

MATERIAL SAFETY DATA SHEET

NFPA	HMIS	Personal Protective Equipment						
	<table border="1"> <tr> <td style="background-color: #0056b3; color: white;">Health Hazard</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="background-color: #d62728; color: white;">Fire Hazard</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="background-color: #ffff00; color: black;">Reactivity</td> <td style="text-align: center;">0</td> </tr> </table>	Health Hazard	1	Fire Hazard	2	Reactivity	0	
Health Hazard	1							
Fire Hazard	2							
Reactivity	0							
See Section 8.								

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION	
Product code:	T2668
Product Name:	3-(TRIMETHOXYSILYL)PROPYL METHACRYLATE
Chemical Name:	1-Propanol, 3-(trimethoxysilyl)-, methacrylate
Synonyms:	2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester 3-(Trimethoxysilyl)-1-propanol methacrylate gamma-Methacryloxypropyltrimethoxysilane Methacrylic acid, 3-(trimethoxysilyl)propyl ester Silane, (3-hydroxypropyl)trimethoxy-, methacrylate [3-(Methacryloxy)propyl]trimethoxysilane Silliane A174
Recommended use:	Coupling agent for the promotion of resin-glass, and resin-resin bonds, for the formulation of adhesives having "built-in" primer systems. Coupling agent for room temperature-cured polymers.
CAS #:	2530-85-0
Formula:	C10-H20-O5-Si
RTECS #	UC0230000
CI#:	Not available
Supplier:	Spectrum Chemicals and Laboratory Products, Inc. 14422 South San Pedro St. Gardena, CA 90248 (310) 516-8000
Emergency Telephone Number:	CHEMTREC: 1-800-424-9300
Contact Person:	Martin LaBenz (West Coast)
Contact Person:	Chris Terpak (East Coast)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW			
CAUTION! COMBUSTIBLE LIQUID. May cause skin and eye irritation. May cause irritation of respiratory tract.			
Odor:	Physical state:	Appearance:	Color:
No information available	Liquid.	No information available	Clear. Colorless. Light yellow.

2. HAZARDS IDENTIFICATION

OSHA Regulatory Status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

POTENTIAL HEALTH EFFECTS

Principal Routes of Exposure:

Skin. Ingestion. Eyes.

Acute Potential Health Effects:

Skin Contact:

May cause skin irritation.

Eye Contact:

Contact with eyes may cause irritation.

Inhalation:

May cause irritation of respiratory tract. May affect the urinary system.

Ingestion:

May cause digestive (gastrointestinal) tract irritation. It may affect the kidneys.

Chronic Potential Health Effects:

Component

3-(Trimethoxysilyl)propyl
Methacrylate
2530-85-0 (100)

Carcinogen Status:

No information available

Target Organs:

Kidneys.

Teratogenic Effects:

No information available

Mutagenic Effects:

No information available

Aggravated Medical Conditions: No information available

See Section 11 for additional Toxicological Information

POTENTIAL ENVIRONMENTAL EFFECTS

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
3-(Trimethoxysilyl)propyl Methacrylate	2530-85-0	100

4. FIRST AID MEASURES

General Advice:

Poison information centres in each State capital city can provide additional assistance for scheduled poisons (13 1126)

Product code: T2668

Product name: 3-
(TRIMETHOXYSILYL)PROPYL
METHACRYLATE

2 / 11

Skin Contact:	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops.
Eye Contact:	Flush eye with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.
Inhalation:	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion:	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.
Notes to Physician:	Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flammable Properties

Flashpoint (°C/°F):	92 °C/197.60°F
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Tested according to: Closed cup

Lower Explosion Limit (%):	0.9%
Upper Explosion Limit (%):	5.4%

Autoignition Temperature (°C/°F):	265 °C/509 °F
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Suitable Extinguishing Media:	Dry chemical. Carbon dioxide (CO ₂). Water spray mist or foam.
Unsuitable Extinguishing Media:	No information available.
Hazardous Combustion Products:	Carbon monoxide; Carbon dioxide; Silicon oxides
Specific hazards:	Combustible material. May be ignited by heat, sparks or flames. Container explosion may occur under fire conditions or when heated.
Special Protective Equipment for Firefighters:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear
Specific Methods:	Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded.

