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460EP INTEPOXY HS TOPCOAT

Two component High solids Epoxy coating system designed to provide a tough and durable finish on metal and masonry surfaces.

- **Product:** Intepoxy (2 Component Epoxy Coating)
- **Mixing Ratio** 4 parts Intepoxy Part A
1 part Intepoxy Hardener Part B by volume.
- **Standard Colours** Can be tinted to full colour range.
- **Thinning** Thin up to 20% using Universal Reducer 101UT-0001
- **Drying Time** Touch dry 4-6 hours providing temperature is above 15°C. Full cure 7 Days
(Ambient temperature above 15 °C and relative humidity below 70%)
- **Recoat Time** Overnight (12hours)
- **Corrosion resistance** Excellent
- **Interior exposure** Excellent
- **Exterior Exposure** Coating will chalk and yellow in direct Sunlight (UV) however the coating's chemical resistance is maintained. **For exterior exposure, Intepoxy must be sealed with suitable UV resistant clear/coloured topcoat.**
- **Abrasion Resistance** Excellent
- **Hot Tyre Resistance** Excellent
- **Chemical Resistance** Excellent
- **Container Size** 4Lt, 16Lt
- **Coverage** 5-8 square meters/Lt
(Subject to substrate and application method)
- **Gloss Level** Gloss

USES:

460EP Epoxy has been formulated for applications where a tough, durable, and chemically resistant coating is required. It is a multi-surface coating suitable for use on metal, wood, masonry, and fibre-glass substrates. Ideal as a direct to metal self-priming topcoat, primer for fiberglass, chemical and abrasion resistant coating for wood/MDF and ideal as a concrete floor coating in workshops, factories, warehouses etc. where a durable chemical resistant finish is required.

GENERAL INFORMATION AND COATING REQUIREMENTS.

Ensure all safety Instructions are followed as per **Material Safety Data Sheet**.

- New concrete must be at least 28 days old and has cured to its specified structural MPA hardness, old concrete must be hard and structurally sound.
- Ensure surface is free from powdery or loose concrete, surface contaminants such as oil, dust, dirt, grease, fuel, adhesives, curing compounds or concrete release agents.
- Be free from defects that could compromise coating adhesion or service performance such as pinholes, cracks, voids, delamination etc.
- Area must be free from standing water. Have no active water ingress or rising moisture that could adversely affect the coating. Areas of dampness, darkened patches or presence of white powdery salts or efflorescence is an indication of constant dampness and presence of water due to Hydrostatic Pressure. (Possible causes could be poor water proofing, drainage, or plumbing issues)
- Allow all surfaces to be painted must be thoroughly dry before applying any coating. **Do not attempt to apply on wet or damp surfaces.** Excessive moisture may cause film defects such as blooming, lower gloss, poor cure, reduced chemical and abrasion resistance and delamination of painted surfaces.
- Previously painted surfaces must be tested for compatibility to **Intepoxy** prior to painting. All surfaces must be free of any loose or flaking paint by grinding back to bare concrete and wiped clean.

RELEVANT AUSTRALIAN REQUIREMENTS

Works shall comply with the applicable provisions of the **National Construction Code (NCC)** and relevant Australian Standards applicable to the project.

Relevant references may include:

- **AS 2870** — Residential slabs and footings, where applicable to residential construction.
- **AS 3600** — Concrete structures.
- **AS 3610** — Formwork for concrete, where applicable.
- **AS 3799** — Liquid membrane-forming curing compounds for concrete, where applicable.
- **AS 1012 series** — Methods of testing concrete.
- Applicable NCC provisions relating to **damp-proofing/vapour barriers to floors on ground**.

For slab-on-ground construction, the NCC identifies the importance of preventing moisture from the ground from reaching the upper surface of the floor. The NCC references AS 2870 for relevant vapour-barrier provisions.

SURFACE PREPARATION

REPAIR DAMAGED CONCRETE

Repair:

- Holes, Cracks, Honeycombing.
- Soft or weak concrete.
- Damaged edges.
- Deep surface defects.

Use two-component epoxy-based repair mortar/putty or polyester putty (builders bog).
Allow repairs to cure before coating.

IDENTIFY CRACKS AND JOINTS

Check the floor for cracks and joints before coating.

Small, non-moving cracks

Clean and repair using a two-component epoxy-based repair mortar/putty or polyester putty (builders bog).

Moving or structural cracks

Do not simply fill these with rigid epoxy.

If a crack continues to move, it may reappear through the coating.

Control joints

Existing saw-cut/control joints should normally remain visible and functional.

Expansion joints

Do not fill or bridge movement joints with rigid epoxy unless the flooring system has been specifically designed for this purpose.

For structural cracks, hydrostatic pressure, significant rising damp, contaminated concrete or unusual industrial exposure, specialist assessment must be obtained before coating.

MECHANICAL GRINDING

Mechanical preparation is the preferred preparation method for resin floor coatings.

Depending on the condition and hardness of the concrete, preparation may include:

- Diamond grinding.
- Shot blasting.
- Scarifying, where required. (Removal of weak surface layer to expose a harder stable surface, more aggressive than diamond grinding or shot blasting)
- Localised mechanical abrasion.

