

TDS AND APPLICATION PROCEDURE – CERAPOXY ULTRA S

CeraPoxy ULTRA S is a two-part, epoxy paste containing graded silicon carbide/Alumina beads, designed to protect, rebuild, and repair high-wear equipment surfaces. It provides excellent resistance to abrasion, impact, and high-wear conditions.



Typical Applications:

Cyclone and separator bodies
Dust collectors and exhausters
Pump liners and impellers
Fan blades and housings
Chutes and hoppers
Elbows and transition points

Key advantage of our Epoxy Formulation

Non-Dangerous Goods: CeraPoxy ULTRA-S is classified as non-dangerous goods - simplifying handling, application, storage, & transportation

User-Friendly Formulation: Part B is a paste, not a liquid, reducing spillage, wastage and splashing during application.

Enhanced Adhesion: The integration of fiber technology improves the epoxy's bonding strength to various substrates, ensuring durability and longevity of the coating.

Superior Abrasion and Wear Resistance: The inclusion of high-grade Silicon Carbide alumina particles, known for its hardness and wear resistance, significantly enhances the epoxy's ability to withstand abrasive forces.

Outstanding Impact and Crush Resistance: The formulation's design allows it to absorb and dissipate impact energy effectively, protecting underlying surfaces from damage.

Minimal Trapped Air Inclusions: The optimized processing techniques reduce the occurrence of air pockets within the cured epoxy, ensuring a uniform and robust coating.

Competitive Pricing: Competitive Pricing: Our product is priced very competitively compared to other options available in the market.

Australian-Made: Ensures local reliability and ready stock availability.

Customised Packaging: MMC can provide customised packaging and tubs tailored to your specific requirements.

Applications:

Wear & Abrasion Protection

- ✓ **Chutes, hoppers, and silos** – for lining surfaces exposed to abrasive materials like ores, coal, or sand.
- ✓ **Cyclones and classifiers** – to reduce internal surface wear from high-velocity particles.
- ✓ **Screw conveyors and augers** – protecting flights and troughs from continuous abrasive flow.
- ✓ **Pump housings and impellers** – for protection against aggressive fluids and slurries.
- ✓ **Worn metal surfaces** – rebuilding eroded or damaged equipment back to original dimensions.

FEATURES	PROFILE	
	Colour	Dark Grey
Abrasion and impact resistance	Mix Ratio by weight.	4:1
Graded Silicon Carbide and Alumina Beads	Pot Life @25°C	20 minutes
Fibre technology	Cure Time @25°C	90 Minutes
Easy to mix and apply	Hardness	85 to 90 Shore D
Excellent adhesion to substrate	Density	2.16 kg/l
Non – Dangerous Good for transport	Compressive Strength	54mg
Manufactured in Australia	Flexural Strength	80 MPa
Range of colours	Kit Size	3 or 7kg
Range of kit size	Coverage	7kg @ 6mm = 0.6m ²
	Packaging	Part A & B

Color**Slight color variation between batches may occur and will not affect the product's performance.

CeraPoxy ULTRA S Trowelling: Application Instructions

1. Surface Preparation

- ✓ All work must comply with fabrication standards.
- ✓ Fillet welds in corners are acceptable; however, any excessive imperfections or protrusions must be ground smooth.
- ✓ Abrasive blast all surfaces to **Class 2.5 (AS 1627)** to achieve a suitable textured profile for adhesion.
- ✓ Remove all oil, grease, and contaminants using approved cleaning methods (e.g., solvent or detergent wash).
- ✓ After blasting, clean surfaces with fibre brushes or dry air, paying special attention to corners, intersections, and horizontal areas
- ✓ For small or difficult areas, mechanical preparation with hand or power tools may be used. Ensure the surface is clean, dry, and dust-free before application.
- ✓ Apply epoxy within **4 hours of blasting** or before any tarnishing occurs; store prepared items under cover.
- ✓ Use approved blasting media to remove rust, mill scale, paint, moisture, oil, dust, weld slag, spatter, and other contaminants.
- ✓ Do not touch cleaned surfaces with bare hands. If contamination occurs, clean with site-approved solvents.
- ✓ Do not blast if:
 - Steel temperature is **less than 5°C above dew point**, or
 - Relative humidity **exceeds 80%**

2. Epoxy Mixing Instructions

- ✓ Ensure the material temperature is between 15°C and 35°C prior to mixing.
- ✓ Use a 2-part epoxy suitable for ceramic-to-steel bonding and capable of withstanding the application's maximum operating temperature.
- ✓ Do not use expired adhesive materials. Confirm shelf life prior to application.
- ✓ Mix only the amount that can be applied within the pot life.
- ✓ Thoroughly mix Part A and Part B (both pastes) in a clean container or on a mixing board until a uniform color and consistency is achieved. It is not recommended mix epoxy directly on the prepared steel surface.
- ✓ For partial kits, premix each component individually before combining.
- ✓ Use a slow-speed mechanical mixer or spatula and mix for 2–4 minutes for complete blending.

3. Application Procedure

- ✓ Mark out the designated area to be trowelled.
- ✓ Apply a thin, even layer of mixed epoxy to the prepared surface using a trowel or spatula. This ensures proper wetting and strong adhesion.

- ✓ Build up to the required thickness (typically 10mm), applying additional layers as needed.
- ✓ In areas with fabrication irregularities, adjust epoxy thickness to achieve a consistent surface.
- ✓ For a smooth finish, lightly moisten the trowel or spatula with water and finish the surface accordingly.

