy Resin Putty is available from Swift Supplies Online in the following size kits:

- 100gm
- 400gm
- 800gm

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