

# MASTERSEAL®

## 180

**A non-toxic solvent free high build, protective epoxy resin coating**

### Description

MASTERSEAL 180 is a protective high build epoxy resin coating specifically developed to protect concrete and steel. Supplied as a two-pack system comprising pigmented base and a hardener, it requires only on site mixing to produce an easily applied decorative and chemically resistant finish. MASTERSEAL 180 can be safely used in areas where contact with foodstuffs is envisaged or for coating potable water storage tanks. It is solvent free and can be used with safety in small rooms or tanks without the need to provide special ventilation. MASTERSEAL 180 coatings will not support the growth of bacteria.

### Primary uses

For the internal protection of concrete or metal tanks containing drinking water, certain chemicals, oils and fuel. Contact your Degussa representative for further advice. As an impervious, resilient and chemically resistant floor or wall coating in food manufacturing plants, breweries, canning and bottling factories. As a gas and vapour barrier. As a protective and decorative coating in laboratories, abattoirs, etc. Other usage areas include oil refineries, paper mills, power

stations, garages, hospitals, sugar refineries, hangars and most liquid containment areas.

### Appearance and finish

High gloss, heavy bodied, ultra dense surface. Hygienic and easily cleaned. Standard colours are light grey and dusty grey.

### Advantages

- Durable
- Non-toxic
- Waterproof and protective
- High chemical resistance
- Solvent free
- High build coating
- Easily applied by brush or roller

### Packaging

MASTERSEAL 180 is supplied in 5kg units.

### Typical properties

Pot life at 30°C:	30 minutes
Mixed density:	1.5gm/cm <sup>3</sup> at 25°C
Tack free time:	Approx. 4 hours at 35°C
Initial cure:	12 hours at 30°C
Final cure:	4 days at 30°C
Coverage:	0.29 - 0.40kg / m <sup>2</sup> / coat
Finished film thickness:	180-240 microns per coat
Bond to concrete:	In excess of the cohesive strength of concrete

## Approvals

Water Research Council Approval for use with Potable Water.

## Application procedure

### Surface preparation:

The substrate should be a smooth or semi-smooth sound surface such as concrete or metal. It is most important to ensure that thorough surface preparation is undertaken prior to application of the MASTERSEAL 180 coating.

### Concrete:

Ensure concrete is free from excessive laitance, grease, oil, curing compound, etc. Ensure concrete is sound, cutting back where necessary and making good using suitable Degussa EMACO or CONCRESEIVE repair systems. Ensure all blow holes and surface imperfections are made good prior to application of the MASTERSEAL 180 coating. Ensure concrete is at least 28 days old. Contamination by oil, grease, fats etc. must be removed before other forms of preparation begin. Remove laitance to expose blow holes, by light grit blasting.

### Steel:

All previous surface treatments should be removed taking the surface back to base metal. The base metal should be abraded and preferably shot blasted with grit, steel shot or proprietary abrasive. Where shot blasting is impractical pre-treatment may be carried out

with pneumatic de-scaling guns, tap hammers, rotary wire brushes or by flame scaling.

Cleaning with solvent or a strong detergent is advisable to ensure surface is free from grease etc. Do not allow surface to re-oxidise before application of MASTERSEAL 180.

### Mixing:

MASTERSEAL 180 is supplied in two pre-weighed components, base and reactor. No additions or omissions are required. Add reactor contents to the base component and mix thoroughly for using a slow speed drill fitted with a suitable mixing paddle until a uniform streak free colour is achieved.

### Application:

MASTERSEAL 180 coating can be applied using good quality rollers or short haired brushes or by airless spray. It is recommended that MASTERSEAL 180 coating be applied in two coats of contrasting colours to ensure complete coverage.

Prior to the application of each coat the surface should be examined for signs of pin-holing, etc. Where pin-holing is evident these should be filled using CONCRESEIVE 2200 thixotropic epoxy resin filler.

If the application is delayed more than 16 hours at 40°C or 36 hours at 20°C after the previous coat (the higher the ambient temperature, the shorter the maximum period), then the previous coat must be thoroughly abraded to give an adequate mechanical key and solvent wiped.

### Airless spray:

For application by airless spray, use a 45:1 or higher ratio pump, minimum 9mm dia hoses and HD tip 19-23 thou.

### Overcoating:

Where areas need to be overcoated due to damage etc. it is important that the areas to be treated are well abraded using a stiff rotary wire brush or coarse sand paper to give an adequate key. Completely strip off any unsound coating and proceed with overcoating as for new work.

### Chemical resistance

MASTERSEAL 180 is resistant to intermittent spillages of the following typically encountered chemicals:

- Formaldehyde, 40% solution
- Sulphuric Acid, 50% solution
- Hydrochloric Acid, 50% solution
- Hydrochloric Acid 5% solution
- Lactic Acid, 50% solution
- Nitric Acid, 10% solution
- Sodium Hydroxide, 50% solution
- Diesel oil
- Wine
- Sea and brackish water
- Aviation hydraulic fuels (Skydrol)
- Vegetable oils

**Note:** Higher concentration of mineral acids may cause matting of the surface and colour changes

### Equipment care

All equipment must be cleaned immediately after use with CLEANING SOLVENT NO. 2. Similar cleaning procedures should be adopted for break periods exceeding 15 minutes duration.

### Specification clause

#### MASTERSEAL 180:

Where indicated, apply MASTERSEAL 180 protective epoxy coating as manufactured by Degussa, or similar approved to the following specification:

Composition:	Two component, non-toxic, pigmented solventless epoxy resin based compound.
Coverage:	0.29 to 0.40kg/m <sup>2</sup> /coat, two coats are recommended.
Dry film thickness:	180 to 240 microns/coat.

### Storage

Store under cover out of direct sunlight and protect from extremes of temperature. In tropical climates the product must be stored in an air conditioned environment. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult Degussa's Technical Services Department.

### Safety precautions

As with all chemical products, care should be taken during use and storage to avoid contact with eyes mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical

attention. Keep away from children and animals. Reseal containers after use. For further information, refer to material safety data sheet.

#### Note

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local Degussa representative.  
Degussa reserves the right to have the true cause of any difficulty determined by accepted test methods.

#### Quality

All products produced by Degussa certified manufacturing facilities, are produced to conform to systems designed to meet internationally recognised quality standards.

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