

## Data sheet B613

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# PML Epoxy Coating

## Introduction

**PML Epoxy Coating** is a low odour, non-taint, solvent free epoxy system specially formulated as a high build floor finish which can be applied by brush, roller or squeegee.

The high build properties of **PML Epoxy Coating** ensure that two coats are normally sufficient to give a high gloss, tile-like, impermeable finish which can be easily cleaned and decontaminated.

**PML Epoxy Coating** has excellent resistance to water and many chemicals including dilute acids, alkalis, salts, detergents, oils and fats. Resistance to mild solvents such as white spirit, petrol and kerosene is good but resistance is limited to more powerful solvents such as aromatic/chlorinated hydrocarbons and ketones.

**PML Epoxy Coating** has an excellent nuclear decontamination rating.

**PML Epoxy Coating** can be optionally made anti-slip, however this will reduce the ease with which the floor can be cleaned.

N.B. For application to walls and ceilings use the special thixotropic grade **PML Epoxy Coating HB** (Data Sheet No. A614)

**PML Epoxy Coating** is available in a standard range of attractive colours, but is not primarily a decorative floor finish.

It is essential that good house-keeping practices are maintained at all times to maximise the performance of **APML Resin Flooring Systems**.

## Typical Applications

Food, dairy and soft drink industries, abattoirs, breweries, chemical plant and nuclear installations.

## Method of Use

### Storage

All materials must be stored prior to use under cover, preferably in a dry heated store. Materials stored at low temperatures (below 10°C) become more viscous and thus difficult to mix and apply. Do not store below 5°C.

If crystals are observed due to low temperature storage, contact **APML Technical Sales Department**.

## Surface Preparation

### Concrete and Sand/Cement Screeds

Where rising damp is likely to be a problem, an efficient damp proof membrane should be installed beneath the concrete screed.

### New Floors

New floors should be **thoroughly dry** (moisture content not higher than 5% measured at a depth of 20mm with a Protimeter "Concretemaster") and fully aged before any work is commenced i.e. 28 days.

The surface must be free from laitance and non-polished. A lightly textured surface similar to medium sandpaper is recommended.

If it is necessary to remove laitance this should preferably be done by grit-blasting or grinding. Alternatively **PML Etch** may be applied in accordance with Data Sheet No. 608.

Very smooth and dense floors - i.e. those which have been power floated - may need to be grit-blasted or ground in order to remove surface polish and provide the necessary texture.

It is essential that any dust created during preparation is completely removed with an industrial vacuum cleaner.

Proprietary floor sealers of the silicate or silicofluoride type **must not be used** prior to application of **PML Epoxy Coating**.

### Old Floors

All traces of oil, grease or other contaminants must be removed.

The following alternative methods may be used, in order of preference:-

- Grit-blasting or mechanical grinding.
- High pressure hot water cleaning using heavy duty detergent followed by **thorough** rinsing with clean water.
- Mechanical scrubbing with a heavy duty detergent or proprietary floor cleaner followed by **thorough** rinsing with clean water.

After cleaning by methods (b) and (c) above, apply **PML Etch** in accordance with Data Sheet No. 608.

After finally washing down, the floor must be allowed to dry **thoroughly** before applying **PML Epoxy Coating**. The use of hot air blowers will be beneficial.

**Caution:** where silicate or silicofluoride sealers or any type of surface coating have been used it is essential that these are first removed by method (a) above before applying **PML Epoxy Coating**.

Certain types of coating may be difficult to remove by grinding and in such cases the **APML Technical Sales Department** should be consulted for advice.

### Surface Irregularities

Where necessary, small surface irregularities such as blow holes etc. should be filled with an **Epoxy Coating Scrape Coat** prepared as follows:

Transfer a pack of mixed **PML Epoxy Coating** (for details of mixing see Application section) to a clean container of at least 5 litre capacity and slowly add, whilst stirring, 600 grams (1.4 litre) of **PML Epoxy Coating Filler**. Stir thoroughly until the material has a uniform paste-like consistency. (Note: the above quantity of filler may be varied slightly to provide the required consistency). Apply the scrape coat by squeegee or steel trowel to fill any irregularities in the concrete surface.

