

RESIDENTIAL
& COMMERCIAL

INDUSTRIAL
& MARINE

ART
& CRAFT

SHIMICOAT
SURFACE SOLUTIONS



HT 1000

High Temperature High Build Epoxy

HT 1000 is a two-pack epoxy coating system used as concrete and metal protective as well as composite repair. The product is ideally suitable for resurfacing applications with refractory properties. Designed for superior adhesion, chemical resistance, and abrasion protection, this material is ideal for coating, repairing, resurfacing, and protecting concrete, stone, and metallic substrates from chemicals, organic/inorganic solvents, environmental and industrial damages. It provides outstanding durability and can be used in high-temperature applications without burning, smoking, or releasing harmful fumes. Various filler materials can be incorporated in HT 1000 to achieve a three-part protective system of epoxy composite. These three parts are resin, hardener, and specialized graded aggregate, allowing for adjustable viscosity and optimal application flexibility. The composite exhibits no shrinkage, excellent mechanical strength, and long-term resistance to chemical and physical wear.

Key Benefits

- High Mechanical & Impact Strength
- Outstanding Abrasion Resistance
- Excellent Chemical Resistance
- Fast Curing & Reduced Downtime
- Refractory Properties
- Resists Burns, Smoke and Fume
- No Shrinkage
- Excellent Substrate Adhesion
- Superior Intercoat Adhesion
- Easy to Mix & Apply
- Temperature Stability -40°C to 150°C
- Versatile Application

INDUSTRY APPLICATIONS

- Tank Lining
- Metal / Concrete Surface Coating
- Structural Repair & Resurfacing
- Grouting & Bonding
- Abrasion & Impact Protection
- Chemical & Heat Resistance Coating
- Molten Metal Spillage Protection
- Metal Refineries
- Foundries
- Power Generation
- Heat Containment
- Minerals Processing
- Abattoirs
- Meat processing establishments
- Bakeries and dairy industries
- Food & beverage processing plants
- Fish processing industries
- Breweries and wineries
- Cold storage warehouses
- Cool rooms and freezers
- Commercial kitchens
- Restaurants
- Catering facilities
- Bars and Clubs
- Food preparation floors
- Hospitals
- Catering facilities
- Chemical floors
- Chemical bunds
- Mining industry
- Containment bunds
- Mineral processing floors
- Treatment plants
- Waste treatment operations
- Extreme and high traffic floors
- Amenities
- Laundries
- Factories and warehouses

 MATERIALS  CHEMICALS  RESINS  EQUIPMENT

Ph: (08) 9364 7446 | info@shimi.com.au | ABN: 28 622 871 283 | www.shimi.com.au

SPECIFICATIONS

Mixing ratio by Weight (Kg)	10A:1B
Mixing ratio by Volume (Lt)	7A:1B
Colour of Blend	Light Amber Clear and transparent
Pot Life @25°C	30min
Re-Coating Time @25°C	16 Hours
Application Temperature (min 3°C above Dew Point)	5 to +30 °C
Material consumption	1 Kg/sqm per coat - May require two coats
Packing Density of Blended Resin (Kg/Lt)	2 Kg/Lt– Each Kg is 0.5Lt (20Kg is ~10Lt)
Overcoating @ 25 °C	12 -24 hours
Cure time @ 25 °C:	
Touch Dry	4 Hours
Foot Traffic	12 - 20 hours
Heavy Traffic	2 days
Chemical Exposure / Total Hardening	7 days
Coefficient of expansion – Aggregated for Grouting <i>Slightly More than concrete</i>	12-14 x 10 ⁻⁶ / °C
Coefficient of expansion - Concrete	8-12 x 10 ⁻⁶ / °C
Adhesive strength	> 1.5 MPa
Compressive Strength:	13,000 psi (89.6 MPa) – ASTM D695
Flexural Strength:	5,500 psi (37.9 MPa) – ASTM D790.
Adhesion to Steel:	2,700 psi (18.62 MPa) – ASTM D1002
Abrasion Resistance:	820 mm ³ per 1,000 cycles – ASTM D4060 14 mm ³ per 1,000 cycles – ASTM D4060.
Heat Distortion Temperature:	97°F (36°C) – ASTM D648.
Thermal Conductivity:	1.9 W/mK – BS 874.
Coefficient of Thermal Expansion:	28.2 ppm/°C – ASTM E228.
Dielectric Strength:	142.5 volts/mil (5700 volts/mm) – ASTM D149.
Volume Resistivity:	1.0 × 10 ¹³ ohm·cm – ASTM D257.
Resists Inorganic Acids & Alkalis:	Up to 20% concentration.
Heat Distortion Temperature:	97°F (36°C) – ASTM D648.
Tensile strength	7 MPa
Elastic Modulus	2 GPa
Flexural strength	15 - 20 MPa
Compressive strength	45 - 55 MPa
Temperature resistance	-20 °C to 120 °C
Hardness (Shore D)	80 (7 days)
Consistency and Flow	Semi-Self Levelling Epoxy Mortar
7 Days Compression Strength	>25 N/mm ²
Shore D	>75
Compression Strength	C40 (>40 N/mm ²)
Flexural Strength	F10 (?10N/mm ²)
Water Resistance	A9 (<9cm ³ /50cm ²)

CHEMICAL RESISTANCE

Specific resistance properties of EPOCEMENT in harsh chemicals:

