TECHNICAL DATA SHEET
UPS 19060 SG THISTLEBOND STICK GRADE METAL
IMPA 81 22 02

UNIQUE POLYMER SYSTEMS
INNOVATE | REBUILD | ENHANCE

UPS 19060 SG ThistleBond Stick Grade Metal is a specially packaged rapid curing synthetic two component metal repair in stick form. A metal repair adhesive which is for on-site repairs to metal components such as leaking pipes, tanks, ducts, radiators, etc.

Product Information

Product Features

- Simple to use; only requiring simple hand mixing to activate reaction between the concentrically packed components.
- High mechanical strength in a short period of time.
- Rapid curing – hard dry in 30 minutes.
- Non-rusting steel reinforced epoxy putty
- Designed for application by gloved hand, putty knife or spatula.
- Can be applied to any damaged metal surface, plus glass, fiberglass and other composite surfaces.
- Designed for rapid repairs to cracked casting, leaking pipes, tanks, flanges, etc., minimizing downtime.
- Exhibits excellent adhesion to correctly prepared metal surfaces.
- WRAS Approved for potable water applications.

Product Applications

Suitable for emergency repairs or part of planned maintenance to equipment such as;

Worn, damaged, or cracked pump shafts, cracked pump or valve casings, scored hydraulic rams, worn bearing housings, damaged flanges, leaking tank seams, worn keyways, cracked engine blocks, etc.,

			
No Specialist Tools Required	60 Minutes to Full Cure	Temperature limitations 120°C continuous 150°C intermittent	Cost Effect Solution

Surface Preparation

Metallic Substrates – Hand Tools

1. All oil and grease must be removed from the surface of the using UPS 9918 MEK Cleaner.
2. All surfaces must be cleaned which is suitable for application to manually prepared surfaces such as hand wire brush, sanding, mechanical grinding or wire brush.
3. Once abraded, the surface must be degreased and cleaned using UPS 9918 MEK Cleaner.

Metallic Substrates – Mechanical Tools

1. All oil and grease must be removed from the surface of the using UPS 9918 MEK Cleaner.
2. Use a handheld mechanical grinder with a coarse grinding pad or rotary wire brush. **UPS MiniBlaster** – The best mechanical surface preparation results are provided by using a UPS MiniBlaster. All surfaces must be technically abraded using handheld grinders to ISO 8501/4 ST3 (SSPC SP3 ST3)
3. Remove all loose material such as rust or flaking paint prior to the application of this product.

Mixing

1. The base component is at room temperature between approx. 20°C (68°F). The ambient surface temperature is above 5°C (41°F)

Then proceed with mixing the product:

1. The product is supplied in stock form and therefore the Base and Activator components are premeasured.
2. Break off the required amount of material from the stick and using gloved hands, knead the product until the black and grey components become a consistent mid grey.
3. The product once fully mixed has a useable life of 3-5 minutes at 20°C (68°F)

Application

Using your hands with gloves, spatula or putty knife application -

1. Press the mixed product onto the prepared surface, rubbing with a damp cloth for a smooth appearance.

Adhesive Use – Force putty against each surface before pressing them together, support the joint until putty has hardened.

Repair Use – Force putty into area that requires filling/repairing, shape and strike off excess using a wetted tool.

Technical Data & Performance

Drying & Cure Times

At 20°C (68°F) the applied materials should be allowed to harden for the times indicated below before being subjected to the conditions indicated.
These times will be extended at lower temperatures and reduced at high temperatures:

Useable Life	5 minutes
Hard Dry	30 minutes
Machining & Light Loading	30 minutes
Full Loading	1 hour
Immersion	1 hour

Appearance

Mixed Material Colour	Mid Grey Putty
Base Colour	Dark Grey Stick
Activator Colour	Light grey

Available Colours

Grey

Over Coating Times

Minimum	The applied material can be over coated as soon as it is touch dry
Maximum	The over coating time should not exceed 1

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	hour.

Where the maximum over coating time is exceeded, the material should be allowed to harden before being abraded or flash blasted to remove surface contamination.

Pack Sizes

125GM Stick

Shelf Life

18 months if unopened and store in normal dry conditions (15-30°C / 60-86°F)

Mechanical Properties

Adhesion Tensile Shear To ASTM D1002 on abrasive blasted mild steel with 75-micron profile	185 kg/cm^2 (2630psi)
Pull off Adhesion To ASTM D4541 on mechanically prepared steel with 75-micron profile	125 kg/cm^2 (1780psi)
Compressive Strength Tested to ASTM D695	843 kg/cm^2 (12,000 PSI)
Flexural Strength Tested to ASTM D790	455 kg/ cm^2 (6470 psi)
Lap Shear Strength on Steel	6.2N/mm^2
Temperature Limitations	120°C continuous 150°C intermittent
Hardness Rockwell R to ASTM D785	92
Electrical Resistance	30,000 MΩ
Dielectric Strength	300 V/mm
Compressive Strength	80N/mm^2

Heat Resistance

Suitable for long-term water immersion at temperatures up to 140°C (284°F).

Chemical Resistance

The product demonstrates resistance to a wide variety of hydrocarbons, ketones, alcohols, esters, halocarbons, aqueous salt solutions, dilute acids and bases. Refer to the Unique Polymer Systems Technical Centre for advice.

Global Availability

UPS 19060 SG Stick Grade Metal is available from a network of Global Distributors for prompt delivery. For further details and the location of your local distributor, please contact Unique Polymer Systems on:
+44(0) 1531 636300 | sales@uniquepolymersystems.com

Technical Service

Complete technical assistance is available. Please contact Unique Polymer Systems with your requirements:
+44(0) 1531 636300 | sales@uniquepolymersystems.com

Official Approvals

BUREAU VERITAS Certificate No. 58535/A0 BV

USDA compliant for incidental food contact.

The products that we supply are for professional use only, it is your responsibility to read the technical data sheets before you place an order and prior to application of the product.

Quality: All Unique Polymer Systems Products are supplied under the scopes of the company's fully documented quality system.

Warranty: Unique Polymer Systems warrants that the performance of the product supplied will confirm to the typical descriptions quoted within this Technical Data Sheet provided the material is stored correctly and used according to the procedures detailed in the Technical Data Sheet for the material.

Health & Safety: Please ensure good practice is observed at all times during the mixing and application of this product. Protective gloves must be worn during the mixing and application of this product. Before mixing and applying the material please ensure you have read the fully detailed Material Safety Data Sheet.

Legal Notice: The data contained within this Technical Data Sheet is furnished for information only and is believed to be reliable at the time of issue. We cannot assume responsibility for results obtained by others over whose methods we have no control. It is the responsibility of the customer to determine the products suitability for use. Unique Polymer Systems accepts no liability arising out of the use of this information or the product described herein.

USED ALL OVER THE WORLD