

MATERIAL SAFETY DATA SHEETS
For
3-(TRIMETHOXYSILYL)PROPYL METHACRYLATE

No.:EM160629043CE002

Date: Jul.06, 2016

Page 1 of 12

Prepared for : PHOMI MCM CO.,LTD.

Address : 112 ZHONGSHENG ROAD,PANYU DISTRICT,GUANGZHOU,CHINA

Prepared by : EMTEK (Shenzhen) Co., Ltd.

Address : GROUND FLOOR, WEST SIDE OF ELECTRONIC FACTORY OF EVOC
TECHNOLOGY INDUSTRIAL PARK,NO.11 GAOXIN ROAD, GUANGMING
STREET, GUANGMING NEW DISTRICT, SHENZHEN, GUANGDONG, CHINA

Tel : (0755) 36352112

Fax : (0755) 36352113

Report Number : EM160629043C002

Date of Conduct : Jun.29, 2016

Date of Report : Jul.06, 2016

Signed for and on behalf of
EMTEK (Shenzhen) Co., Ltd.

Tested by:

Qu Xiang

Qu xiang
Test engineer

Reviewed by:

Howar

Howar
Technical supervisor

Approved by:

Pascal Shi

Pascal Shi
Authorized signatory
Jul. 06, 2016

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Reports printed overleaf and is intended for your exclusive use. Attention is drawn to the limitations of liability, indemnification and jurisdictional policies defined therein. This test report includes all of the tests requested by you and the results thereof based upon the information that you provided. You have 30 days from date of issuance of this test report to notify us of any error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

MATERIAL SAFETY DATA SHEETS

For

3-(TRIMETHOXYSILYL)PROPYL METHACRYLATE

No.:EM160629043CE002

Date: Jul.06, 2016

Page 2 of 12

1- Identification of the substance /preparation and of the company/undertaking**Product identifier**

Product name : 3-(Trimethoxysilyl)-propyl methacrylate
Alternative names : 3-(Trimethoxysilyl)-propyl methacrylate
Product Item No. /Lot. No : /
CAS No. : Refer to section 2
EC No. : Refer to section 2
Molecular formula : Refer to section 2

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses : Clean hand and sterilization.
Uses advised against : Do not use near heat or ignition sources. Use in a well-ventilated area.

Details of the supplier of the safety data sheet

Registered company : PHOMI MCM CO.,LTD
name
Address : 112 ZHONGSHENG ROAD,PANYU DISTRICT,GUANGZHOU,CHINA
Export to : /
Website : /
Telephone : 020-84515088
Fax : /
E-mail address : 283757115@qq.com

Emergency telephone number

Emergency phone : /

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Reports printed overleaf and is intended for your exclusive use. Attention is drawn to the limitations of liability, indemnification and jurisdictional policies defined therein. This test report includes all of the tests requested by you and the results thereof based upon the information that you provided. You have 30 days from date of issuance of this test report to notify us of any error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

MATERIAL SAFETY DATA SHEETS

For

3-(TRIMETHOXYSILYL)PROPYL METHACRYLATE

No.: EM160629043CE002

Date: Jul.06, 2016

Page 3 of 12

2- Composition / Information on Ingredients

 Substance or Preparation: preparation

Serial Number	Component/Substance	% by wt	CAS Number	EINECS Number	Molecular Formula	Classification
01	3-(Trimethoxysilyl)-propyl methacrylate	100	2530-85-0	219-785-8	C ₁₀ H ₂₀ O ₅ Si	N/A

Note: CAS Number is Chemical Abstract Service Registry Number.

EINECS Number is EUROPEAN Inventory of Existing Commercial Chemical Substance.

N/A denote not applicable.

3 – Hazards Identification

Hazards Classification

Classification of the substance or mixture : Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

Label elements

Pictogram none

Signal word none

Labelling according Hazard statement(s) none

Regulation (EC) No : Precautionary statement(s) none

1272/2008 Supplemental Hazard

Statements none

Safety data sheet available on request.

