

Technical Data Sheet

Capatue™ SCA-R74M

Abstract

SCA-R74M is an organofunctional silane used to improve the physical and electrical properties of glass reinforced and mineral filled thermoset resin, typically those curing via a free-radical mechanism (e.g. polyester, polyurethanes and acrylics) and in filled or reinforced thermoplastic polymers, including polyolefins and thermoplastic polyurethanes.

Chemical Name

3-Methacryloxypropyltrimethoxysilane

Synonyms

3-Trimethoxysilyl-propyl-methacrylate;
 [3-(Methacryloyloxy)propyl]trimethoxysilane;

CAS Registry Number

2530-85-0

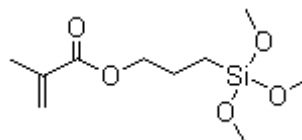
EINECS

219-785-8

Molecular Formula

$C_{10}H_{20}O_5Si$

Molecular Structure



Molecular Weight

248.35

Equivalents

Product	Supplier
Silquest® A-174	Momentive (formerly OSi Specialties)
Z-6030	Dow Corning
MEMO	Evonik (formerly Degussa)

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GENIOSIL® GF 31	Wacker
KBM-503	Shin-Etsu
Sila-Ace® S710	Chisso
M8550	UCT (United Chemical Technologies, Inc)

Typical Properties

Index	Value
Appearance	Colorless, transparent liquid
GC Purity, %	≥ 98
Specific Gravity (ρ_{25}), g/cm ³	1.045
Boiling Point (760mmHg), °C	255
Refractive Index (n_D^{25})	1.4295
Flash Point, °C	108
Free Chlorine, ppm	≤ 30
Solubility	Soluble in water after hydrolysis, alcohol, acetone, and most aliphatic esters at normal application levels fewer than 5%. Hydrolysis releases methanol.

Applications and Performance

1. Significantly improves composite strengths when the composite is reinforced with fiber glass 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 fiber, silicates and many metal oxides.
3. Enhances the wet electrical properties of many mineral-filled composites, such as

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crosslinked polyethylene and polyvinyl chloride.

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 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.