

# IOTA-570 3-Methacryloxypropyltrimethoxysilane

Molecular Formula:  $\text{CH}_2=\text{C}(\text{CH}_3)\text{COO}(\text{CH}_2)_3\text{Si}(\text{OCH}_3)_3$

**CAS NO.: 2530-85-0**

## **Features and Benefits:**

The methacryloxysilane produced by silane IOTA-570.

1. Significantly improves composite strengths when the composite is reinforced with fibreglass roving sized with a typical polyester-compatible formulation. These formulations normally incorporate silane coupling agents, film-forming resins, lubricants and antistatic agents.
2. Enhances the strength performance, both initially and after wet-conditioning, of cured polyester resin composites filled with silica, glass, silicates and many metal oxides.
3. Enhances the wet electrical properties of many mineral-filled composites, such as crosslinked polyethylene and polyvinyl chloride.
4. May be copolymerized with vinyl acetate and acrylate or methacrylate monomers to prepare silylated polymers that are moisture-curable. These silylated polymer may be used in coatings, adhesives and sealants to provide superior adhesion and durability.

## **Typical Physical Properties:**

Determined on commercial material whose properties may vary within the specification limits.

Physical Form	Light yellow to Clear liquid
Colour, Pt-Co	Max 25
Specific Gravity at 20°C, g/cm <sup>3</sup>	1.043~1.053
Refractive Index, n <sub>D</sub> 25°C	1.4285~1.4310
Purity, %	Min 97.0

### **Solubility:**

Silane IOTA-570 is soluble in ethanol, methanol, isopropanol, acetone, benzene, toluene, and xylene. After hydrolysis it is soluble in water with adequate stirring if the pH is adjusted to 4.0. Hydrolysis releases methanol.

### **Application:**

1. Silane IOTA-570 has found its utility in the manufacturing of many intermediate goods such as: unsaturated polyester, ethylene- propylene diene copolymer, polystyrene, ABS, polyurethane, polybutadiene and polyethylene crosslinked by peroxide. For the finished goods like polyester reinforced material, Ethylene- propylene-non-conjugated diene cable and so on. Modified by silane coupling agent, dihydrate gypsum gesso, can not only be used as filling of artificial marble to reinforce the bending strength of board but also greatly reduce the production cost of artificial marble.

2. Glass Fibre Soakage Agent, Glass fibre soakage agent is used in the treatment of glass fiber. It contains film former, lubricant, antistatic, silane coupling agent and water etc. The concentration of the silane coupling agent should be of 0.3%-0.6%.

3. Electrical wire and cable, when used in electrical wire and cable, silane IOTA-570 can greatly improve its mechanical performance and electrical performance in wet state. When applied in argil, silane IOTA-570 can dramatically better the consumption factor, inductance and capacitive reactance of the EPM (ethylene propylene monomer) and EPDM (Ethylene-Propylene-Diene Monomer) systems crossed linked by peroxide and filled with argil. Silane IOTA-570 results 2.5 times better than vinyl silane with the same dosage.

4. Filler Treatment, This silane can improve the mechanical strength of polyester composite materials made from filling white carbon black, glass, silicate and metal oxide in either dry or wet state, for instance, crosslinked polyethylene and polyvinyl chloride.

5. Adhesive and Coating, Silane IOTA-570 can be applied in acrylic resin and polyester adhesive in the purpose of improving its water resistance and adhesion stress with inorganic material, and also lowering its solidification value.

**Validity period and storage:**

Stored in cool and dry place, avoiding water, tinder, heat source and light, the validity period will be 6 months on such condition.

**Package:**

1. 25KGS/Plastic Drum
2. 200 KGS/Steel Drum
3. 1000KGS/IBC