Product Code:
PBG (Blue)
PBGR (Green)

TECHNICAL DATA SHEET

Ceramic Brushable

An extremely smooth-setting, ceramic-filled, brushable epoxy for protecting and sealing new or repaired surfaces from abrasion, cavitation, erosion and pitting. Ceramic Brushable is ideal for the protection 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.

Use both colours to make a two-layer wear indicator coating, which highlights where the coating is wearing through by revealing the colour beneath. Applying a topcoat of one colour over a basecoat of another colour enables you to identify high-wear areas which need re-application when the top layer wears through.

Description
Sylmasta Ceramic Brushable is reinforced with hard-wearing silicon carbide giving a high-wear, low friction finish. The light consistency makes it easy to mix and apply with a brush, with little sag. In addition, Ceramic Brushable is virtually odourless, with no unpleasant smell.

The resin container has enough room to dispense all of the hardener into the resin so that Ceramic Brushable can be applied with a brush straight from the pack. A 90 minute gel time allows larger quantities to be mixed in one go, meaning:
- enough time to complete the job - no need to worry that the paste will cure before completion
- longer pot-life at higher ambient temperatures, making Ceramic Brushable suitable for warm climates with less chance of premature curing.

A faster 45 minute gel time version is available on request.

Applications
- Protect new equipment from wear and corrosion
- Protect silos, chutes, mills, pumps, impeller blades, valves, fan blades, metals castings and tanks
- Apply as a final topcoat over repaired surfaces
- Applications requiring protection against corrosion, chemical attack and surface abrasion

Advantages
- High abrasion resistance
- Ultra smooth finish reduces abrasion and cavitation.
- Easy to apply with a brush
- 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. Roughening the surface creates a “key” which improve the grip of the coating to the substrate.
- 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
- Apply using a paintbrush.
- Each coat should be 0.5-1.0mm per coat. Apply at least two coats to ensure a pinhole-free coating.
- Re-coat time between coats is approximately 4-8 hours after applying, or when first coat has gelled.
- A tack-free finish will be achieved about 4 hours after applying.
- Functional cure is reached in about 24 hours at 22ºC.
- Cure can be accelerated using heat after the coating has been allowed to harden at ambient temperature. Material will fully cure at 100ºC in 2 hours.

TECHNICAL DATA SHEET

Technical Data

Values for Fast version in brackets

MINIMUM SHELF LIFE (months @ 24°C,).....24
MIX RATIO (WEIGHT) 5:1
MIX RATIO (VOLUME) 3:1
GEL TIME (minutes).....90 (fast: 45)
RECOAT TIME (hours).....4 - 8 (fast: 4 - 6)
FULL CURE (hours).....24 - 48
THICKNESS PER COAT (mm) .....0.5 - 1.0
DENSITY (gm/cm^3) 1.6
SHRINKAGE (%) .....<1
NON-VOLATILE CONTENT (%) 100
COVERAGE (per kg)
0.5mm thick (m^2) 1.2
0.020in thick (ft^2) 13
HARDNESS, SHORE D (full cure, 24 hrs.).....90
TENSILE STRENGTH (MPa).....35
COMPRESSIVE STRENGTH (MPa) 111
FLEXURAL STRENGTH (MPa) 70
HEAT DISTORTION
Cured at room temperature (°C) 50
Post cured (°C).....120
MAXIMUM SERVICE TEMPERATURE (°C).....150

Chemical Resistance:

Excellent resistance to water, inorganic acids, alkalis and certain organic solvents; good resistance to dilute organic acids but limited resistance to alcohol's, ketones and glycol ethers. For maximum chemical resistance allow to harden for 7 days at ambient temperature or else post-cure at 100°C for 2 hours after initial cure.
(values are typical and should only be used as a guideline)

Post Curing

Heat resistance can be as high as 150°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	Code	Name	Size
PBG/500g	Ceramic Brushable Blue	500g	PBG-F/500g	FAST Ceramic Brushable Blue	500g
PBG/4x500g	Ceramic Brushable Blue	4x500g	PBG-F/4x500g	FAST Ceramic Brushable Blue	4x500g
PBG/2kg	Ceramic Brushable Blue	2kg	PBG-F/2kg	FAST Ceramic Brushable Blue	2kg
PBG/5kg	Ceramic Brushable Blue	5kg	PBG-F/5kg	FAST Ceramic Brushable Blue	5kg
PBGR/500g	Ceramic Brushable Green	500g	PBGR-F/500g	FAST Ceramic Brushable Green	500g
PBGR/4x500g	Ceramic Brushable Green	4x500g	PBGR-F/4x500g	FAST Ceramic Brushable Green	4x500g
PBGR/2kg	Ceramic Brushable Green	2kg	PBGR-F/2kg	FAST Ceramic Brushable Green	2kg
PBGR/5kg	Ceramic Brushable Green	5kg	PBGR-F/5kg	FAST Ceramic Brushable Green	5kg

Bulk sizes sizes available on request

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.