

TECHNICAL DATA SHEET

EPO100THW® TINTED EPOXY WINTER HARDENER

100% Solids, Solvent Free, Low VOCs



Description

EPO100THW® Tinted Epoxy Winter Hardener is a specialty epoxy curing agent specifically for use in cooler weather and is to be mixed with EPO100T®. EPO100THW® shortens the curing time and reduces the risk of amine blushing in cooler conditions. The finish is high gloss, self-levelling and colour stable. Designed and manufactured by All Purpose Coatings for use in a wide range of residential, commercial and industrial environments where a lasting wall or flooring solution is required. EPO100T® has an exceptional resistance to a wide variety of chemicals and fumes making this product ideal for use in high traffic commercial and heavy-industrial environments.

Recommended Uses

- Mechanical workshops and warehouses
- Mining construction
- Factories and manufacturing facilities
- Car parks, loading bays and ramps
- Food processing plants
- Chemical and pharmaceutical industries
- Laboratories
- Exhibition halls and showrooms.
- Washrooms and cloakrooms
- Wet and dry processing areas
- Government and education facilities
- Residential properties

Features and Benefits

- Australian Made
- High gloss
- Excellent adhesion with high durability
- Self-levelling and self priming
- Low VOCs (Volatile Organic Compounds)
- Low viscosity
- Excellent abrasion resistance
- Good chemical resistance
- Pre-coloured / tinted
- Solvent free
- APAS approved (Australian Paint Approval Scheme)
- Food contact safe

Product Information

Mixing Ratio

(3:1) 3 parts EPO100T® Part A : 1 part EPO100THW® Part B

Coverage

3-8m²/L depending on the system, application, and porosity of the surface.

Dry Film Thickness

150-300 µm depending on the system, and application.

Shelf Life

2 years. Store in a cool, dry area and out of direct sunlight.

Heat Resistance

Epoxy will not begin to soften until 90°C.

Clean Up

Clean tools with APC Thinners while still wet and discard rollers and brushes.

Cure Times

Pot life: 35 minutes
Work time: 40 minutes
Thin tack free: 5 hours
Thin shore hardness: 72 hours
Max recoat time: 72 hours without sanding
 Note: No water or condensation should come into contact with the coating for **3-5 days** from installation.

Return to Service

Light foot traffic: 24 hours
Vehicle traffic: 48 hours
Full chemical cure: 7 days

Testing Information

Cure times completed at 25°C in a 100g container or at 200µm.

Maintenance

Refer to APC Clean and Care guide.



TECHNICAL DATA SHEET

EPO100THW® TINTED EPOXY WINTER HARDENER

100% Solids, Solvent Free, Low VOCs

Environmental Conditions

Temperature and the surrounding atmospheric conditions will play a part in the curing process of all epoxy products. Under conditions of low temperatures and high humidity, the final cured surface finish can be adversely affected potentially resulting in poor gloss retention, discolouration over time, poor overcoat ability, and inter-coat adhesion. Quite often these conditions will result in the formation of a white film over the surface often evident after contact with water. This chemical reaction with the atmosphere is commonly referred to as “amine bloom” or “amine blush”. If this occurs then the existing coating will need to be abraded to completely remove the affected surface to ensure the adhesion of subsequent application. In some cases, partial or complete re-priming may be necessary. Attention also needs to be paid to the substrate temperature which should be at least 10°C and preferably 5°C above the dew point during the curing phase. The ideal humidity is less than 75%.

Industry standards recommend the accurate recording of times and dates, batch numbers, consumption rates, and environmental conditions including the substrate and air temperatures, humidity levels, and dew point readings during both the application and curing process. Full material warranties cannot be provided unless all the relevant data has been recorded accurately.

Surface Preparation

- Ensure the concrete is sufficiently cured to the recommended minimum of 28 days from completion.
- Diamond grind the substrate. The surfaces must be clean, dry, and free from all traces of loose material, old coatings, curing compounds, release agents, laitance, oil, and grease, etc. This must be completed by diamond grinding or a suitable cleaning method.
- To check that all traces of oil and other contaminants have been completely removed, sprinkle a few drops of water over the surface. If all water is quickly absorbed, the surface is sufficiently oil and grease-free.
- If water forms into globules that remain on the surface, further thorough treatment of the substrate is necessary. Substrate compression strength should be at least 25MPa, cohesive bond strength at least 1.5MPa, and moisture content below 4%.
- Repair and fill cracks with EPO100EP Epoxy Putty or APC Concrete Repair Kit.

Product Application

- If using more than one kit, compare the batch numbers on the lids of the packaging and ensure different batches are combined to create an even finish. Small variances in colour may occur between different batches of the product as part of the normal manufacturing process of Tinted Epoxy.
- Mix EPO100T® Epoxy Resin Part A thoroughly prior to combining with EPO100T® Epoxy Hardener Part B.
- Mix 3 Parts A with 1 Part B (3:1) by volume. Mix with a drill mixer at a slow speed for 2 minutes. Ensure the sides and bottom of the container/bucket are mixed. Tilt the drill to the side to ensure the product on top of the container/bucket is mixing in with the product on the bottom. In normal curing conditions, the EPO100T® Coating Kit does not require an induction time and coating can begin immediately after mixing. For colder climates, see product cautions for further information on mixing and induction times.
- For system-specific instructions, consult the All Purpose Coatings Installation Instructions documentation, located on the website.
- It is recommended that the first coat of EPO100T® be applied with a recommended 10% of APC Thinners to ensure high penetration and adhesion to the coating substrate. Subsequent coats can be thinned, but sufficient curing time will be required to allow for the evaporation of solvent content from the product before recoating or top coating when used as part of an All Purpose Coatings system. The recoat time is typically 24 hours at 25°C. Apply using a brush or lint-free roller.