Other hazards

none

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Reports printed overleaf and is intended for your exclusive use. Attention is drawn to the limitations of liability, indemnification and jurisdictional policies defined therein. This test report includes all of the tests requested by you and the results thereof based upon the information that you provided. You have 30 days from date of issuance of this test report to notify us of any error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

MATERIAL SAFETY DATA SHEETS

For

3-(TRIMETHOXYSILYL)PROPYL METHACRYLATE

No.:EM160629043CE002

Date: Jul.06, 2016

Page 4 of 12

4 - First Aid Measures

Description of first aid measures

- General advice** : Consult a physician. Show this safety data sheet to the doctor in attendance.
- If inhaled** : If breathed in, move person into fresh air. If not breathing, give artificial respiration.
- In case of skin contact** : Wash off with soap and plenty of water.
- In case of eye contact** : Flush eyes with water as a precaution.
- If swallowed** : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 3 and section 11)

Indication of any immediate medical attention and special treatment needed

No data available

5 - Fire-Fighting Measures

Extinguishing media

- Suitable extinguishing media** : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Special hazard arising from the substance or mixture** : Carbon oxides, silicon oxides
- Advice for firefighters** : Wear self contained breathing apparatus for fire fighting if necessary.
- Further information** : Use water spray to cool unopened containers.

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Reports printed overleaf and is intended for your exclusive use. Attention is drawn to the limitations of liability, indemnification and jurisdictional policies defined therein. This test report includes all of the tests requested by you and the results thereof based upon the information that you provided. You have 30 days from date of issuance of this test report to notify us of any error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

MATERIAL SAFETY DATA SHEETS

For

3-(TRIMETHOXYSILYL)PROPYL METHACRYLATE

No.:EM160629043CE002

Date: Jul.06, 2016

Page 5 of 12

6 - Accidental Release Measures

- Person precautions protective equipment and emergency procedures** : Use personal protective equipment. Avoid breathing vapours, mist or gas. Remove all sources of ignition.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
For personal protection see section 8.
- Environment precautions** : Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
- Methods and materials for containment and cleaning up** : Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.
- Reference to other sections** : For disposal see section 13.

7 - Handling and Storage

- Precautions for safe handing** : Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
For precautions see section 3.
- Conditions for safe storage, including any incompatibilities** : Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
Recommended storage temperature: 2 - 8 °C
Moisture sensitive. Handle and store under inert gas. Heat sensitive.
- Specific end use(s)** : Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8 - Exposure Controls / Personal Protection

- Control parameters** : **Components with workplace control parameters**
- Exposure controls**
- Appropriate engineering controls** : General industrial hygiene practice.
- Personal protective equipment**

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Reports printed overleaf and is intended for your exclusive use. Attention is drawn to the limitations of liability, indemnification and jurisdictional policies defined therein. This test report includes all of the tests requested by you and the results thereof based upon the information that you provided. You have 30 days from date of issuance of this test report to notify us of any error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

MATERIAL SAFETY DATA SHEETS

For

3-(TRIMETHOXYSILYL)PROPYL METHACRYLATE

No.:EM160629043CE002

Date: Jul.06, 2016

Page 6 of 12

Eye/face protection

: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,4 mm

Break through time: > 480 min

Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,4 mm

Break through time: > 480 min

Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de,

test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374,

contact the supplier of the CE approved gloves. This recommendation is advisory only and must

be evaluated by an industrial hygienist and safety officer familiar with the specific situation of

anticipated use by our customers. It should not be construed as offering an approval for any

specific use scenario.

Body Protection

: impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Reports printed overleaf and is intended for your exclusive use. Attention is drawn to the limitations of liability, indemnification and jurisdictional policies defined therein. This test report includes all of the tests requested by you and the results thereof based upon the information that you provided. You have 30 days from date of issuance of this test report to notify us of any error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

MATERIAL SAFETY DATA SHEETS

For

3-(TRIMETHOXYSILYL)PROPYL METHACRYLATE

No.:EM160629043CE002

Date: Jul.06, 2016

Page 7 of 12

Respiratory protection

specific workplace.
: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

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

9 - Physical and Chemical Properties

Appearance	: Form: liquid Colour: colourless	Odor	: No available data
Boiling Point	: 190 °C - lit.	Density	: 1,045 g/cm ³ at 25 °C - lit.
Freezing point	: Melting point/freezing point: < -20 °C at ca.1.013,0 hPa - OECD Test Guideline 102	Flashing Point	: 92 °C - closed cup
Explosion Upper Limits	: No available data.	Explosion Lower Limits	: No available data.
Vapor Pressure	: No available data.	Vapor Density	: No available data.
Viscosity	: No available data.	pH	: No available data
Solubility	: No available data		

10 - Stability and Reactivity

Reactivity	: No available data.
Stability	: Stable under recommended storage conditions.
Conditions To Avoid	: Heat, flames and sparks
Possibility of hazard reactions	: No data available
Incompatible materials	: Strong oxidizing agents, Strong acids, Strong bases
Hazardous Decomposition Products	: Other decomposition products - no data available In the event of fire: see section 5

