DUPOXY™

DUPOXY SL 100

Flow applied, 0.5 - 1.5 mm thick, water based, damp-tolerant, epoxy resin floor topping

Description

Dubond's Dupoxy SL 100 is a four component, pre-weighed water based epoxy self leveling top coating, consists of graded aggregates bound in a pigmented epoxy resin, which is laid at a thickness from 0.5mm to 1.5mm.
it provides a Hygenic, Non porous, smooth, seamless, monolithic, and light-reflective surface with chemically resistant properties. It is available in a range of standard (RAL) colours

Uses

Dupoxy SL 100 is designed for use in wide range of industrial environments where a lasting solution to floor maintenace problems is required. It provides a dense, impervious, coloured and chemically resistant floor surface which is hygenic and easy to clean. Typical application include...

- Clean Rooms.
- Dairies
- Soft drinks production facilities.
- Chemical manufacturing plants.
- Plant Rooms.
- Light industrial plants.

Advantages

- Damp Tolerant - No application delays.
- Chemically resistant - Good resistance to a wide range of chemicals.
- Durable - Good abrasion resistance.
- Hygenic - Provides a dense, impervious, seamless floor surface which is easily cleaned.
- Attractive - Available in a wide range of colours to enhance the working environment.

Specification

Flow applied water miscible damp tolerant, epoxy resin floor topping.
The designated floor areas shall be surfaced with Dupoxy SL 100 a 0.5 -1.5 mm thick flow applied, water miscible damp tolerant, epoxy resin floor topping. The topping shall achieve a compressive strength to 25 N / mm^2 and a flexural strength of 11 N / mm^2 at 7 days when tested to BS6319. At 35°C, it shall be capable of accepting foot traffic at 24 hours and vehicular traffic at 48 hours.

Properties

The values given below and average figures achieved in laboratory tests. Actual values obtained on site may show minor variations from those quoted.

Mixed Density	1.50 gm / cc
Flow	0 min : 23 cm
	15 min : 30 cm

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Particulars	@ 23°C	@ 35°C
Pot Life	1 hour	30 mins.
Complete Cure	7 days	5 days
Compressive strength @25°C 7 days (BS 6319 pt 2)	25 N / Sq. mm	25 N / Sq. mm
Flexural strength @25°C 7 days (BS 6319 pt 3)	11 N / Sq. mm	11 N / Sq. mm
Tensile strength @25°C 7 days (BS 6319 pt 7)	5 N / Sq. mm	5 N / Sq. mm
Adhesion strength @ 7 days (ASTM D 412)	1.5 N / Sq. mm	1.5 N / Sq. mm
Application Thickness	0.5 - 1.5 mm	0.5 - 1.5 mm

Chemical Resistance

Dupoxy SL100 is resistant to spillages of the following, when tested in accordance with ASTM D 1308 C 1.3.1.2.

ACIDS (m/v)

HCL (18%)	Resistant
H_2SO_4 (25%)	Discolours
Citric Acid (25%)	Resistant
Acetic Acid (10%)	Resistant

ALKALIS(m/v)

NaOH (50%)	Resistant
KOH (50%)	Resistant
Petrol (25%)	Resistant
Skydrol (10%)	Resistant
Diesel	Resistant
Brake Fluid	Resistant
Engine Oil	Resistant
Ethylene Glycol	Resistant
Propylene Glycol	Resistant
Kerosene	Resistant

AQUEOUS SOLUTION

Water (Tap/Distilled/Potable)	Resistant
Sodium Chloride (sat)	Resistant
Urea Solution (sat)	Resistant

Chemical Properties

Dupoxy SL 100 has good resistance at ambient temperatures to a wide range of industrial chemicals. Specific data is available on request. Note that it is especially important that spillage is cleaned up quickly since much higher concentrations of chemicals may occur on evaporation. For details of other chemicals, please contact your local Dubond office.

Design Criteria

Dupoxy SL100 is designed for application at a nominal thickness of between 0.5 - 1.5mm.

Instruction for use

Dupoxy SL 100 should be applied by specialist contractors who must follow the procedures laid down in the product method statement. Dubond works with a network of such applicators who have been trained in the correct installation procedures. The following steps are involved in the application which would normally take place over a 2 to 3 day period.

Surface Preparation

It is essential that Dupoxy SL 100 is applied to sound, clean and damp surfaces in order that maximum bond strength is achieved between the substrate and the flooring system. All dust and debris should be removed prior to application of the product or its primer.

New Concrete Floors

New Concrete, or cementitious substrates, should be at least 3 day old. Laitance deposits on new concrete are best removed by light grit blasting, mechanical scabbling or grinding.

Old Concrete Floors

Existing concrete floors which require refurbishment must be prepared to ensure a strong adhesive bond between the flooring system and the existing floor. Mechanical cleaning methods are strongly recommended particularly where heavy contamination by oil and grease has occured or existing coatings are present. To ensure adhesion, all contamination should be removed. Proprietary chemical degreaser may be used on small areas of light contamination only

Steel Surfaces

Steel surfaces should be degreased and grit blasted to SA2½ immediately prior to application. The prepared surface should than be treated with one coat of Dupoxy Prime FS.

Priming

All surfaces to be treated with Dupoxy SL 200 should be primed with Dupoxy Prime SFW & SFD, a solvent based epoxy resin primer designed for maximum absorption and adhesion to concrete substrates.

Add the entire contents of the hardener tin to the base tin and mix the two primer components thoroughly for at least 2 minutes under no circumstances should part mixing be considered.

