

Data sheet C646

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PML Epoxy Screed SD - Low Odour

Introduction

PML Epoxy Screed SD - Low Odour is a thin screed flooring system for application at 5 - 6mm thickness. It is especially suitable for applications in food processing areas where freedom from taint during application is essential.

PML Epoxy Screed SD - Low Odour is easy to lay and due to the unique blend of fillers does not stick to the trowel. Very little pressure is required to consolidate the material giving a dense screed which does not require additional sealer coats to provide an impervious topping. The finish is inherently anti-slip in nature.

PML Epoxy Screed SD - Low Odour is available in a standard range of attractive colours, but is not primarily a decorative floor finish.

A sealer coat of PML Screed Primer Low Odour will improve cleaning properties if area is to be subjected to spillage of dry powders etc. which are likely to be ground into the surface.

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

For application to vertical surfaces e.g. skirtings, upstands and covings, use PML Epoxy Render - Low Odour (Data Sheet No. C683).

Typical Applications

Food and drink processing areas, abattoirs, dairies, breweries, storage areas, and pharmaceutical plants.

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

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

New Floors

New concrete 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 wood float finish is ideal.

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 coarse ground in order to remove surface polish and provide the necessary open 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 Screed SD - Low Odour flooring.

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, mechanical grinding or planing.
- 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 Screed SD - Low Odour flooring. 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 Screed SD - Low Odour flooring.

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.

Ambient Temperature

The ambient temperature should be a minimum of 10°C and preferably at least 16°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.

Priming

Use PML Screed Primer - Low Odour (Data Sheet No. C611) which is supplied in a 2 kg pack containing separate base and hardener components.

Thoroughly mix the two components together with a palette knife, flat piece of wood or preferably a slow speed drill fitted with a mixing paddle. Apply the mixed material with a lambswool or long pile synthetic fibre roller. Cut in any edges etc. by brush. Spread uniformly over the prepared surface ensuring the substrate is well 'wetted'. Do not apply excess primer or allow the primer to pond as this will cause difficulties during application of the screed.

A 2 kg pack of PML Screed Primer - Low Odour will cover 7 - 9m² depending on porosity and/or profile of the surface.

The PML Epoxy Screed - Low Odour must be applied while the primer is still wet or tacky. In no circumstance should the primer be allowed to cure to touch dry before the screed is applied.

Application of Screed

PML Epoxy Screed SD - Low Odour is supplied as a two component pack. The Base component consists of a factory blended mixture of epoxy resin with specially graded fillers to which is added a low odour Hardener component.

PML Epoxy Screed SD - Low Odour should be mixed by means of a forced circulation mixer e.g. 'Cretangle' or similar. Free-fall mixers of the type used to mix concrete are not recommended nor is mixing by hand.

Empty the Base component into the mixing drum and start the mixer. Whilst the drum is rotating add the contents of the Hardener component ensuring that it is well drained. Continue mixing until the Hardener is thoroughly dispersed throughout the mix and a uniform consistency has been achieved. A mixing time of approximately two minutes is usually sufficient.

Note: Do not over-mix as this will lead to excessive air entrapment and formation of heat which will cause application difficulties and a reduction in pot life of the mix.

For best results, PML Epoxy Screed SD - Low Odour should be laid in alternate bays using screeding bars of approximately 1mm less than the required thickness of finish.

Apply the mixed PML Epoxy Screed SD - Low Odour to the primed substrate and level off using the screeding bars as a guide to thickness. Consolidate the material to give a dense screed and finish with a steel float. When the first bays have cured lay the alternate bays.

Note: Always prime the edges of existing bays to ensure a liquor-tight joint between bays.

For expansion joints in floors use ACALOR No. 20 Expansion Jointing (Data Sheet No. C726).

Technical Specification

General data for guidance purposes only (Approximate figures)

Packing	20 kg pre-weighed packs
Density of mixed floor	2.05 kg/litre
Volume of pack	9.8 litres
Coverage per pack	Approximately 1.7m ² at 5mm thickness
Pot life	45 minutes at 15°C
Cure time at 15°C	Approximately 24 hours to accept foot traffic, 4 days to accept heavy traffic or chemical exposure
Shelf life	12 months minimum

Physical Properties (Approximate figures)

Compressive Strength to BS 6319 Pt 2	50-55 N/mm ² (70mm cubes tested after 7 days)
Flexural Strength to BS 6319 Pt 3	23.5 N/mm ²
Tensile strength	10 - 11 N/mm ²
Water absorption	Sample 30mm diameter x 6mm thick fully immersed for 7 days. 0.1% absorption by weight
Adhesion	Stronger than concrete provided surface adequately prepared
Slip resistance	Anti-slip

Thermal Properties (Approximate figures)

Coefficient of linear thermal expansion per °C	25 x 10 ⁻⁶
Maximum service temperature	60°C Continuous 90°C Spasmodic

Chemical Resistance

PML Epoxy Screed SD - Low Odour 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 Chemicals (Hazard Information and Packaging 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.