

## Technical Data Sheet – ORBIT HYDROSHIELD

### Description

Hydroshield is a single-part liquid, cold-applied coating based on high-quality acrylic resins, pigments, and other additives. Excellent resistance to mild acids, alkalis, heat, cold water, and ultraviolet rays. Non-toxic, odourless, and non-flammable, provides a seamless protective coating.

### Features Benefits

- Water-based
- Excellent adhesion qualities
- Very good UV stable
- Easy to apply and finish
- Flexible
- Highly crack resistant

**Recommended Use:** For protection of roofs, concrete, tiles, wood, primed metals, etc. It can be applied over polyurethane foam in insulation and other materials to reduce the UV degradation effect. Ideally suitable for flat and sloped roofs new or old.

### Physical Properties

- Volume solids : 51±2%
- Density : 1.25 ±2%Kg/ltr
- Colour\* : White, tint able to desired colours
- VOC : 27 g/liter
- pH : 8-9
- Extension at break up : 300%
- UV Resistance : No effect after 1000 hrs
- Adhesion to concrete : >1.0 N/mm<sup>2</sup>
- Crack bridging ability : >1.0 mm
- Impermeability to water : 1.5 bar (waterproof)
- Superficial film formation : 50 minutes
- Temperature of application : -5°C to +35°C
- Thinner/Cleaner : Potable clean water
- Finish : smooth matt
- Packing size : 18 liters
- Shelf life : 12 months
- Consumption : 2.3 kg at 1mm thickness

**Note:** All values subject to 5-10% tolerance

### Surface Preparation:

The surface of the concrete shall be sound, clean, and uncontaminated. This preparation shall be such as to leave a sound-exposed concrete surface free from dust, loose particles, and any deleterious matter. If the concrete surface is defective or has laitance, it must be cut back to a sound base. Crack treatment: Shrinkages and non-moving structural cracks less than 1.0mm shall be filled with a pre-treatment strip of Fiber of 1.0mm thick extended to 75 mm on both sides of the crack. Voids and honeycombs shall be patched with repair mortar allowing the area to cure before applying the membrane.



**Right angles and bends:**

All right-angle bends must have a coving detail installed. In areas where parapet walls, columns, and pipe penetrations are present, a 45° coving fillet shall be made at all corners using Fiber cloth, a Fiber reinforced shrinkage-controlled mortar for concrete repair to the water-saturated cured surface. All other angles, joints, protrusions, and stress joints should be pre-treated with a heavy application of Hydrosshield extending 150mm on both sides of the coving.

**Movement Joints:**

Allow the patched area to cure before applying the coating. Expansion and movement joints should be sealed with a Polyurethane sealant.

**Priming:**

Hydrosshield diluted with 15% water shall be applied as a primer coat on the concrete surface to seal pores and stabilize the surface. The primer coat can be applied by brush roller or airless spray and should be allowed to dry before application of the coating.

**Mixing:**

Hydrosshield should be stirred before use until a uniform colour and consistency are achieved. The product is ready for use.

**Application:**

Hydrosshield shall be applied by brush, roller, or airless spray in 2 coats to achieve a minimum dry film thickness of 0.5 mm for each coat. The two coats must be applied at right angles to one another once the first coat completely dries.

For substrates that are exposed to movements and deformation or where cracks are expected, a reinforcing glass Fiber mesh shall be spread into the first coat of Hydrosshield before applying the second coat.

A layer of fiberglass mesh should be embedded between the two Hydrosshield coats over pipe culverts, floor drains, corner joints, and floor/wall junctions.

It is recommended to spread sufficient clean silica to the final wet coat of Hydrosshield before applying adhesives. Tiling or finished floor installation Hydrosshield should be carried out as soon as possible after a full cure of coating is established.

**Cleaning**

All tools employed for the application of Hydrosshield can be cleaned with water before it hardens. Cured materials should be mechanically removed.

**Storage and Handling:**

12 months when stored in warehouse conditions below 35°C in the original, unopened packs. The product must be kept in a cool, dry well-ventilated space and away from the source of heat and ignition. Containers must be kept tightly closed and always handled with care. Keep out of reach of children. Health and Safety Always ensure good ventilation during application and drying. Do not eat, drink, or smoke while using the product. Do not breathe vapor or spray when applying paint indoors by spray, wear proper air-supplied



breathing equipment. Respiratory equipment must be suitable for the purpose and meet appropriate standards. When applying paint, it is advisable to wear suitable eye protection, in case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Remove splashes from the skin, use soap and water or recognized skin cleaner. Do not use or store by hanging on a hook. Materials and all related packaging must be disposed of in a safe way in accordance with the full requirements of the local authorities. Do not allow product to enter into wadis, waterways, drains, watercourses, and soil. Only completely emptied containers should be given for recycling. Material safety data sheet (MSDS) available on request.

### **Health and Safety:**

Always ensure good ventilation during application and drying. Do not eat, drink, or smoke while using the product. Do not breathe vapours or spray when applying paint indoors by spray, wear proper air supplied.

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**Disclaimer:** The recommendations contained herein are given in good faith and are meant to guide the user by good painting practices. They are gained from our tests and experiences and are believed to be accurate and reliable. No warranty/guarantee is implied by the recommendations contained herein since the conditions of use; application method, substrate, and cleanliness of the substrate are beyond Orbit Coatings Disinfection & Sterilization Services and MIS Chemical Industries LLC control. Technology may change with time, necessitating changes to this Technical Data Sheet (TDS). Orbit Coatings Disinfection & Sterilization Services L.L.C reserves the right to amend the TDS without any further notice. It is the responsibility of the user to ensure that the latest TDS is being used for reference.

