Research, Development & Engineering
Tallaght Business Park,
Dublin, Ireland

Technical Data Sheet
Hysol® 3479

formerly Metal Set HTA
August 2003

PRODUCT DESCRIPTION

Loctite Hysol 3479 is an aluminium filled 2-component epoxy adhesive that cures at ambient temperatures. Ideal for the repair and recovery of worn and damaged machinery. It has a 1:1 mixing ratio with very low shrinkage properties and does not rust. Hysol 3479 was developed for easy and convenient use in the workshop or for on-site maintenance. Hysol 3479 will withstand continuous temperatures up to 190°C.

TYPICAL APPLICATIONS

Repairing worn parts including shafts, housings, keyways and flanges as well as broken or damaged parts such as castings, pipes or fabrications. Product can be used for jobs as varied as filling cavities, levelling machinery, repairing cast-steel plates, making core moulds, applying a sacrificial coating or sealing leaking pipes.

PROPERTIES OF MIXED MATERIAL

		Typical Value
Appearance		Grey, putty
Mix Ratio by Volume (Resin/Hardener)		1:1
Mix Ratio by Weight (Resin/Hardener)		1:1
Maximum open gap fill (mm)		1mm
Open Time of mixed adhesive, minutes		
	@10ºC	135
	@ 20°C	45
	@ 30ºC	35

Cure: (see table)
Hysol 3479 develops functional strength at 20ºC after 12 hours At 10ºC 24 hours is required.

TYPICAL PROPERTIES OF CURED MATERIAL

(Product Cured for 7 days at 23ºC)

Physical Properties	Typical Value
Hardness, Shore D	85
Shrinkage on Cure, %	0.2
Adhesive strength (ASTM D1002), N/mm²	
Steel	20
Aluminium	12
Compressive strength (ASTM D695), N/m²	90
Tensile strength (ASTM D638), N/mm²	60
Young's Modulus (ASTM D695), N/mm²	6,000
Temperature range, °C	-20 to +190

TYPICAL ENVIRONMENTAL RESISTANCE

Solvent Resistance
Like most epoxy resin based materials, product has excellent resistance to many liquids and solvents. The following information may be used as a guide.

Type of Liquid/Solvent	Product Performance
Water, dilute acids, salt solution	Excellent. Some surface discolouration may occur
10% Caustic Soda	Excellent
Gasoline/Petrol, hydrocarbon fuels and lubricants	Excellent
Chlorinated solvents	Good resistance but not recommended for continuous long term contact
Methanol, Acetone, MEK	Poor resistance

NOTE: This information refers to fully cured material. Incomplete cure or inadequate mixing will adversely affect solvent resistance.

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidising materials.

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).

Directions for Use

1. For best performance surfaces for repair should be clean, dry and free of grease. Special surface treatments can increase the bond strength and durability .
2. Stir each component of resin and hardener separately, then measure out equal amounts of each.
3. Stir thoroughly together for up to two minutes until an even mix is achieved.
4. Apply the product to the working area with the spatula provided.
5. For larger breaks or fractures, the product can be applied to glass fibre matting or a similar support and used as a patch or bandage.
6. If used as a moulding compound, use a wax, grease or silicone release agent to prevent adhesion to any surface. Functional strength is normally achieved after 10 to 12 hours, with full cure in up to 72 hours. These times are reduced with high ambient temperatures. For applications involving high temperatures or where resistance to solvents is required, consult the Technical Data Sheet. NOTE: Due to heat generation during the curing process larger quantities tend to cure more rapidly.
7. Excess uncured adhesive can be wiped away with organic solvent (e.g. Acetone).
8. Keep the assembled parts from moving during cure. The joint should be allowed to develop full strength before subjecting to any service loads.
9. After use and before adhesive hardens mixing and dispensing equipment should be cleaned with hot soapy water.

Storage
Product shall be ideally stored in a cool, dry location in unopened containers at a temperature between 8°C to 21°C (46°F to 70°F) unless otherwise labelled. Optimal storage is at the lower half of this temperature range. To prevent contamination of unused product, do not return any material to its original container. For further specific shelf life information, contact your local Technical Service Centre.

Data Ranges
The data contained herein may be reported as a typical value and/or range. Values are based on actual test data and are verified on a periodic basis.

Note
The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Loctite Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Loctite Corporation's products. Loctite Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Loctite Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Bulk No. Resin: 210261/Hardener: 210262