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Reports printed overleaf and is intended for your exclusive use. Attention is drawn to the limitations of liability, indemnification and jurisdictional policies defined therein. This test report includes all of the tests requested by you and the results thereof based upon the information that you provided. You have 30 days from date of issuance of this test report to notify us of any error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

MATERIAL SAFETY DATA SHEETS

For

3-(TRIMETHOXYSILYL)PROPYL METHACRYLATE

No.:EM160629043CE002

Date: Jul.06, 2016

Page 8 of 12

11 - Toxicological Information

Information on toxicological effects

Acute Toxicity	: LD50 Oral - rat - male and female - > 2.000 mg/kg (OECD Test Guideline 401) LC50 Inhalation - rat - male and female - 4 h - > 2,28 mg/l (OECD Test Guideline 403) LD50 Dermal - rat - male and female - > 2.000 mg/kg (OECD Test Guideline 402)
Skin corrosion/irritation	: Skin - rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404)
Serious eye damage/eye irritation	: Eyes - rabbit Result: No eye irritation (OECD Test Guideline 405)
Respiratory or skin sensitisation	: Maximisation Test - guinea pig Result: Does not cause skin sensitisation. (OECD Test Guideline 406)
Germ cell mutagenicity	: Ames test S. typhimurium Result: negative Hamster ovary Result: negative Mutagenicity (micronucleus test) mouse - male and female Result: negative
Carcinogenicity	: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity	: No data available
Specific target organ toxicity-single exposure	: No data available
Specific target organ toxicity-repeated exposure	: No data available
Aspiration hazard	: No data available.

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Reports printed overleaf and is intended for your exclusive use. Attention is drawn to the limitations of liability, indemnification and jurisdictional policies defined therein. This test report includes all of the tests requested by you and the results thereof based upon the information that you provided. You have 30 days from date of issuance of this test report to notify us of any error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

MATERIAL SAFETY DATA SHEETS

For

3-(TRIMETHOXYSILYL)PROPYL METHACRYLATE

No.:EM160629043CE002

Date: Jul.06, 2016

Page 9 of 12

Additional information : RTECS: UC0230000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12 - Ecological Information

Toxicity : Toxicity to fish semi-static test LC50 - Danio rerio (zebra fish) - > 100 mg/l - 96 h
(Directive 67/548/EEC, Annex V, C.1.)
Toxicity to daphnia and other aquatic invertebrates
static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h
(Directive 67/548/EEC, Annex V, C.2.)
Toxicity to algae static test EC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h
(Directive 67/548/EEC, Annex V, C.3.)
Toxicity to bacteria Respiration inhibition EC50 - Sludge Treatment - > 1.000 mg/l - 3 h
(OECD Test Guideline 209)

Persistence and degradability : Biodegradability aerobic - Exposure time 28 d
Result: 69 % - Readily biodegradable.

Bioaccumulative potential : no data available

Mobility in soil : no data available

Results of PBT and vPvB assessment : PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects : no data available

13 - Disposal Considerations

Waste treatment methods

Product : This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company

Contaminated packaging : Dispose of as unused product.

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Reports printed overleaf and is intended for your exclusive use. Attention is drawn to the limitations of liability, indemnification and jurisdictional policies defined therein. This test report includes all of the tests requested by you and the results thereof based upon the information that you provided. You have 30 days from date of issuance of this test report to notify us of any error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

MATERIAL SAFETY DATA SHEETS

For

3-(TRIMETHOXYSILYL)PROPYL METHACRYLATE

No.:EM160629043CE002

Date: Jul.06, 2016

Page 10 of 12

14 - Transport Information

Transport Attentions:

In the case of land, air and ocean shipping, avoid exposure to fire, water, prevent damp and insolation. The products restrict the use of own steel tanker shipment when railway transport, submit to relevant departments for approval. The transport vehicles should be equipped with the appropriate variety and quantity of fire control equipment and emergency equipment for leakage. In summer, best transport in morning or evening. Transport tank should have grounding chain, the inner of tank should have baffle hole plate to reduce static electricity. Ban mixed operation with antioxidants, acid, alkali metal and amine. Prevent insolate, rain and heat in transit. Keep away from fire, heat and high temperature when stopover. Exhaust pipes of transport vehicle must be equipped with fire retardant equipment. Ban load and unload with mechanical equipments and tools that easy to produce the spark. According to prescribed routes when road transport. Do not stay in residential area and densely populated area. Ban humping when railway transport. Ban bulk transport use wooden boats, concrete boats. The container must be handled carefully. Please refer to section 7-HANDING AND STORAGE also, and requirements of the ADR-RID/PG III, IMO/IMDG/PG III, IATA/ICAO/PG III.