Allow the scrape coat to cure for at least 16 hours, then abrade with a belt sander to give a uniform matt surface ready to receive subsequent

Mild Steel

Grit blast to SA 2½ standard. If the steel can be coated within four hours of grit blasting, the first coat of **PML Epoxy Coating** may be applied without a special primer.

If it is not possible to coat within this period then a good quality two part Epoxy/Polyamide zinc rich primer should be applied and allowed to cure for the manufacturers' recommended period before applying **PML Epoxy Coating**.

Ambient Temperature

The ambient temperature should be at least 15°C during application and curing. If necessary heating should be applied sufficiently in advance of the time of application to ensure that the temperature of the floor and surrounding air is at least this level before commencing work.

Application of PML Epoxy Coating

**PML Epoxy Coating** is supplied as a two part pack consisting of pre-weighed Base (coloured) and Hardener components.

Add the entire contents of the Hardener container (ensuring that it is well drained) into the Base container. Stir **very thoroughly** with a palette knife or preferably a mixing paddle fitted to a slow speed electric drill. Ensure no unmixed material remains on the sides or bottom of the container preferably by emptying the material into another container and re-mixing.

Apply the thoroughly mixed materials in a uniform way by brush, roller or squeegee to the prepared surface. Normally two coats are applied, the second coat being applied after the first coat has become almost hard (12 - 24 hours)

If it is not possible to apply the second coat within this time period then it is essential that the first coat is lightly abraded with a belt sander in order to provide a mechanical key. Vacuum dust.

Optional Anti-Slip Finish

To provide an anti-slip finish, lightly sprinkle **PML 40 Mesh Anti-Slip Aggregate** at a rate of 0.1 kg/m² into the first coat of **PML Epoxy Coating** whilst it is still wet. Apply the second coat of **PML Epoxy Coating** in the usual manner.

Cleaning

All tools and mixing vessels should be cleaned immediately after use with **PML Resin Cleaner** (Data Sheet No. 610) acetone or similar solvents.

Technical Specification

General data for guidance purposes only  
(Approximate figures)

Packing	2 kg pre-weighed packs
Density of mixed material	1.47 kg/litre
Volume of pack	1.36 litres
Coverage per pack (one coat)	
Concrete	6 - 7 m²
Steel	8 - 9 m²
Film thickness per coat	125 - 150 microns
Pot life	15 - 45 minutes
Cure time at 15°C	Approximately 36 hours to accept foot traffic, 4 days to accept heavy traffic or chemical exposure
Shelf life	12 months minimum

Physical Properties  
(Approximate figures)

Modulus of elasticity	1000 N/mm²
Elongation at yield	3 - 4%
Adhesion to: Concrete and Sand/Cement Screeds	Stronger than substrate provided surfaces adequately prepared
Mild Steel	Minimum 7 N/mm² to grit blasted surfaces

Thermal Properties  
(Approximate figures)

Coefficient of linear thermal expansion per °C	60 x 10 <sup>-6</sup>
Maximum service temperature	50°C Continuous 80°C Spasmodic
Resistance to steam cleaning	Not resistant

Chemical Resistance

**PML Epoxy Coating** is resistant to the effects of a wide range of chemicals however it is important that advice is sought from the **APML Technical Sales Department** before the product is specified.

Health and Safety

This product contains substances that are classified as hazardous according to the Classification, chemicals (Hazard informayion and pakaging for supply) regulations 1994 (as amended). The product is labelled in accordance with these regulations and further information regarding health hazards, handling, storage etc. is detailed in the Material Safety Data Sheet(s). In addition to considering the advice given by APML, all users must conform to the Control of Substances Hazardous to Health Regulations, 1994 (As amended).

All coverages and thicknesses quoted are nominal and will be affected by substrate profile and porosity.

The information in this Data Sheet, given in good faith, is based on results gained from experience and tests. Since application and use are beyond our control, no condition or warranty is given covering the results from the use of our products in any particular case, whether the purpose is disclosed or not, and we cannot accept any responsibility for any loss or damage, howsoever caused arising from the said use.