Environmental Precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods for Cleaning Up:

Absorb spill with inert material (e.g. vermiculite, dry sand or earth), then place in a suitable chemical waste container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE**Handling****Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

Safe Handling Advice:

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Do not breathe vapors or spray mist. Handle in accordance with good industrial hygiene and safety practice.

Storage**Technical Measures/Storage Conditions:**

Moisture sensitive. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep refrigerated. Keep at temperatures between 2 and 8 °C. Store away from incompatible materials. Store under inert gas. Store under nitrogen.

Incompatible Products:

Oxidizing agents. Acids. Bases.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Engineering measures to reduce exposure:**

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Personal Protective Equipment

Eye protection: Safety glasses with side-shields. Safety glasses.

Skin and body protection: Long sleeved clothing. Chemical resistant apron. Gloves.

Respiratory protection: Respiratory protection is not necessary for normal handling. Good room ventilation or use of local exhaust (fume hood) is sufficient. Use a vapor respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapor, inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

National occupational exposure limits**United States**

U.S Occupational Exposure Limits: Not determined

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
3-(Trimethoxysilyl)propyl Methacrylate - 2530-85-0	None	None	None	None

Canada

Canada Occupational Exposure Limits: Not determined

Components	Alberta	British Columbia	Ontario	Quebec
3-(Trimethoxysilyl)propyl Methacrylate 2530-85-0	None	None	None	None

Australia and Mexico

Occupational Exposure Limits for Australia and Mexico: Not determined

Components	Australia	Mexico
3-(Trimethoxysilyl)propyl Methacrylate 2530-85-0	None	None

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:

Liquid.

Appearance:

No information available

Color:

Clear. Colorless. Light yellow.

Odor:

No information available

Taste

No information available

Molecular/Formula weight:

248.40

Flash point (°C):

92

Lower Explosion Limit (%):

0.9%

Upper Explosion Limit (%):

5.4%

Autoignition Temperature (°C/°F):

265 °C/509 °F

pH:

No information available

Boiling point/range(°C/°F):

190 °C/374 °F

Melting point/range(°C/°F):

No information available

Decomposition temperature(°C/°F):

No information available

Specific gravity:

1.045 @25 °C

Density (g/cm³):

No information available

Bulk density:

No information available

Vapor pressure @ 20°C (kPa):

0.13

Vapor density:

8.57

Evaporation rate:

No information available

VOC content (g/L):

No information available

Odor threshold (ppm):

No information available

Partition coefficient

(n-octanol/water):

No information available

Miscibility:

No information available

Solubility:

Soluble in Acetone

Soluble in Ether

Soluble in Benzene

Soluble in Methanol

Soluble in hydrocarbons

Insoluble in water

10. STABILITY AND REACTIVITY

Stability:

Stable at normal conditions

Product code: T2668

Product name: 3-
(TRIMETHOXYSILYL)PROPYL
METHACRYLATE

5 / 11

Conditions to avoid:	Heat. Ignition sources. Exposure to moist air. Exposure to moisture.
Materials to avoid:	Strong oxidising agents. Strong acids. Strong bases.
Hazardous decomposition products:	Carbon monoxide. Carbon dioxide. Silicon oxides.
Possibility of Hazardous Reactions:	No information available
Polymerization:	Hazardous polymerisation does not occur
Corrosivity:	No information available
Special Remarks on Corrosivity:	No information available

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

3-(Trimethoxysilyl)propyl Methacrylate - 2530-85-0

LD50/oral/rat =

22600 µL/kg Oral LD50 Rat

LD50/oral/mouse = No information available

LD50/dermal/rabbit =

No information available

LD50/dermal/rat = No information available

LC50/inhalation/rat = No information available

LC50/inhalation/mouse = No information available

Other LD50 or LC50 information =

No information available

Product Information

LC50/inhalation/rat = No information available

LC50/Inhalation/mouse = No information available

LD50/dermal/rabbit =

No information available

LD50/dermal/rat = No information available

LD50/oral/rat = 22600 µL/kg

LD50/oral/mouse = No information available

Local Effects

Skin irritation: May cause skin irritation. Mild skin irritation.

