

Adhesion promoting agent**SURFADIOLS 200**

(Alternative to CoatOSil MP 200)

SURFADIOLS 200 is an epoxy functional silane oligomer that may be considered for use as an adhesion promoter or binder in polysulfide, urethane, epoxy and acrylic caulks, sealants, adhesives and coatings. The product is a polyfunctional structure bearing gamma-glycidoxy groups, which is an excellent candidate to consider to reduce emissions of methanol upon hydrolysis of the material as compared with monomeric epoxy silanes. It typically aids adhesion promotion and crosslinking of water borne or solvent based coatings as well as dispersion of metallic pigments in water borne systems.

SURFADIOLS 200 promotes adhesion in a broad range of applications via multiple epoxy and silane groups on each oligomer chain. Its gamma-glycidoxy propyl epoxide ring reacts with many organic groups while its alkoxy silane groups promote adhesion to most inorganic substrates. Condensation of its silanol groups can also provide crosslinks between polymer chains.

Typical properties

Appearance	Light yellow clear liquid
Composition	Epoxy functional silane oligomer
Active substance content	100%
Density (20 °C), g/cm ³	1.11-1.20
Solid Content (120 °C/2h)	90%
Viscosity	30-100mpa.s
pH value	6.0-7.0

Special properties

- Promotes adhesion through its ability to react with various organic functionalities
- Bonds well to many inorganic substrates.
- Significantly reduce methanol emissions
- Used at relatively low levels in water-based, solvent-borne or high-solids systems
- Maintains good hydrolytic stability and storage stability
- Good compatibility with water and solvent-borne systems
- Improves wet and dry adhesion, storage stability and corrosion resistance
- Improves the coating drying speed, hardness, luster, and resistance to water/salt/acid/alkali

Scope of application

The additive is suitable for the following water-based and solvent-based formulations.

Epoxy, acrylic and alkyd resin coatings;

Surface treatment of aluminum silver paste, copper gold powder, and inorganic pigments and fillers.

Incorporation and Processing Instructions

Addition methods:

- a. Resin pre grafting modification method: since inorganic pigments and fillers will participate in the reaction and snatching of the effective components of the auxiliary agent, and the grafting reaction of Surfadiols 200 with the resin requires a certain induction period, it can be used for high color filler systems such as color paint and matt paint, together with the co-solvent in the formula, to fully stir and mix with the resin, and then stand for more than 48 hours, making Surfadiols 200 fully grafted with the resin and prepared as graft modified resin.
- b. Add to the let-down stage. It also requires 48 hours to prepare the board to measure the performance.
- c. For the surface treatment of powder and metal pigments, Surfadiols 200 can directly react with powder or inorganic material after diluted with ethanol.

Recommended Levels

As supplied calculated on resin content: 1.0-3.0%;

Please do test the optimum level, compatibility and storage stability before use the material.

The above recommended levels can be used for orientation. Optimal levels are determined through a series of laboratory tests.

Package and storage

The material is available in 200kg drums and 25kg pails.

Keep containers tightly closed in a dry, cool, and well-ventilated place, away from heat or fire resource. When stored in an original unopened packaging, the product has a shelf life of 12 months from the date of manufacture.