Metal Set Epoxy – 301175/301176
Technical Data Sheet

Technical Information

Recommendations for use

Surfaces must be clean, dry and free of grease, oil, rust etc. On metal roughen surface with emery paper for optimum results.

Method of use.

1. Apply in ventilated areas - vapours may irritate eyes and nose.
2. Squeeze out equal amounts of bonding agent and curing agent.
3. Mix together thoroughly until colour is uniform.
4. Apply immediately to both surfaces and press together.
5. Remove excess glue immediately.
6. Allow bond to set for approximately 10 minutes before moving
7. Cure time is longer in cold weather and fast in hot weather.

Precautions.

Mix only the amount required to do the job. Clean any excess or spilled glue immediately.

Health and safety Information.

This adhesive is a skin and eye irritant. It contains epoxy and amine resins. In case of eye contact flush with water for 15 minutes and get medical attention. Wash after skin contact. Avoid breathing vapour. use with adequate ventilation. cured glue is none toxic.

Storage

The product should be stored in a dry, cool environment out of direct sunlight at a temperature between 8 and 18^{o}C.

Setting times.

Temperature (^{O}C)	Setting time (min)
5	20 - 30
10	8 - 12
20	4 - 6
30	2 - 3
40	1 - 2

Use at temperatures below 5^{o}C and above 40^{o}C is not advised.

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Characteristic properties.

	Resin	Hardener
Appearance	Black	White
Density (g/L)	1.80 – 1.95	1.71 – 1.81
Viscosity (cps @ 23°C)	700,000 – 1,500,000 (Sp 7@ 5rpm)	1,200,000 - 2,800,000 (Sp7 @ 5rpm)
Mix ratio:	1:1	
Gel Time (20 - 25 °C):	4 - 6 min.	
Mix colour:	Grey.	
Temperature resistance:		
Continuous (no load)	-20°C to +80°C	
Continuous (load)	-20°C to +80°C	

Cured Properties.

The product will cure to 5°C, although at such a temperature a cure time of greater than 6 minutes is expected.

Bond strength. (DIN 53283) at 23°C

Hardening time (min)	Bond strength (Nmm-2)
15	1
30	7
60	10
120	12
240	17
3 days	25

Shear results for varying materials.

111 Overlap (ASTM 1002-72), 0.5 mm gap 24 hours, at 23°C.

Material	Bond strength (Nmm-2)
Degreased mild steel	18.4
Grit blasted mild steel	22.8
Degreased Aluminium	5.9
Grit blasted Alumi nium	15.0
Polycarbonate	2.2
Wood (ramin)	7.7 (wood failure in all cases)
PVC	0.8

Chemical resistance.

Distilled water	- Good
10% Sodium Hydroxide	- Good
10% Acetic acid	- Poor
10% Hydrochloric acid	- Fair
M.E.K.	- Poor
Xylene	- Excellent
95% Ethanol	- Fair
Mineral spirits	- Excellent
Methylene Dichloride	- Not resistant.

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