Eye irritation: Contact with eyes may cause irritation. Mild eye irritation.

Inhalation: May cause irritation of respiratory tract

Ingestion: May cause digestive (gastrointestinal) tract irritation. May affect urinary system (kidneys).

Sensitization: No information available

Product code: T2668

Product name: 3-
(TRIMETHOXYSILYL)PROPYL
METHACRYLATE

6 / 11

Chronic Toxicity

Chronic Toxicity

Prolonged or repeated inhalation may affect respiration. Prolonged or repeated inhalation may affect the kidneys.

Carcinogenic effects: Not considered carcinogenic

Components	NTP	IARC	OSHA HCS - Carcinogens	ACGIH - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
3-(Trimethoxysilyl)propyl Methacrylate	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects: No information available

Reproductive Effects: No information available

Teratogenic Effects: No information available

Target Organs: Kidneys.

12. ECOLOGICAL INFORMATION

ECOTOXICITY

Toxicity to terrestrial and aquatic plants and animals: Information given is based on data on the components and the ecotoxicology of similar products

Ecotoxicity effects: No data available.

Aquatic toxicity: No information available

Mobility: It is expected to have low mobility based upon estimated Koc.

Persistence and degradability: No information available

Bioaccumulative potential: Potential for bioconcentration in aquatic organisms is low.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
3-(Trimethoxysilyl)propyl Methacrylate	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: Not regulated
Proper Shipping Name: No information available
Hazard Class: No information available

Product code: T2668

Product name: 3-(TRIMETHOXYSILYL)PROPYL METHACRYLATE

7 / 11

Packing Group: None
Subsidiary Risk: Not applicable
Marine Pollutant: No data available
ERG No: No information available
DOT RQ (lbs): No information available

TDG (Canada)

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available
Description: No information available

ADR

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available
Classification Code: No information available
Description: No information available
CEFIC Tremcard No: No information available

IMO / IMDG

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Description: No information available
IMDG Page: No information available
Marine Pollutant: No information available
MFAG: No information available
Maximum Quantity: No information available

RID

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available
Classification Code: No information available
Description: No information available

ICAO

UN-No: Not Regulated
Hazard Class: No information available
Proper Shipping Name: No information available
Packing Group: No information available
Subsidiary Risk: No information available
Description: No information available

IATA

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available

Packing Group: No information available
Subsidiary Risk: No information available
Description: No information available

15. REGULATORY INFORMATION

International Inventories

Components	U.S. TSCA	Philippines (PICCS)	KOREA KECL	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
3-(Trimethoxysilyl)propyl Methacrylate	Present	Present	KE-23175	2-2076	Present	Present	219-785-8

U.S. Regulations

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
3-(Trimethoxysilyl)propyl Methacrylate	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting <i>de minimis</i>
3-(Trimethoxysilyl)propyl Methacrylate	None	None	None	None	None

U.S. TSCA

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
3-(Trimethoxysilyl)propyl Methacrylate	Not Applicable	Not Applicable

Canada

WHMIS hazard class:

B3 Combustible liquid

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
3-(Trimethoxysilyl)propyl Methacrylate	1 %

Inventory

Components	Canada (DSL)	Canada (NDSL)
3-(Trimethoxysilyl)propyl Methacrylate	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
3-(Trimethoxysilyl)propyl Methacrylate	Not listed	Not listed

EU Classification

R -phrase(s)

not determined

S -phrase(s)

none

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Not dangerous

16. OTHER INFORMATION

The MSDS format complies with ANSI Z400.1-2004 standards.

Preparation Date	22-Jul-2011
Reason for revision:	Not applicable
Prepared by:	Sonia Owen
Literature reference:	No information available

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. The physical properties reported in this MSDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.