Product Code: PST

TECHNICAL DATA SHEET

Industrial Metal

Tested to BS 6920:2000 as suitable for use on drinking water

Thames Water Utilities Ltd (The Water Quality Centre)

A metal-filled, two-part repair compound designed for maintenance and repair work, even on wet surfaces. Industrial Metal can cure underwater and is ideal for the maintenance and repair of pumps, valves, metals castings, low pressure pipes and tanks, and automotive bodywork. It can be used on metal, wood and most plastics and provides excellent protection against corrosion and chemical attack.

Description

Industrial Metal is reinforced with corrosion-resistant metal platelets, giving a smoother finish than regular repair pastes when machined. The light consistency makes it easier to mix than stiff and heavy traditional epoxy pastes and it is thixotropic, meaning it will not sag. In addition, Industrial Metal is virtually odourless, with no unpleasant smell compared to other products.

Applications

- Used for the repair and manufacture of pipes, fittings and equipment
- Used to repair holes, cracks and pitting in pipes and tanks, used to reline worn areas in pumps, valves and associate equipment
- Industrial equipment repair, maintenance and construction
- Gives protection against corrosion & chemical attack.

Advantages

- Moisture tolerant
- Cures underwater
- Can be machined
- Does not shrink
- Easy to mix & apply
- Long working time

Directions for Use

Surface Preparation

- Surfaces must be prepared prior to application.
- All surfaces must be dry and free from grease. Clean and roughen surface for optimum adhesion.
- Remove all paint, rust and grime from the surface by abrasive blasting or with sandpaper.
- Aluminium: remove oxidation from surface for optimal adhesion.
- Roughen the surface first, ideally by grit blasting (8-40 mesh grit), or through grinding with a coarse wheel or abrasive disc pad. An abrasive disc may be used provided white metal is revealed. Do not 'feather edge' – this epoxy must be 'locked in' by defined edges and a good 3 – 5mm profile.
- Metal which has been in contact with seawater or other salt solutions should be grit blasted and high pressure water blasted, and then left overnight to allow salts in the metal to 'sweat' to the surface. Repeat this process if necessary to 'sweat out' all of the soluble salts.
    - Test for chloride contamination before application.
    - The maximum soluble salts left on the substrate should be no more than 40 ppm.
- Use a solvent cleaner to remove all traces of sandblasting, grit, oil, grease, dust or other foreign substances.
- In cold working conditions, it is recommended that the repair area is heated to 37ºC - 43º C prior to application. This will dry off any moisture, contamination or solvents for maximum adhesion.
- Apply as soon as possible after preparation of the substrate to avoid oxidation or rusting.

Application Method

- Industrial Metal should be kept and applied at room temperature. It can be applied when temperatures are between 13ºC and 52ºC.
- Spread Industrial Metal over prepared surface with a putty knife. Press firmly to ensure maximum surface contact and avoid trapping air.
- To bridge large gaps or holes use fibreglass, sheet metal or wire mesh.

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TECHNICAL DATA SHEET

Technical Data

MINIMUM SHELF LIFE (months @ 24°C,).....24
MIX RATIO (WEIGHT).....2:1
MIX RATIO (VOLUME).....2:1
GEL TIME (minutes).....60
FULL CURE (hours).....24
COVERAGE (cm²/kg @ 5mm thickness).....1212
HARDNESS, SHORE D (full cure, 24 hrs.).....85
LAP SHEAR TENSILE STRENGTH (Mpa)
On Steel.....18
TENSILE STRENGTH (MPa).....28
COMPRESSIVE STRENGTH (MPa).....82
FLEXURAL STRENGTH (MPa).....38
DENSITY (gm/cm^3).....1.6
SHRINKAGE (%).....<1
NON-VOLATILE CONTENT (%).....100
HEAT DISTORTION
Cured at room temperature (°C).....56
Post cured (°C).....100
MAXIMUM SERVICE TEMPERATURE (°C).....130
(values are typical and should not be used for specification purposes)

Post Curing

Heat resistance can be as high as 130°C. In order to achieve maximum temperature resistance, it should be post-cured for maximum performance.

Post-Cure Instructions:

1. Cure at room temperature for 24 hours
2. Heat at 80°C for 2 hours
3. Heat at 130°C for 3 hours
4. Allow to cool.

Packaging

Code	Name	Size
PST/500g	Industrial Metal	500g
PST/4x500g	Industrial Metal	4x500g
PST/2kg	Industrial Metal	2kg
PST/5kg	Industrial Metal	5kg
PST/25kg	Industrial Metal	25kg

Storage

Sylmasta Epoxy Pastes should be stored out of direct sunlight in dry, frost free conditions at temperatures between 15° and 25°C. Under such conditions shelf life will be 2 years from the date of manufacture.

Health & Safety

Sylmasta Epoxy Paste consists of epoxy resins and hardener systems, please consult the individual Material Safety Data Sheet for hazard information. Wear eye protection and rubber or plastic coated gloves, and wash hands with soap and water immediately after use.