

Aquaprime/ Chemoxy ESD

Conductive water-based primer for
conductive coating.

Product Description

Aquaprime is a two-component water-based epoxy primer with high electrostatic conductivity.

Storage Conditions/Shelf Life

12 months from the manufacturing date if stored properly in undamaged seal packaging at a temperature between 5°C and -30°C. It should be kept in a cool, well-ventilated area.

Product Data

Appearance / colour:	Aquaprime [R] Resin:	Black Liquid
	Aquaprime [H] Hardener:	Clear liquid

Salient Features

- Easy to apply
- Gives a highly conductive surface
- Water-based system
- Solvent free and odourless system

Uses

- Aerospace / Military areas
- Electronic industry
- Data processing

Mechanical /Physical properties

Property	Test Method	Value and Unit
Mixing Ratio	NA	Pre weighed kit
Finish	CPI* 1001	Non porous, matt
Pot Life		
@ 10 deg °C	CPI 1002	60 min
@ 20 deg °C	CPI 1002	~45 min
@ 35 deg °C	CPI 1002	~25min
Surface Dry @ 35 deg °C	CPI 1002	~20 min
Hard Dry [Open for foot traffic]		~8 hour
@ 35 deg °C		
Coverage	CPI 1010	Pre weighed kit to cover 50 sqm@ 100 micron
Tensile Strength	ASTM C 307	> 90Kg / c * m ^ 2
Electrostatic Behaviour	-	< 10 ^ 3 Ohm

Method of Application

All Chemsol Products are recommended to be applied only by Approved Applicators and should be handled after using proper PPEs like Gloves, mask, goggles, etc.

Substrate Quality

The CDS (clean, dry, sound) test must be conducted before the application of primer to the concrete substrate. The substrate must be free of all contaminants such as dirt, oil, grease, coatings, surface treatments, etc. If in doubt, apply a test area first.

Application conditions



Substrate temperature: 10-40 °C



Substrate moisture content: - <5%



Relative humidity: 80%max

Note: The substrate temperature must be at least 30C above the prevalent dew point temperature to reduce chances of condensation on the floor.

Substrate Quality

Ensure that the concrete substrate has a minimum compressive strength of 250 kg/cm². The CDS (clean, dry, sound) test must be conducted before application of primer/screed coat to the concrete substrate. The substrate must be free of all contaminants such as dirt, oil, grease, coatings, surface treatments, etc. Consider applying a test area if necessary.

Substrate Preparation

Mechanically prepare the concrete substrate to achieve a concrete surface profile between 4-6. This will also aid in removing weak concrete and cement laitance. Suitably established methods like scarification, grinding, abrasive shot blasting, etc., should be employed to achieve the same. Fully expose the blowholes and voids and repair them using appropriate products like Chemprime, Chemseal, etc. Remove oils, grease, wax, etc. by using detergent, low-pressure water, steam, or suitable chemicals, as they create a hindrance in developing a strong bond between the concrete and primer. Prime the surface with Chemprime, Chembase 150 / Chembase 160 (Your Chemsol solutions expert will choose the suitable primer depending on the substrate condition). (Apply Aquaprime/ Chemoxy ESD only on primed, smooth concrete and screed surfaces. The priming coat must be thoroughly cleaned. After this, depending on the system selected, either apply a screed coat followed by fixing of high adhesion Chemopper special grade copper tape/ or copper tape can even be directly applied on the primer by omitting the screed coat. The copper tape is then connected securely to the earthing points. Now Apply a 2K conductive primer coat of Aqua Prime/Chemoxy ESD at a DFT of 100-150 micron. This is followed by the application of Chemstat ESD Topcoat.

Mixing

Pour Aqua prime (R) and add Aqua prime [H] and mix both components thoroughly for 3 min using a low-speed drill (300 - 400 rpm) to minimize entrapping air. Always mix complete packs, never split packs. Visually ensure that the mixture has become homogeneous. Only start the application of Aqua Prime after the priming coat has dried tack-free. Otherwise, there is a risk of wrinkling or impairing the conductive properties. Apply the conductive primer to the prepared substrate, which should be pore-free and pinhole-free. Aquaprime must be applied with a 3/8" nap roller and roller trays. 18-inch (46 cm) roller assemblies and trays are preferred. The roller should be wet in the tray, and then the excess coating is removed by lightly rolling in the tray so as to avoid drips. Then apply 3 pairs of 6 - 8 foot (approx. 1.80 m - 2.40 m) long paths onto the floor. Then spread the material with roller passes perpendicular to the paths of coating. It is extremely important to apply the coating at a rate of 4 - 6 mils (100 - 150 μ m) to achieve proper appearance, texture, and color development, and consistent ESD properties. If areas are too thick, the coating may be too soft; if too thin, the coating will appear very flat in sheen and may exhibit poor electrical properties. Work evenly to avoid late "tie-in" and rerolling to adjacent previously applied material; Doing so may result in color variations.

Cleaning of Tools

Clean all tools and application equipment with water immediately after use. Hardened and/or cured material can only be removed mechanically

Packing: Aquaprime is available in pre weighed kit consisting of Resin, Hardener.

Storage Conditions

Store in a dry and covered shed between 5 °C to 30 °C, away from sources of heat and naked flame.

Handling & Safety

Keep the containers tightly sealed when not in use. Avoid skin contact and inhalation of fumes (if any). While spraying, it is advised to wear a mask. If it comes in contact with the body, wash affected parts with plenty of soap and water. In case of persistent irritation, contact a physician.

Disclaimer: The Information provided is based on our experience, thorough investigations & sophisticated testing methods but due to the vast number of applications and usage methods, Chemsol Polymer Industries cannot accept responsibility of any kind for any particular result. It is the responsibility of the user to verify the suitability of the product for their end use, and in accordance with the rules and regulations of that country /territory. All information provided pertaining to our products should be treated only as guidance tool without any guarantee or warranty of any sorts.

* All CPI test methods are our scientifically designed internal test methods which can be shared upon request.

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