The objective is to remove weak surface material and contaminants and expose a sound concrete surface suitable for mechanical adhesion. Ensure equipment is vacuum assisted to avoid air-borne dust particulate and dust build up on surfaces to be painted.

ACID ETCHING

Acid etching is **not regarded as the default preparation method** for a new slab intended for a high-performance epoxy system. **Mechanical preparation** is preferred where practical because it provides better control over removal of weak concrete, loose, or powdery cement, sand, efflorescence, and surface contaminants.

- Acid etching is recommended only when grinding concrete is not a viable option. After surface has been cleared of contaminants wear chemical resistant gloves, footwear, safety glasses and treat surface evenly with a 10% hydrochloric acid solution using a broom.
- Once surface has been acid etched, thoroughly wash off residues with high pressure water cleaner and allow concrete to completely dry.
- Ensure surface is ready to coat by sprinkling water and ensuring instant penetration, if water fails to penetrate and beads on the surface, repeat the etching process again until sufficient porosity is achieved to enable instant absorption of water droplets.

Note: Ensure the preparation used achieves a dull porous surface. It is not recommended to apply Intepoxy directly onto a shiny, smooth, dense, power-trowelled surface.

ENVIRONMENTAL CONDITIONS

Before and during coating application, note:

1. Measure room/air temperature.
2. Note the Relative Humidity or alternatively measure (RH) with a hygrometer.
3. Measure concrete surface temperature with an IR thermometer or surface probe. If the surface is close to the air temperature, condensation risk is generally lower. If the concrete is several degrees colder than the air, particularly with Relative Humidity $\geq 70\%$, delay coating and improve ventilation/heating/de-humidification.
4. Avoid painting if there is impending rain.
5. Temperature must be above 15°C.
6. Keep the area to be painted under stable conditions rather than heating the air immediately before coating—the concrete surface also needs to warm up.

APPLICATION

Observe all safety data sheet guidelines wear goggles and appropriate safety gear. Ensure good airflow, and ventilation is present otherwise it is advised to wear Australian Standards approved respirator.

1. Mix 4 parts 460IP Intepoxy base to 1 Part Intepoxy 460HD Hardener by volume. (If required mix in anti-slip additive 300gm -500gm per 20 Lt of epoxy)
2. Allow 15 min dwell time and re-stir by hand paddle until uniform for 2-3 min.
3. Apply by brush, or roller to achieve a wet film build of 50-100 micron (solvent resistant) and allow to dry 12hrs.
4. Apply a second coat of as per **Step 1** and allow to dry overnight.

Note: Full cure is achieved in 7-10 days depending on film thickness. Heavier coats will require longer recoat and drying times. Avoid excessive film builds as this can lead to film defects, delamination, poor coating performance and solvent entrapment.

COATING OVER EXISTING PAINT

PREPARATION & PRE-TESTING RECOMMENDATIONS

1. Ensure any loose or flaky sealer is removed by mechanical sanding or wire brush. Wash surface clean to remove any grease, oil or chemicals and **wipe dry**. Vacuum up all loose dust, dirt, or surface contamination.
2. Pre-test existing surface for any reaction such as lifting, wrinkling or adhesion issues by applying a mixed sample of Intepoxy onto several test areas of approx. 30cm x 30cm. If any reaction of the coated surface is immediately apparent such as wrinkling, lifting, blistering, **do not proceed with sealing**.
3. Remove old coating, sand blast, or mechanically grind back to raw concrete ensure all chemical, paint and dust residues are thoroughly removed and proceed with coating as per application instructions.
4. If no reaction is evident, check adhesion after 24 hrs. drying by scratching a straight line on the sealed surface with a blunt end of a knife. If sealer flakes, delaminates or peels away from the scratch, **do not proceed with sealing**. Follow steps as per point 3.
5. If sealer leaves a straight edge with no fraying or lifting, you may proceed with coating as per application instructions.

PREPARING AND COATING METAL SURFACE

NON-FERROUS METAL

Prepare metal surface by wiping off all oil, grease and surface contaminants with a wax and grease remover or suitable solvent and allow to dry. Dispose of used rags in a bucket of water. Do not sand any oxidized metal off the surface especially when preparing galvanised metal.

1. Apply one coat of **120PE Etch Primer** at a film build of 15-25 microns dry film thickness and allow to air dry for 1-2 hrs
2. Mix Intepoxy as per **Application Instructions**
3. Apply first coat of 460HS Intepoxy and allow overnight curing.
4. Apply second coat the following day if required.

FERROUS METAL

Ensure surface is free from dirt and grease or metal scale. Round off all welds and sharp edges. Grind off any weld spatter and remove grease, oil, and other contaminants in accordance with AS1627.1. Prepare metal surface by mechanical sanding or abrasive blast clean to a minimum of AS1627.4 Class 2.5 with a blast profile of 40 – 70 microns. Remove all dust or contaminants by brushing or vacuum cleaning.

1. Mix Intepoxy as per **Application Instructions**
2. Apply first coat of 460HS Intepoxy and allow overnight curing.
3. Apply second coat the following day if required.

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