4. Finishing

- ✓ Once applied, all trowelled surfaces must be scraped clean.
- ✓ Remove any excess adhesive using a damp cloth (with minimal water).
- ✓ Ensure no water penetrates the epoxy lining during or after cleanup.

5. Recording and Reporting

Maintain comprehensive records including:

- ✓ Environmental conditions (temperature, relative humidity, dew point).
- ✓ Surface preparation details.
- ✓ Surface profile.
- ✓ Coating application data.
- ✓ Coating testing results.
- ✓ Any defects, failures, or anomalies.

6. Inspection and Testing

- ✓ Visual Testing: Inspect epoxy-coated surfaces for defects, discontinuities, pin holes, any misses after curing.

7. Specific Benefits

- ✓ Resurfaces and repairs worn or corroded metal parts.
- ✓ Protects metal surfaces against chemicals, abrasion, and corrosion.
- ✓ Ceramic-filled for excellent abrasion resistance.
- ✓ Non-sag/drooping formulation suitable for overhead and vertical applications.

8. Storage

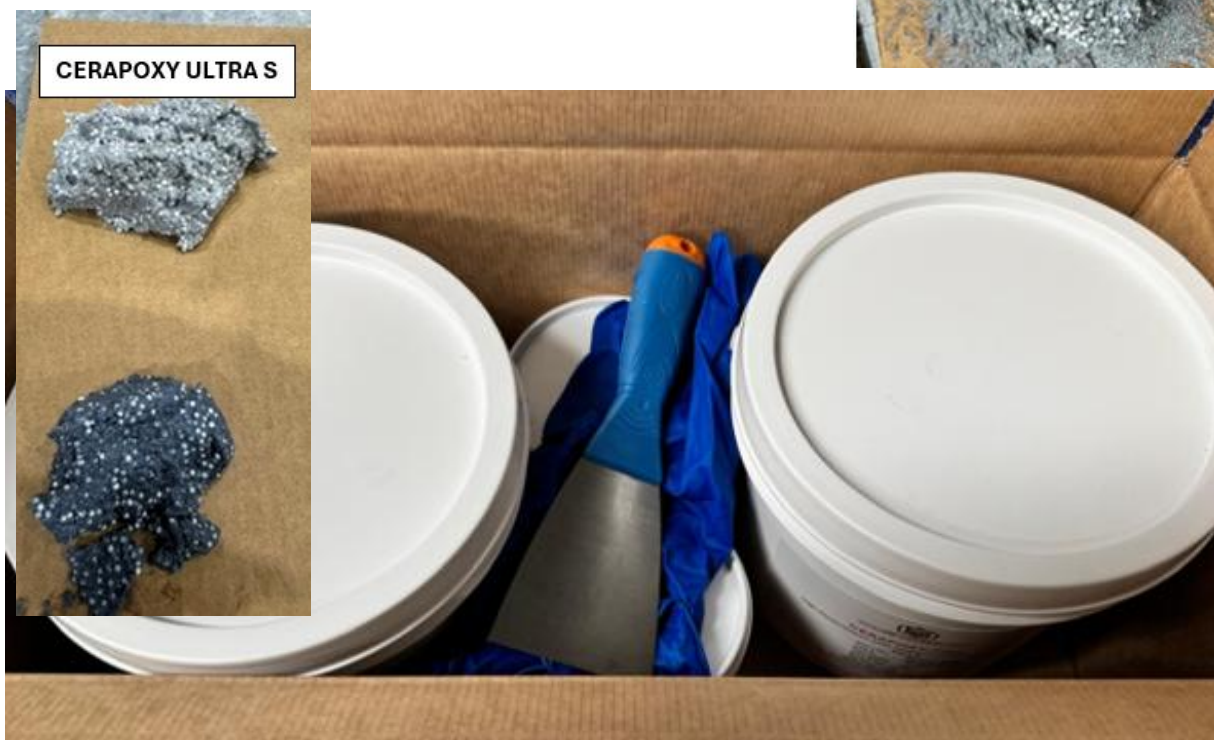
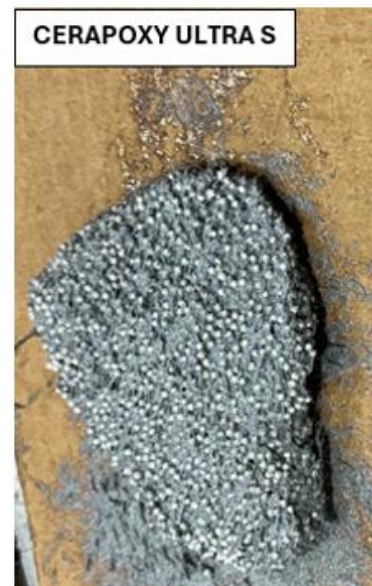
- ✓ Store the product in its original, unopened container in a dry location. Storage details may also be indicated on the product label.
- ✓ Recommended storage temperature: 8 °C to 26 °C. Storage below 8 °C or above 26 °C may adversely affect product properties.
- ✓ Material removed from the container during use may become contaminated; therefore, do not return unused material to the original container.
- ✓ The manufacturer cannot assume responsibility for product that has been contaminated or stored outside the recommended conditions. For further information, contact your local Technical Service Centre or Customer Service Representative.

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



The image below illustrates items included in a complete kit



Technical Data Sheet and Application Procedure CeraPoxy ULTRA-S

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