Product Code: PCG

TECHNICAL DATA SHEET

Ceramic Supergrade

A blue, two-part, silicon carbide-filled epoxy that can be applied by trowel to provide a low friction, highly abrasion resistant repair. Ceramic Supergrade is ideal for the maintenance and repair of silos, chutes, mills, pumps, metal castings and tanks. It can be used on metal, wood and most plastics and provides excellent protection against abrasion, corrosion and chemical attack.

Description

Ceramic Supergrade is reinforced with silicon carbide for ultimate surface hardness . The extremely smooth finish means lower friction as surfaces rub together, increasing the wear resistance and extending the life of the repair. 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, Ceramic Supergrade is virtually odourless, with no unpleasant smell compared to other products.

Applications

- Protect new equipment from wear and corrosion
- Repair heavy damage to silos, chutes, mills, pumps, impeller blades, valves, fan blades, metals castings and tanks before applying a topcoat of Ceramic Brushable
- Applications requiring protection against corrosion, chemical attack and surface abrasion.

Advantages

- High abrasion resistance
- Low friction surface finish
- Moisture tolerant
- Easy to 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

Ceramic Supergrade should be kept and applied at room temperature. It can be applied when temperatures are between 13ºC and 52ºC.

- Spread Ceramic Supergrade 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.

Sylmasta Ltd, Halland House, Dales Yard, Lewes Road, Scaynes Hill, West Sussex, RH17 7PG
Web: www.sylmasta.net Email: sales@sylmasta.com
Tel: +44 (0)1444 831459 Fax: +44 (0)1444 831971

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
HARDNESS, SHORE D (full cure, 24 hrs.).....90
LAP SHEAR TENSILE STRENGTH (MPa)
On Steel 14
TENSILE STRENGTH (MPa).....30
COMPRESSIVE STRENGTH (MPa) 100
FLEXURAL STRENGTH (MPa) 70
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 only be used as a guideline)

Post Curing

Heat resistance can be as high as 130°C. Like all high temperature epoxy systems, in order to achieve maximum temperature resistance, it should be post-cured to enable secondary cross-linking.

Post-Cure Instructions:

1. Cure at room temperature for 24 hours
2. Heat at 80°C for 2 hours
3. Heat at 150°C for 3 hours
4. Allow to cool.

Packaging

Code	Name	Size
PCG/500g	Ceramic Supergrade	500g
PCG/4x500g	Ceramic Supergrade	4x500g
PCG/2kg	Ceramic Supergrade	2kg
PCG/5kg	Ceramic Supergrade	5kg
PCG/37.5kg	Ceramic Supergrade	37.5kg

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.