



UPS 19060 SG Stick Grade Metal is a high performance, rapid-curing, synthetic metal repair compound specially designed for on site repairs to metal components such as castings, worn threads, jigs and mould patterns.

UPS 19060 SG is based on a unique epoxy resin system co-reacted with an organo-sulphur / amine blend which are then interspersed with specially chosen pigments and fillers which allow the base and activator components to be packed in intimate contact with each other. The reaction only occurs when the two components are hand mixed and the resultant blend produces a repair material with high physical and mechanical strength.

Product Features

- Simple to use, only requiring simple hand mixing to activate reaction between the concentrically packed components.
- 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.

Product Applications

Suitable for emergency repairs to pump casings, leaking pipes, leaking tanks seams, damaged flanges faces, stripped threads and cracked engine blocks.

Before proceeding, please read the following information carefully to ensure that the correct application procedure is fully understood.

Surface Preparation

Heavy contamination due to oil or grease must first be removed using *UPS TAC 883 Universal Cleaner*. All loose material, rust and surface contaminants, including existing coatings, must be removed and the surface roughened by using an angle grinder, needle gun or abrasive blasting.

Where grinding or needle gunning is used, the surface should be cross-scored to improve adhesion. Care must be taken, when angle grinding, to avoid polishing rather than roughening metal surface. Where possible, abrasive blasting is the preferred surface preparation, especially in fluid flow repairs.

Surfaces should finally be carefully degreased with *UPS TAC 883*. Cloths should be frequently changed to avoid spreading contamination. On deeply pitted surfaces or porous castings, the cleaner should be worked into the surface by brush and washed off using excess cleaner.

Parts (for example, threads or bearing surfaces) which must remain in position during application but must not adhere to *UPS 19060 SG* must be coated with *UPS TAC 872 Release Agent* prior to application of the *UPS 19060 SG*.

Mixing

Before mixing, hands should be treated with barrier cream or lightweight disposable gloves should be worn

Sufficient product to complete the repair should be cut or broken from the stick. This should then be twisted and kneaded until a uniform colour is achieved with no streaks. The two components are colour coded to ensure complete mixing is achieved when the colour is uniform.

UPS 19060 SG should be used within 6 minutes of mixing at 20°C (68°F). This time will be reduced at higher temperatures and extended at lower temperatures.

Application

Prepared surfaces should be dry. The mixed material should be pressed firmly onto the prepared area, working the material into any cracks and surface defects.

When *UPS 19060 SG* is being used to repair leaking pipes, the flow through the pipe should be discontinued until the repair is made and the *UPS 19060 SG* is set. Any leaking fluid must be wiped from the prepared surface to render the surface as dry as possible before undertaking the repair.

Once the *UPS 19060 SG* has reached initial set the material can be separated from surfaces treated with *UPS TAC 872*.

All equipment must be cleaned immediately after use, with *UPS TAC 883*.

Physical Constraints

Volume Capacity	66cc (4cu ins / unit)
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Mixing Ratio	Supplied Ready To Use
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Appearance	Grey Putty Stick
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Drying & Cure Times at 20°C (68°F)	
Useable Life	6 minutes
Initial Set	15 minutes
Machining	30 minutes
Full mechanical Cure	2 Days

Volume Solids	100%
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Shelf Life	
Use within 5 years of manufacture date. Store in original sealed containers at temperatures between 5°C (40°F) and 30°C (86°F).	

Operating Temperatures		
	Maximum	Continuous
Dry Heat	250°C (480°F)	120°C (248°F)
Wet Heat	120°C (248°F)	70°C (158°F)

Physical Properties

Compressive Strength ASTM D 695	35 Mpa (5000 psi)
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Flexural Strength ASTM D 790	23 Mpa (3250 psi)
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Shore D Hardness ASTM D 2240	85
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Heat Distortion ASTM D 648	40°C (96°F)
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Tensile Shear Adhesion ASTM D 1002	17.24 Mpa (2500 psi) (Abrasive Blasted Steel)
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Corrosion Resistance ASTM B 117	5000 hours
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Packaging

UPS 19060 SG is supplied in the following;
10 X 125gms tubes

Health And Safety

As long as normal good practice is observed *UPS 19060 SG* can be safely used. Protective gloves should be worn during use.

A fully detailed Material Safety Data Sheet is either included with the material or is available on request.

The information provided in this Technical Data Sheet is intended as a general guide only and should not be used for specification purposes. The information is given in good faith but we assume no responsibility for the use made of the product or this information because this is outside the control of Unique Polymer Systems LTD. Users should determine the suitability of the product for their own particular purposes by their own tests.

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