Media	Reagent	Rating
Mineral Acids	Concentrated Hydrochloric	B
	Sulphuric Acid	C
	Acetic Acid 10%	A
	Acetic Acid 20%	B
	Nitric Acid 10%	A
	Nitric Acid 20%	B
	Nitric Acid 35%	C
	Phosphoric Acid 15%	A
	Phosphoric Acid 35%	A
	Concentrated Phosphoric Acid	C
Organic Acids	Acetic Acid 5% (Vinegar)	A
	Acetic Acid 10%	A
	Acetic Acid 20%	B
	Butyric Acid 10%	A
	Citric Acid 50%	A
	Lactic Acid 15%	A
	Oleic Acid	A
Fat, Oil & Solvents	Xylene	A
	Methyl Ethyl Ketone (MEK)	C
	Diesel	A
	Ethanol	A
	Acetone	B
	Kerosene	A
	Petrol Unleaded	A
	Wine & Beer	A
	Animal Fat	A
	Ethyl Alcohol	B
	Lubricating Oils	A
	Aromatic and Ketone Solvents	A
	Hydraulic Fluid	B
Vegetable Oil	A	
Solvents	Ammonium Hydroxide 20%	A
	Sodium Hydroxide 20%	A
	Salt Solutions 10%	A
	Potassium Hydroxide 20%	A
	Sodium Hypochlorite 4% (Bleach)	C
Code	Resistance	Description
A	Excellent	Suitable for Long term immersion
B	Good	Suitable for Short-term immersion (Max 3 days)
C	Caution	Very short contact time is OK, spill and splash. 8 Hours Cleanup.
D	Danger	Not Recommended

Indicative reference only. Tested in laboratory conditions at 25°C.

Resistance properties of HT 1000

THERMAL PROPERTIES	Thermal Conductivity: 1.9 W/M ² K / BS 874 / Thermal Expansion Coefficient: 28.2 ppm/°C / ASTM E228 / Thermal Stability: 140°C	Alkalis	Resist Short term immersion in all alkalis.
Weather Proofing	All Epoxy Coatings may yellow with time. Weatherproof top coat may be used if required.	Salts & Brines	Resist continuous or long-term immersion in all Salts & Brine systems.
Solvents	Resistant to most hydrocarbon solvents and alcohols.	Water	Excellent resist to continuous or long term immersion in fresh & Salt Water.
Acids	Resist splash and spills in all acids.	Abrasion	Excellent when fully cured (7 Days)

Coverage

1L covers approximately 5sqm per coat (200micron thickness), depend on the conditions of the surface. First coat usually consumes more and the second coat less. Recommended two coats.

Colour Chart

Standard Colours:

- White N14
- Dark Grey N64
- Terracotta R52
- Black N61
- Cream Y34
- Bright Blue B23
- Neutral Grey N23
- Charcoal B64
- Dark Brown X65

SHIMICOAT offers all Australian Standard AS2700 Colours, consisting of 206 colours. Please contact SHIMICOAT office for your custom design tint. Extra charges may apply.

Applications

Roller, Brush or Squeegee.

Dry Time at 25°C

Pot Life:	45 minutes at 25°C
Tack Free:	2-3 hours
Thin Film Set:	8 Hours (Min, depending on temperature and humidity)
Dry Cured:	12-24 hours – Foot Traffic (depending on temperature and humidity)
Fully Cured:	7 days (Vehicle Traffic)
Re-Coat:	16 Hours / Over night

Clean Up

Thinner & Diluent (Blend of Solvents).

Preparations

Clean and dry surface. Ensure surface to be coated is free of all dirt, grease, oil, paint, curing agents and other contaminants. Removal of Oil Contamination by degreaser and alkaline cleaning pressure wash
Acid-wash to enhanced surface porosity and etch the surface. Ensure moisture free surface. Allow to completely dry, run Dry Test. Place a piece of plastic over a small area, tape the edges and leave for 1 hour. Remove plastic, if there is no moisture on either surface, concrete is sufficiently dry. Ideally, always consider sanding, surface grinding and removal of loose materials. Mechanical sanding or grinding is always advisable prior to application of all Shimicoat Epoxy products, to maximize adhesion.
For further information, please refer to SHIMICOAT Instruction for "Surface Preparations".

Curing Times

SHIMICOAT Epoxy Mortar Mortar dries in 8-20 hours depending on atmospheric temperature. High temperatures and windy conditions may speed up the curing time. Complete curing process and full hardness is achieved after 7 days.

Temp °C	Pot Life (min)	Surface Dry (Hours)	Initial Cure (Hours)	Recoat Time (Hours)	Fully Cured (Days)
10°C	45	12	24	24	7 Days
20°C	40	10	18	18	7 Days
30°C	35	8	16	16	7 Days

WARNING

- The curing agent (Part B – Hardener) of HT 1000 has a freezing point of 15°C, and similar to honey, paraffin and wax it may solidify at lower temperatures during cold seasons. Simply:
 - Warmup the container to 60°C,
 - Mix for 3-4min to uniform,
 - Let it cool down to room temperature (25°C)
 - Use as normal.
- Direct sunlight and UV radiation may result in chalking, colour variations and yellowing effect over time. UV stable topcoat application shall be used.

Storage

The products shall be stored out of direct sunlight and heat at all times (0°C to 30°C).
The shelf life of the product is 5 years, mix uniformly for 3 minutes prior to use.

DISCLAIMER

Material Safety Data Sheet, Technical and Environmental Data Sheet can be provided upon request.

The information provided in this document is guidance only and considering the uses of this product are beyond the seller's control, the product is sold without guarantees or warranties. Warranties and guarantees shall be governed by SHIMICOAT Standard Terms of Sale. The purchaser shall make its own tests to determine the suitability for their specific application, and Shimicoat Pty Ltd is taking no responsibility for misuse of the product. The purchaser assumes all risk of use and handling of this product. This product will be happily replaced or credited back if defective. Beyond this, Shimicoat Pty Ltd is not liable for any damages caused by this product or its use.

This information and all further technical advice are based on our present knowledge and experience.

The customer is not released from the obligation to conduct careful inspection and testing of supplied goods.