TECHNICAL DATA SHEET

EPO100THW® TINTED EPOXY WINTER HARDENER

100% Solids, Solvent Free, Low VOCs



Physical Properties

Solids Content	100%												
Impact Resistance	AS 1580.406.1: high												
Compressive Strength	ASTM D695: 12,000 PSI												
Tensile Strength	ASTM D638: 3,900 PSI												
Elongation at Break	ASTM D638: 7.00%												
Taber Abrasion Resistance	AS/NZS 1580.403.2-2006: 133mg loss (mg of loss/1000 cycles) H022 wheel; 1000 grams weight												
Water Absorption	ASTM D570: 0/07% (2 hour boil)												
Flexural Strength	ASTM D790: 7,800 PSI												
Shore D Hardness	ASTM D2240: 84												
Bond Strength to Concrete	100% concrete failure												
Heat Distortion Temperature	ASTM D648: 50°C.												
Volatile Organic Compounds	AP-T002: very low												
Resistance to Chemical Spills (7 days at 25°C)	<table border="0"> <tr> <td>Ammonia solution (20%)</td> <td>Sodium hydroxide (30%)</td> </tr> <tr> <td>Sulphuric acid (30%)</td> <td>Kerosene</td> </tr> <tr> <td>Lactic acid (5%)</td> <td>Aviation fuels</td> </tr> <tr> <td>Sodium chloride (50%)</td> <td>Petrol</td> </tr> <tr> <td>Tannic acid</td> <td>Hydrochloric acid (20%)</td> </tr> <tr> <td>Acetic acid (5%)</td> <td>Toluene</td> </tr> </table>	Ammonia solution (20%)	Sodium hydroxide (30%)	Sulphuric acid (30%)	Kerosene	Lactic acid (5%)	Aviation fuels	Sodium chloride (50%)	Petrol	Tannic acid	Hydrochloric acid (20%)	Acetic acid (5%)	Toluene
Ammonia solution (20%)	Sodium hydroxide (30%)												
Sulphuric acid (30%)	Kerosene												
Lactic acid (5%)	Aviation fuels												
Sodium chloride (50%)	Petrol												
Tannic acid	Hydrochloric acid (20%)												
Acetic acid (5%)	Toluene												

Sample Identification	Critical Heat Flux (kW/m2)			Smoke Value %min		
	≤11	≤11	≤11	5	1	2
Epoxy Coating Kit Tinted EPO100T®	≤11	≤11	≤11	5	1	2
	Average: ≤11			Average: 3		
Epoxy Resin Clear Glaze EPO100G®	≤11	≤11	≤11	<4	<4	<4
	Average: ≤11			Average: <4		

TECHNICAL DATA SHEET

EPO100THW® TINTED EPOXY WINTER HARDENER

100% Solids, Solvent Free, Low VOCs

CAUTION

- Avoid contact with skin and eyes. Use full PPE during application including but not limited to, gloves, mask and goggles.
- When used as a self-levelling floor coating, EPO100T® will not profile irregular substrates. For the profiling of defects on horizontal surfaces, a suitable patching or repair mortar will be required.
- The mix ratio is calculated by product volume. **NOT BY PRODUCT WEIGHT**. Mixing products by weight may result in an unsatisfactory cure time or failure of the mix to cure entirely.
- To achieve optimum results in colder climates, you may need to warm the resin or introduce an induction time before application. This will jump-start the curing process. For further information, consult All Purpose Coatings, technical advisers.
- Sunlight and UV radiation can cause discolouration and chalking of the surface. However, this won't affect the coating's protective functions. To avoid discolouration, apply a UV-stable and protective top coat, such as Tetrathane®, Sparta60®, or Sparta Guard.
- Lighter colours may appear translucent when applied as a plain coating and may require additional coats.
- All solvents, corrosives, and spills should be cleaned up as soon as possible.
- **If recoating after 72 hours since the last coat, a mechanical bond will need to be made by sanding the previous coat.**

In an emergency, contact the Poisons Information Centre on 13 11 26 or a doctor for advice. IF THE SITUATION IS LIFE THREATENING, DIAL 000 IMMEDIATELY.

DISCLAIMER: Please ensure you read the SDS & TDS thoroughly & carefully before the use or application of any All Purpose Coatings product. These documents contain information in context to how you will apply the product, including if it is being used in conjunction with any other products or systems, and to what surface the product will be applied. All-Purpose Coatings Pty Ltd does not accept any liability either directly or indirectly for any losses that arise from the use or application of the product in accordance with any advice, specification & recommendation given by the companies' documentation or representatives at any point in time. Application, performance & safety data may change from time to time. It is the user and/or applicators' responsibility to ensure they have the latest copy of any documentation pertaining to their project. Industry standards recommend the accurate recording of times and dates, batch numbers, consumption rates and environmental conditions including substrate and air temperatures, humidity levels and dew point readings during both the application and curing processes. Full material warranties cannot be provided unless all the relevant data has been recorded accurately.

