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PlasSteel

ThistleBond 'PlasSteel' is a high performance, rapid curing synthetic metal repair compound in the form of a stick which has been specifically developed for on site repairs to metal components such as castings, worn threads, jigs and mould patterns.

ThistleBond 'PlasSteel' 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.

ThistleBond 'PlasSteel' also has the ability to set underwater which makes it highly suitable for submerged conditions.

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 be removed using **ThistleBond 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 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 surfaces.

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

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.

ThistleBond 'PlasSteel' should be used within 6 minutes of mixing at 20°C (68°F).

This time will be reduced at higher temperatures or 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 **ThistleBond 'PlasSteel'** is being used to repair leaking pipes, the flow through the pipe should be discontinued until the repair is made and the **ThistleBond 'PlasSteel'** is set. Any leaking fluid must be wiped from the prepared surface to render the surface as dry as possible before undertaking the repair.

When being used underwater it is important that **ThistleBond 'PlasSteel'** is applied direct to the parent material and not to a film of water. This can be achieved by applying finger pressure to the centre of the repair and moving the pressure progressively outwards towards the periphery, thereby excluding the moisture film between the repair and the parent material.

Volume Capacity

66 cc (4 cu. in) per unit.

PHYSICAL CONSTANTS

Mixing Ratio	Supplied ready to use.	
Appearance	Concentric coloured stick of putty consistency.	
Drying & Cure times at 20°C/68°F	UsableLife	6 minutes
	InitialSet	15 minutes
	Machining	30 minutes
	FullMechanical	2 hours
Volume Solids	100%	
V.O.C.	Nil	
Shelf Life	Use within 5 years of purchase. Store in original sealed containers at temperatures between 5°C (40°F) and 30°C (86°F).	
Food Contact	Meets FDA requirements CFR 21.175.300 for food contact. Meets USDA requirements for incidental food contact.	
Operating Temperature	Maximum	Continuous
Dry Heat	250°C (480°F)	120°C (248°F)
Wet Heat	120°C (248°F)	70°C (158°F)

PHYSICAL PROPERTIES

Flexural Strength	230kg/cm ² (3250 psi)
ASTMD790	
Compressive Strength	350kg/cm ² (5000 psi)
ASTMD695	
Tensile Shear Adhesion	45kg/cm ² (650 psi)
	(Grit Blasted)
ASTMD1002	
Heat Distortion	40°C (96°F)
ASTMD648	
Hardness (Shore D)	85
ASTMD2246	
Corrosion Resistance	5,000 hrs
ASTMB117	

FOR FURTHER INFORMATION PLEASE CONTACT

**HEALTH AND SAFETY**

As long as normal good practice is observed **ThistleBond 'PlasSteel'** can be safely used.

Keep skin contact to a minimum. Use barrier cream or disposable gloves. Wash off areas of contact with soap and water.

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

PACKAGING

Supplied in 0.125 kg units.

The information provided in this Product 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 the company. Users should determine the suitability of the product for their own particular purposes by their own tests. Detailed specifications are available on request from the company.



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