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	Epoxy Adhesives - Rapid Setting		

Formulating The Future®

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FixRite® EPOXY STEEL

FixRite® Epoxy Steel is a two-component, metal-filled epoxy adhesive engineered for high-performance bonding, repair, and maintenance applications. Rapid-setting and solvent-free, this adhesive provides exceptional bond strength and chemical welding capabilities for most metals including steel, copper, zinc, brass, aluminium, and iron. It is ideal for general industrial, automotive, marine, construction, and household use. FixRite® Epoxy Steel offers excellent gap-filling characteristics, making it suitable for repairing fatigued metal parts, castings, pumps, valve bodies, jigs, fixtures and radiators.

Once cured, the adhesive forms a durable, waterproof, non-shrinking bond that can be drilled, sanded, threaded, machined, and painted. It is resistant to fuels, oils, water, and many solvents, and withstands high-temperature and high-pressure environments. Non-flammable and VOC-free, FixRite® Epoxy Steel is also safe for emergency repairs.

Note: Not recommended for use on polyethylene (PE) or polypropylene plastics (PP).

Properties			
	Resin	**Hardener**	**Mixture**
Appearance	Thick Viscous liquid	Thick Viscous Liquid	Paste
Colour	Black	Light Yellow	Black
Density	1.62-1.64 Kg/Lt	1.09-1.10 Kg/Lt	1.35-1.37 Kg/Lt
Solid Content	100%	100%	100%
Viscosity - (mpas at 30˚C)	Paste	Paste	Paste/Solid after Curing
Mixing Ratio	One part of Resin to one part of Hardener by volume.		
Pot Life (10g Sample)			Approx. 3-4 mins at 20˚-30˚C
Curing Time (10g Sample)			40% - 50% Bond strength in 2 hrs at 30˚C 100% (full) Bond strength in 24 hrs at 30˚C
Tensile Strength			1800 psi
Curing Temperature			Over 4˚C

General Characteristics	
FixRite® Epoxy Steel Adhesive	• Permanently bonds wide variety of metals to themselves and to other rigid surfaces. • Permanently seals cracks. Once the crack is sealed FixRite® Epoxy Steel acts as a waterproof airtight seal. • Can be machined to any shape according to the requirement. • Non toxic when fully cured. • No solvents in the formulation and no shrinkage when curing. • Cures at room temperature or at elevated temperature. At elevated temperature the curing time is considerably shortened • Can be used indoors and outdoors. • Stable at high temperature conditions. • Extremely durable bond after curing.
Bond Characteristics	
Chemical Resistance	• Excellent water and humidity resistance. • Good petrol, kerosene, engine oil or diesel oil resistance. • Resistant to most solvents. • Resistant to wide range of chemicals including soaps, detergents etc. • Not Resistant to mineral acids and alkali
Temperature Resistance	• The bond will perform excellently in high-temperature applications, under different climatic conditions, and under temperature fluctuations. The degree of performance is dependent on the tension or stress applied to the bond.
Pressure Resistance	• The bond will perform well under high pressure conditions and pressure variations.
Directions	
Surface Preparation	• Surfaces to be bonded should be clean, dry and free from grease, oil, loose material and all other contaminants. Metal or smooth, glossy surfaces should be preferably abraded. do not touch the surfaces after cleaning.

Application	• Mix thoroughly equal volumes of FixRite® Epoxy Steel Resin and Hardener until a uniform Black color is achieved. Mixing should be done for a minimum of 90 seconds (If not mixed properly the adhesive will not perform well or will not harden at all.) Mixing can be carried out by using a spatula or similar tool. The mixture should be applied within 3-4 minutes (Pot life mentioned is for a sample size of 10g. Larger amounts will lead to reduced pot life). Apply a thin coat of the mixed adhesive to both surfaces, join together and hold firmly with a clamp for 8 minutes which will provide sufficient bond strength for handling. Do not apply undue strain within this period. Strain maybe applied after 2 hours after the bond has gained sufficiently more strength. It gains full bond strength after 24 hours. Tubes should be kept closed and stored in a cool dry place after use.
Other Information	
Theoretical Coverage	Approximately 2 sqm (20 sqft.) per litre of mixed adhesive at 0.25mm. thickness.
Cleaner	Use Petrokem Epoxy Thinner 221 for removal of excess uncured adhesive and for cleaning of equipment etc.
Packaging	Available in 2x20 ml tubes and 2x5.5 ml tubes in a consumer pack.
Shelf Life	Minimum 18 month from date of manufacture when stored in cool, dry environment.

Disclaimer :

The information contained in this document is based on Petrokem's knowledge, drawn from laboratory testing and practical experience. Petrokem's products are categorized as semi-finished goods and may be used under conditions beyond the company's control. While Petrokem guarantees the quality of its products, no additional assurances can be provided. Furthermore, Petrokem reserves the right to amend the information presented in this document or elsewhere without prior notice.

Ensure good ventilation.
Avoid eye / skin contact
Eye contact : rinse with running water for 10 minutes and seek medical advice.
Skin contact : wash with soap and water.
Keep container closed and out of reach of children.
Refer material safety data sheet.

Health & Safety Precautions

FixRite® Resin and Hardener are chemicals and care should be taken when handling. For details please read Petrokem epoxy safety and handling information sheet. A copy of this manual will be supplied on request.

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