Product Code:
PBGR (Green) ***(see also PBG - Blue and PBW - White)***

TECHNICAL DATA SHEET

Ceramic Brushable - Green

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

Ceramic Brushable Green is elastomer-toughened to provide high impact resistance, superior peel strength and improved resilience to thermal shock. Like Brushable Blue and White, it has a smooth, low friction finish to minimise friction-related wear and, being loaded with high-purity green silicon carbide, it has an abrasion resistance and hardness almost equal to that of Brushable Blue.

Wear Identification
Wherever wear needs to be identified before costly damaged occurs, use this two-coat method. First apply Brushable White as a basecoat and topcoat with Brushable Green. As the topcoat wears away, the White layer shows through, highlighting where the topcoat needs to be re-applied and preventing damage to the substrate before it occurs.

Description
Sylmasta Ceramic Brushable Green is reinforced with hard-wearing, high purity, green silicon-carbide giving a high-wear, low friction finish. Its formulation incorporates a functional elastomer to improve toughness, impact strength, thermal shock resistance and peel resistance with minimal reduction in loss of thermal modulus or hardness. The light consistency makes it easy to mix and apply with a brush, with little sag. In addition, Ceramic Brushable Green 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 Green can be applied with a brush straight from the pack. The standard formulation has a 90 minute gel time allowing 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 version is also available, with a 45 minute pot life to reduce time between coats.

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
- Ultra smooth finish reduces abrasion and cavitation
- Elastomer toughened for superior impact resistance
- Extremely hard setting
- High abrasion resistance
- Easy to paint with a brush on roller
- Can be used with Brushable Blue & White for two-colour wear identification

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 coating.
- Re-coat time between coats is approximately 4-8 hours after applying
- 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.

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

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
HARDNESS, SHORE D (full cure, 24 hrs.).....88
TENSILE STRENGTH (MPa).....35
COMPRESSIVE STRENGTH (MPa) 80
FLEXURAL STRENGTH (MPa) 58
DENSITY (gm/cm^3) 1.6
SHRINKAGE (%) .....<1
NON-VOLATILE CONTENT (%) 100
COVERAGE (per kg)
- 0.5mm thick (m²) 1.2
- 0.020in thick (ft²) 13

HEAT DISTORTION
- Cured at room temperature (°C) 50
- Post cured (°C).....110

MAXIMUM SERVICE TEMPERATURE (°C).....140

Chemical Resistance:

Excellent resistance to water, inorganic acids, alkali's and certain organic solvents; good resistance to dilute organic acids but limited resistance to alcohol's, ketones and glycol ethers. For maxiumum 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
PBGR/500g	Ceramic Brushable Green	500g
PBGR/4x500g	Ceramic Brushable Green	4x500g
PBGR/2kg	Ceramic Brushable Green	2kg
PBGR/5kg	Ceramic Brushable Green	5kg
PBGR-F/500g	FAST Ceramic Brushable Green	500g
PBGR-F/4x500g	FAST Ceramic Brushable Green	4x500g
PBGR-F/2kg	FAST Ceramic Brushable Green	2kg
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.