

## Technical Data Sheet

### Capatue™ SCA-E86M

#### Abstract

**SCA-E86M** is a versatile epoxy functional organosilane possessing a reactive organic epoxide and hydrolyzable inorganic methoxysilyl groups. The dual nature of its reactivity allows SCA-E86M to bind chemically to both inorganic materials (e. g. glass, metals, fillers) and organic polymers (e. g. thermosets, thermoplastics, elastomers), thus functioning as an adhesion promoter, crosslinking agent and/or surface modifier.

#### Chemical Name

2-(3,4-Epoxycyclohexyl)ethyl]trimethoxysilane

#### Synonyms

Trimethoxy[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]silane

#### CAS Registry Number

3388-04-3

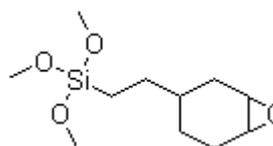
#### EINECS

222-217-1

#### Molecular Formula

$C_{11}H_{22}O_4Si$

#### Molecular Structure



#### Molecular Weight

246.38

#### Equivalents

Product	Supplier
Silquest® A-186	Momentive (formerly OSi Specialties)
Z-6043	Dow Corning
KBM-303	Shin-Etsu

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Sila-Ace® S530	Chisso
E6250	UCT (United Chemical Technologies, Inc)

### Typical Properties

Index	Value
Appearance	Colorless, low-viscosity liquid
GC Purity, %	≥ 98
Specific Gravity ( $\rho_{20}$ ), g/cm <sup>3</sup>	1.0090
Boiling Point (760mmHg), °C	310
Flash Point, °C	113
Solubility	It is soluble in alcohols, ketones and aliphatic or aromatic hydrocarbons. It will hydrolyze in water, and hydrolyzate is easy to self-polymerization.

### Applications and Performance

1. Glass fiber/glass fabric composites: As a finish or a size ingredient.
2. Foundry resins: As an additive to polyurethane resins.
3. Sealants and adhesives: As a primer or additive.
4. Mineral filled composites: For pretreatment of fillers and pigments or as an additive to the polymer.
5. Paints and coatings: As an additive and as a primer for improving adhesion to the substrate, especially glass and metal.
6. Improved shelf life over aminosilanes in polyurethanes.
7. Important product effects that can be achieved through the use of SCA-E86M include:  
 Improved mechanical properties, such as flexural strength, tensile strength, impact strength and modulus of elasticity.  
 Improved moisture and corrosion resistance.

Improved electrical properties, for example dielectric constant, volume resistivity.

### **Packing**

The regular packing of this product is 25kg plastic pail, 200L steel drums and 1000L immediate bulk container.

### **Storage and Shelf Life**

Should be stored in dry, cool, ventilated room; keep away from water, moisture, high temperature and fire. This product has a shelf life of at least 12 months if stored in tightly closed original container at room temperature.

If this product is kept beyond the shelf life recommend on the product label, it is not necessarily unusable, but a quality control should be performed on the properties relevant to the application.

### **Product Safety and Handling**

When considering the use of any Capatue products in a particular application, you should read our latest Material Safety Data Sheets (MSDS) thoroughly for handling instructions, personal protective equipment if necessary, other safety issue and toxicological data as well as for information on proper transportation, storage and use to ensure that the use you intend can be accomplished safely. Our latest Material Safety Data Sheets (MSDS) and other product safety information are available at [www.capatue.com](http://www.capatue.com) or upon request, from our customer service department.

Use of other material in conjunction with Capatue products may require addition precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

**This product is for industry use only; it is neither tested nor represented as suitable for food, medical or pharmaceutical uses.**

### **Limited Warranty Information**

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that Capatue's products are safe, effective, and fully satisfactory for the intended end use.

Suggestions of use shall not be taken as inducements to infringe any patent.

**Capatue's sole warranty is that the product will meet the Capatue sales specifications in effect at the time of shipment.**

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Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

Capatue specifically disclaims any other express or implied warranty of fitness for a particular purpose or merchantability.

Capatue disclaims liability for any incidental or consequential damages.

Customer must do enough tests before their regular production to ensure that our product is suitable for their specific application.