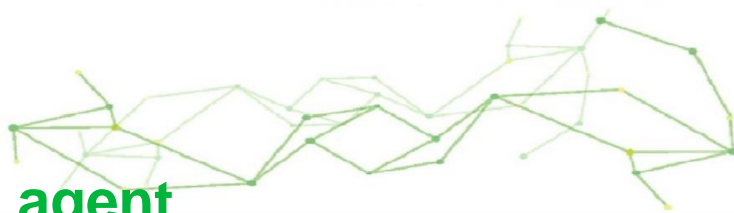




SAD

Silane coupling agent



Overview

SAD is an amino-modified silane coupling agent, primarily used in coatings, inks, adhesives, inorganic pigment and filler surface treatment, and fiberglass industries. It enhances adhesion to metals (e.g., steel, aluminum, zinc, copper, chromium), glass, ceramics, concrete, nylon, polyester, acrylates, Kevlar, fiberglass, and fabrics, and improves water resistance.

Physicochemical Properties

Appearance	Transparent, slightly yellow liquid	Composition	Amino-modified silane coupling agent
Effective content	≥98.0 %	Solvent	None
Density	1.03 g/ml		

Characteristics and Advantages

Hydrolyzed amino silane coupling agents can migrate freely to organic/inorganic interfaces, where the silanol groups form hydrogen bonds with the substrate. These bonds then condense to form -O-Si- bonds, while the amino groups on the other end form chemical covalent bonds with resin polymers, enhancing adhesion.

- Excellent water and water boil resistance.
- Improves the tensile strength, flexural strength, and compressive strength of fiberglass in both dry and wet conditions.
- As an inorganic pigment and filler surface treatment, it provides wetting and dispersibility, reduces oil absorption, and improves processability and appearance.
- Enhances the surface properties of moisture-affected fillers, reducing clumping, facilitating resin wetting of fillers, and lowering the viscosity of premixes while minimizing bubbles in the final product.
- Increases the peel strength of plastic sols on fiber-reinforced materials.
- Can be used as a crosslinking agent for epoxy resins or organic silicone resins; epoxy coatings require the addition of a curing agent.

Application Method

Adhesion Promoter:

1. For direct addition: Use 0.2-2% based on the solid content, either added directly or first diluted with butanol.
2. For primer: Dilute with water and alcohols, then apply directly to the substrate.

Inorganic Pigment and Filler Surface Treatment:

1. Adjust the pH of water to 4 with acetic acid, then add 0.1-0.2% SAD to create an aqueous solution. Apply this solution to the surface of inorganic pigments and fillers.
2. Alternatively, mix SAD directly with inorganic pigments and fillers under low shear for several minutes, then rapidly dry at 104-121 °C.

**Application
Range**

Non-ferrous metals, glass, plastics, surface treatment.

**Precautions
& Storage**

Storage Conditions: 0-40 °C. Store the product in a cool, well-ventilated area, keep the container tightly closed, and away from heat and sources of ignition.

Safety

Refer to MSDS

Packaging

25 KG/Barrel