Once mixed, the primer should be applied immediately to the prepared substrate using stiff brushes and/or rollers. The primer should be well 'scrubbed' into the substrate to ensure full coverage, but care should be taken to avoid over application or 'ponding'.

Allow the primer to dry (see table below) before proceeding to the next stage. Do not proceed whilst the primer is 'tacky' as this will lead to unsightly marks on the finished surface.

Porous substrates may require a second primer coat when the first coat is directly absorbed into the substrate but minimum overcoating times must still be observed (see table below).

The minimum overcoating times will vary slightly according to the porosity of the substrate. However, they should be inaccordance with the following ambient application temperatures.

@ 20°C	@ 30°C	@ 40°C
6 - 24 hours	3 - 16 hours	2 - 10 hours

Mixing

Dupoxy SL 100 flooring is supplied in four pre-weighed packs (base, hardener, aggregate and colour pack) which are ready for immediate on-site mixing. Part mixing of these components is not acceptable and will affect both performance and appearance of the finished floor. Mixing should be carried out using either a forced action mixer; or a heavy duty, slow-speed drill fitted with mixing paddle. All such equipment should be of a type and capacity approved by Dubond. The components should be mixed in a suitably sized mixing vessel. The colour pack should be added to the base container and mixed for 15-30 seconds, until homogeneous. Then add the hardener and mix for further 30 seconds, until an even colour and texture is obtained. Thereafter, the contents of the graded aggregate pack should be slowly added and mixing carried out for a further 3 minutes until a completely homogenous material is obtained.

Application

The applicator should ensure that there are sufficient supplies of plant, labour and materials to make the mixing and subsequent application process a continuous one for any given, independent floor area.

Once mixed, the material must be used within its specified pot life.

The material should be poured onto the prepared and primed substrate as soon as mixing is complete. It should be spread to the required thickness using a serrated trowel; with care taken not to overwork the resin, spreading evenly and slowly.

Immediately after laying, the material should be rolled, using a spiked nylon roller, to remove slight trowel marks, and to assist air release. The rolling should be carried out using a 'back and forth' technique along the same path. An overlap of 50% with adjacent paths is recommended.

Further light rolling may be required to remove surface imperfections, or for subsequent release of trapped air, but should be prior to the setting of the product.

Floor Joints

All existing expansion or movement joints should be followed through the new floor surface.

Joint sealant & joint geometry should be compatible with the floor type used, intended exposure conditions and likely movement characteristics of the substrate - consult the local Dubond office for more details.

Cleaning

Dupoxy Prime SFW and Dupoxy SL 100 should be removed from tools and equipment with Dupoxy Thinner immediately after use. Hardened material can only be removed mechanically.

Maintenance

The service life of a floor can be considerably extended by good housekeeping. Regular cleaning may be carried out using a rotary scrubbing machine with a water miscible cleaning agent at temperature upto 50°C.

Technical Support

Dubond offers a comprehensive range of high performance high quality, flooring jointing and repair products for both new and existing floor surfaces. In addition, the company offers, a comprehensive technical support service to specifiers, end users and contractors.

Limitations

- In areas where significant thermal shock is likely to occur, for e.g. cold rooms etc., please consult the local Dubond office.
- Dupoxy SL100 should not be applied to asphalt, weak or friable concrete, unmodified sand/cement screeds, PVC tiles or sheet or substrates known to move substantially e.g. steel walkways
- Dupoxy SL100 should not be installed at temperatures below 10°C or above 45°C. If in doubt, or for application outside these temperature limits, please consult your nearest Dubond office.
- In common with all epoxy materials some light shade changes may be experienced over the long term when placed in adverse exposure conditions. Any such change in shade is not regarded as being detrimental to performance.

Packaging

Dupoxy SL 100	15 ltr. pack (incl. colour pack)
Dupoxy Prime SFW	1 & 5 Ltr. pack
Dupoxy Thinner	5 & 20 Ltr. pack

Coverage

Dupoxy SL 100	15 m^2 pack @ 1mm thickness
Dupoxy Prime SFW	5.2 - 6.2 m^2 / ltr.

Note : The coverage figures given are theoretical due to wastage factors and the variety and nature of possible substrates, practical c overage figures will be reduced. Typically, an additional 10% should be allowed for surface irregularities and wastage although this will vary with site conditions.

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Shelf Life

Dupoxy SL100 has a shelf life of 12 months if kept in warehouse conditions at 30°C in the original, unopened pack.

Storage Conditions

Store in dry conditions between 5° C and 30°C, away from sources of heat and naked flames, in the original, unopened packs. If stored at high temperatures the shelf life will be reduced.

Health & Safety

Dupoxy SL100, Dupoxy Prime SFW and Dupoxy thinner should not come in contact with the skin and eyes, or be swallowed.

Ensure adequate ventilation and avoid inhalation of vapours. Some people are sensitive to resins, hardeners and solvents. W ear suitable protective clothing, gloves and eye protection.

In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water. Do not use solvent. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed seek medical attention immediately - do not induce vomiting.

Fire

DupoxyThinner is flammable. Keep away from sources of ignition. No smoking in the event of fire extinguish with CO or foam. Do not use a water jet.

Dupoxy SL 100 is non-flammable.

Flash Points

DupoxyThinner : 33°C

Disposal

Spillages of component products should be absorbed on to earth , sand or other inert material and transferred to a suitable vessel. Disposal of such spillages or empty packaging should be in accordance with local waste disposal regulations.

For further information, refer to the Product Material Safety Data Sheet.

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