Packing Method:

No available data.

Maritime transport IMDG

IMDG Code : Not hazardous goods
UN-Number : Not available data
Packing group : Not available data
Proper shipping name : Not available data

DOT regulations

Hazard class : Not hazardous goods
Identification number : Not available data
Packing group : Not available data
Proper shipping name : Not available data

Land transport ADR/RID(cross-border)

Hazard class : Not hazardous goods
UN-number : Not available data
Packing group : Not available data
Proper shipping name : Not available data

Air transport ICAO-TI and IATA-DGR

ICAO-TI-II class : Not hazardous goods
UN/ID Number : Not available data

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Reports printed overleaf and is intended for your exclusive use. Attention is drawn to the limitations of liability, indemnification and jurisdictional policies defined therein. This test report includes all of the tests requested by you and the results thereof based upon the information that you provided. You have 30 days from date of issuance of this test report to notify us of any error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

MATERIAL SAFETY DATA SHEETS

For

3-(TRIMETHOXYSILYL)PROPYL METHACRYLATE

No.:EM160629043CE002

Date: Jul.06, 2016

Page 11 of 12

Packing group : Not available data

Proper shipping name : Not available data

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

The product is harmless to marine.

15 - Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental

regulations/legislation specific for the substance or mixture : no data available

Chemical Safety Assessment : For this product a chemical safety assessment was not carried out

16 - Other Information

ACGIH	: American Conference of Governmental Industrial
ADR	: European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS	: Chemical Abstracts Service
CLP	: Classification Packaging and Labelling
EC	: European Commission
ECHA	: European Chemicals Agency
EINECS	: The European Inventory of Existing Commercial Chemical Substances
GHS	: Globally Harmonised System of Classification and Labelling of Chemicals
IARC	: International Agency for Research on Cancer
IATA	: International Air Transport Association
IBC Code	: International code for the construction and equipment of ships carrying dangerous chemical in bulk
ICAO	: International Civil Aviation Organization
IMDG	: International Maritime Dangerous Goods
IC50	: Inhibitory Concentration fifty
LC50	: Lethal Concentration fifty
LD50	: Lethal Dose fifty per cent.
MARPOL	: International Convention for the Prevention of Pollution From Ships
REACH	: Registration Evaluation And Authorisation Of Chemicals

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Reports printed overleaf and is intended for your exclusive use. Attention is drawn to the limitations of liability, indemnification and jurisdictional policies defined therein. This test report includes all of the tests requested by you and the results thereof based upon the information that you provided. You have 30 days from date of issuance of this test report to notify us of any error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

MATERIAL SAFETY DATA SHEETS

For

3-(TRIMETHOXYSILYL)PROPYL METHACRYLATE

No.:EM160629043CE002

Date: Jul.06, 2016

Page 12 of 12

RID	:	Regulations Relating to International Carriage of Dangerous Goods by Rail
RTECS	:	Registry of Toxic Effects of Chemical Substances
STEL	:	Short term exposure limit
TWA	:	Time-Weighted Average
OSHA	:	Occupational Safety and Health Administration
NIOSH	:	National Institute for Occupational Safety and Health
TLV-TWA	:	Threshold Limit Value-Time Weighted Average
TLV-STEL	:	Threshold Limit Value-Short Term Exposure Limit
PEL	:	Permissible Exposure Limit
MAK	:	Maximale Arbeitsplatz-Konzentration...

Conductor information

Date: Jul.06, 2016

Data Audit Units: EMTEK (Shenzhen) Co., Ltd.

Disclaimer: The information in this Material Safety Data Sheet (MSDS) was obtained from sources which we believe are reliable; however, the information is provided without any representation of warranty, expressed or implied, regarding the accuracy or correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, use, or disposal of this product. All information, recommendations, and suggestions appearing herein concerning this product are taken from sources or based upon data believed to be reliable.

The End of MSDS

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Reports printed overleaf and is intended for your exclusive use. Attention is drawn to the limitations of liability, indemnification and jurisdictional policies defined therein. This test report includes all of the tests requested by you and the results thereof based upon the information that you provided. You have 30 days from date of issuance of this test report to notify us of any error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.