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METATRON
MINING CONSULTING
MINING SOLUTIONS WITH PASSION AND PURPOSE!

SicaShield - Silicon Carbide Coating

SicaShield is a liquid, brush-on silicon carbide coating designed to protect surfaces against **abrasion and corrosive conditions**.

Formulated with **100% solids (solvent-free)**, it combines fine wear-resistant ceramic particles with silicon carbide for superior abrasion resistance. The specially engineered **epoxy resin system** ensures excellent adhesion, high mechanical strength, and long-lasting protection.

Once cured, the coating forms a **super-hard, wear-, heat-, and corrosion-resistant layer**. Post curing, the coating produces a **high-gloss** finish that not only resists wear and corrosion but also improves pump flow efficiency.

This not only enhances durability but also improves **pump flow efficiency** by reducing friction.

Key Applications:

- Pumps & valves
- Pans & seals
- Turbines
- Heat exchangers
- Nozzles & screws
- Screens

<u>FEATURES</u>	<u>PROFILE</u>
Abrasion	Colour Dark Grey
Fine Grade Silicon Carbide	Mix Ratio by weight. 7:1
Easy to mix and apply	Pot Life @25°C 30 minutes
Good all-round chemical resistance	Cure Time @25°C 60 Minutes
Excellent small particle wear resistance	Density 1.7gcm
Excellent adhesion to substrate	Kit Size 0.8kg or 3.2kg
Dry heat resistance to 90°C	Coverage@250 µm ~0.9-1.0m ²
Manufactured in Australia	Packaging Part A & B
Simple Application	
Range of kit size	
100% solids	

SicaShield – Silicon Carbide Coating - Application Instructions

Surface Preparation:

- All oil, grease, and surface contaminants must be removed using approved cleaning methods (e.g., solvent cleaning or detergent wash).
- Abrasive blast the substrate to achieve a surface profile of **75–100 microns** and a **near-white metal finish**
- For small or difficult-to-reach areas, mechanical preparation using hand tools or power tools may be used to clean and abrade the surface. Ensure the substrate is clean, dry, and free from dust before application.

Mixing:

- Ensure the material temperature is between **15°C and 30°C** prior to mixing.
- Combine **Part A and Part B** thoroughly by hand or slow-speed mechanical stirrer, making sure material on the container walls and bottom is fully dispersed.
- Mix until a **uniform colour and consistency** is achieved. Avoid aeration during mixing.

Application:

- Apply the first coat by **brush** to achieve a **dry film thickness (DFT) of 200–250 microns**.
- Allow the coating to become **tack-free** before applying the second coat.
- Apply the second coat at the same DFT, ensuring even coverage.
- Allow the coating to fully **cure as per technical data sheet** before placing equipment back into service.

Safety:

- **Read the Safety Data Sheet (SDS)** before use.
- Wear appropriate **personal protective equipment (PPE)** including gloves, eye protection, and respirators where required.
- Ensure adequate ventilation during application and curing.

