



U N I L A M I N T E R N A T I O N A L

UNILAM INTERNATIONAL LIMITED

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MATERIAL SAFETY DATA SHEET: CATALYST A:

1. Company Information

Company:

Unilam International Limited, Ravenscliffe Road, Calverley. Leeds, LS28 5RZ, United Kingdom

Emergency Telephone No: + 44 (0) 1274 615550 **Emergency Fax No:** + 44 (0) 1274 615540

2. Composition / Information On Ingredients

Substance: Gamma-Methacryloxypropyltrimethoxysilane

Ingredient	CAS No.	Concentration %	Hazard	Danger Symbol(s)
Gamma – Methoxypropyltrimethoxysilane	2530-85-0	>98	None	None
Methanol	67-56-1	<0.2	R11/ R23 / R24 R25 / R39	F T

Notes: Product is inhibited against polymerisation with Monomethylether hydroquinone (MEHQ)

3. Hazard Identification

Main Hazards And Effects: Harmful or fatal if swallowed due to methanol production in the stomach.

4. First Aid Measures

Swallowing: If patient is fully conscious, give two glasses of water. Induce vomiting. Obtain medical attention immediately.

Inhalation: Remove to fresh air. Give artificial respiration if not breathing. If breathing is difficult, oxygen may be given by qualified personnel. Obtain medical attention.

Skin Contact: Remove contaminated clothing. Wash skin with soap and water. If irritation persists or contact has been prolonged, obtain medical attention.

4. First Aid Measures (continued)

Eye Contact: Immediately flush eyes with water and continue washing for several minutes. Obtain medical attention.

Notes To Physician: Product may hydrolyse upon contact with body fluids in the gastrointestinal tract to produce additional methanol; therefore consider the signs / symptoms of methanol poisoning and also observe the known latency period of several days!

5. Fire Fighting Measures

Suitable Extinguishing Media:

Large Fires: Alcohol type foam or universal foam types

Small Fires: CO₂, dry chemical

Unsuitable Extinguishing Media: None

Special Fire Fighting Procedures: None

Protection Of Firefighters: Self-contained breathing apparatus. Protective clothing

Hazardous Decomposition Products: None known

6. Accidental Release Measures

Personal Precautions: Wear suitable protective equipment.

Environmental Precautions: Prevent run-off.

Methods For Cleaning Up: Cover with absorbent or contain. Collect for disposal.

7. Handling And Storage

Handling: Do not swallow. Avoid breathing mist. Use with adequate ventilation. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling.

Storage: General (mechanical) room ventilation is expected to be satisfactory where this product is stored and handled in closed equipment. Special, local ventilation is needed at points where vapours can be expected to escape to the workplace air.

Storage Requirements: Keep container closed.

8. Exposure Controls / Personal Protection

Exposure limits:

Ingredient Type	Value	Remark
Methanol		
8 hours, skin	200 ppm	None
15 minutes, skin	250 ppm	None

Personal Protection:

Respiratory System: Self contained breathing apparatus in high vapour concentrations. Mist respirator, if misting conditions exist.

Skin And Body: Safety shower.

Hands: Chemical resistant gloves. Recommended order of use: 4H, Butyl, Neoprene, Nitrile (NBR), PVC-coated

Eyes: Safety glasses with side shields

Other: Eye bath, safety shower

9. Physical And Chemical Properties

Physical State: Liquid

Colour: Clear, pale

Odour: Ester

Boiling Point: 255°C at 1.013 hPa (estimated)

Melting Point: < -40°C

Flash Point: 108°C Method: Tag Closed Cup (estimated)

Relative Density: 1.045 at 25°C (1.013 hPa) (estimated)

Vapour Pressure: < 1.33 hPa at 20°C

Vapour Density: Heavier than air

Evaporation Rate: <1

Percent Volatiles: Not determined

Solubility In Water: Reacts slowly

Molecular Weight: 248,1

10. Stability And Reactivity

Stability: Product is inhibited against polymerization.

Conditions to avoid:

Heat. High temperatures. Alkalis. Metal salts. Strong oxidizing agents. Free radical initiators, such as peroxides. May cause exothermic polymerisation or degradation of the product.

Incompatible Materials:

Alkalis. Metal salts. Oxidizing Agents. Water. Free radical inhibitors, such as peroxides.

Hazardous Decomposition Products:

Burning can produce the following combustion products: Oxides of carbon. Oxides of silicon. Carbon monoxide is highly toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant. Acute overexposure to the products of combustion may result in irritation of the respiratory tract.

Polymerization: May occur.

11. Toxicological Information

SWALLOWING

Test Results

Acute Toxicity: LD50 – Rat
Result: > 2.000 mg / kg

SKIN ABSORPTION

Test Results

Acute Toxicity: LD50 – Rat
Result: >2.000 mg/kg.

SKIN CONTACT

Acute effects

May cause irritation

Test Results

Skin Irritation Species: Rabbit.
Result: Slight irritation

EYE CONTACT

Acute Effects

May cause irritation

Test Results:

Eye Irritation Species: Rabbit
Result: Mild irritation

MUTAGENICITY:

Genetic Toxicity in Vitro: Test Type: Ames bacterial assay.
Result: Negative.

12. Ecological Information

Ecotoxicity:

Acute Toxicity (Fish): NOEC. Brachydanio rerio. Result: 100mg/l Exposure Time: 96 Hours

Aquatic Toxicity (Plants): NOEC. Scenedesmus subspicatus. Result: > 100 mg/l
Exposure Time: 72 Hours

Acute Toxicity to

Aquatic Invertebrates: NOEC. Daphnia magna. Result: > 100 mg/l Exposure Time: 48 Hours

Persistence And Degradability:

Biodegradation: Not readily biodegradable.

13. Disposal Considerations

Incinerate in a furnace where permitted under national and local regulations.

14. Transport Information

ADR/RID: This product is not regulated by ADR

IMDG: This product is not regulated by IMDG

ICAO: This product is not regulated by ICAO

15. Regulatory Information

EC Classification:

According to EC-regulations this product is not classified or labelled.

Safety phrases: If swallowed, seek medical advice immediately and show this document or container label. Swallowed product will hydrolyse in the stomach and produce methanol, which is toxic.

Regulatory data – Germany

VBF: Not subjected to VbF

WGF: 1, Low hazard to waters, VwVwS, Annex 3
KBwS 4427

Chemical Inventory

Canada: The ingredients of this product are on or exempt from the DSL.

Europe: 219-785-8

United States: The components of this product are listed on the TSCA inventory or are exempt.

16. Other Information

DISCLAIMER:

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

17 May 2005