

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 15.12.2017

Version 13.2

SECTION 1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Catalogue No.	800841
Product name	Methyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

REACH Registration Number	A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.
---------------------------	--

CAS-No.	96-33-3
---------	---------

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

Identified uses	Chemical for synthesis For additional information on uses please refer to the Merck Chemicals portal (www.merckgroup.com).
-----------------	---

1.3 Details of the supplier of the safety data sheet

Company	Merck KGaA * 64271 Darmstadt * Germany * Phone:+49 6151 72-0
Responsible Department	LS-QHC * e-mail: prodsafe@merckgroup.com

1.4 Emergency telephone number	Please contact the regional company representation in your country.
--------------------------------	---

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	800841
Product name	Methyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquid, Category 2, H225

Acute toxicity, Category 4, Oral, H302

Acute toxicity, Category 3, Inhalation, H331

Acute toxicity, Category 4, Dermal, H312

Skin irritation, Category 2, H315

Eye irritation, Category 2, H319

Skin sensitisation, Category 1, H317

Specific target organ toxicity - single exposure, Category 3, Respiratory system, H335

Chronic aquatic toxicity, Category 3, H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word

Danger

Hazard statements

H225 Highly flammable liquid and vapour.

H302 + H312 Harmful if swallowed or in contact with skin.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	800841
Product name	Methyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

H331 Toxic if inhaled.

H335 May cause respiratory irritation.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P240 Ground/bond container and receiving equipment.

P273 Avoid release to the environment.

P280 Wear protective gloves.

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Reduced labelling (≤125 ml)

Hazard pictograms



Signal word

Danger

Hazard statements

H317 May cause an allergic skin reaction.

H331 Toxic if inhaled.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	800841
Product name	Methyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 Wear protective gloves.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

Index-No. 607-034-00-0

2.3 Other hazards

None known.

SECTION 3. Composition/information on ingredients

3.1 Substance

Formula	CH ₂ =CHCOOCH ₃	C ₄ H ₆ O ₂ (Hill)
Index-No.	607-034-00-0	
EC-No.	202-500-6	
Molar mass	86,09 g/mol	

Hazardous components (REGULATION (EC) No 1272/2008)

Chemical name (Concentration)

CAS-No.	Registration number	Classification
---------	---------------------	----------------

methyl acrylate ($\geq 50\%$ - $\leq 100\%$)

96-33-3 *)

Flammable liquid, Category 2, H225
Acute toxicity, Category 4, H302
Acute toxicity, Category 3, H331
Acute toxicity, Category 4, H312
Skin irritation, Category 2, H315
Eye irritation, Category 2, H319
Skin sensitisation, Category 1, H317
Specific target organ toxicity - single exposure, Category 3, H335
Chronic aquatic toxicity, Category 3, H412

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	800841
Product name	Methyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

*) A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

3.2 Mixture

Not applicable

SECTION 4. First aid measures

4.1 Description of first aid measures

General advice

First aider needs to protect himself.

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower. Consult a physician.

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

irritant effects, Allergic reactions, Cough, Shortness of breath, Vomiting, Headache, somnolence, CNS disorders

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	800841
Product name	Methyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Foam, Carbon dioxide (CO₂), Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Combustible.

Pay attention to flashback.

Forms explosive mixtures with air at ambient temperatures.

Vapours are heavier than air and may spread along floors.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Special protective equipment for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system. Suppress (knock down) gases/vapours/mists with a water spray jet.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	800841
Product name	Methyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

Protective equipment see section 8.

6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

Indications about waste treatment see section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Observe label precautions.

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Protected from light.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	800841
Product name	Methyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorised persons.

Recommended storage temperature see product label.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection

Safety glasses

Hand protection

full contact:

Glove material:	butyl-rubber
Glove thickness:	0,7 mm
Break through time:	> 480 min

splash contact:

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	800841
Product name	Methyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

Glove material:	Nitrile rubber
Glove thickness:	0,40 mm
Break through time:	> 30 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 898 Butoject® (full contact), KCL 730 Camatril® -Velours (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Other protective equipment

Flame retardant antistatic protective clothing.

Respiratory protection

required when vapours/aerosols are generated.

Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Environmental exposure controls

Do not let product enter drains.

Risk of explosion.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid
------	--------

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	800841
Product name	Methyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

Colour	colourless
Odour	stinging
Odour Threshold	No information available.
pH	at 20 °C neutral
Melting point/freezing point	-76,5 °C
Boiling point/boiling range	80,1 °C at 1.013 hPa
Flash point	-2,7 °C Method: DIN 51755 Part 1
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	2,8 %(V)
Upper explosion limit	25 %(V)
Vapour pressure	90 hPa at 20,1 °C
Relative vapour density	2,97
Density	0,96 g/cm ³ at 20 °C

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	800841
Product name	Methyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

Relative density	No information available.
Water solubility	60 g/l at 20 °C
Partition coefficient: n-octanol/water	log Pow: 0,739 (25 °C) OECD Test Guideline 107 Bioaccumulation is not expected.
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	0,472 mPa.s at 25 °C
Explosive properties	Not classified as explosive.
Oxidizing properties	none

9.2 Other data

Ignition temperature	415 °C
Viscosity, kinematic	10 mm ² /s at 23 °C

SECTION 10. Stability and reactivity

10.1 Reactivity

Vapours may form explosive mixture with air.

10.2 Chemical stability

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 800841

Product name Methyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

heat-sensitive

Sensitivity to light

Sensitive to air.

tendency towards spontaneous polymerisation

Decomposes on exposure to light.

Stabilizer

hydroquinone monomethyl ether

10.3 Possibility of hazardous reactions

Risk of explosion with:

Peroxides, Strong oxidizing agents, Strong acids, strong alkalis, Activated charcoal

10.4 Conditions to avoid

Warming.

10.5 Incompatible materials

no information available

10.6 Hazardous decomposition products

no information available

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

LD50 Rat: 768 mg/kg

OECD Test Guideline 401

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 800841

Product name Methyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

Acute inhalation toxicity

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

LC50 Rat: < 10,8 mg/l; 4 h ; vapour

OECD Test Guideline 403

Acute dermal toxicity

LD50 Rabbit: ca. 1.250 mg/kg

(ECHA)

Skin irritation

Rabbit

Result: irritating

OECD Test Guideline 404

Causes skin irritation.

Eye irritation

Rabbit

Result: Eye irritation

(IUCLID)

Causes serious eye irritation.

Sensitisation

Local lymph node assay (LLNA) Mouse

Result: positive

Method: OECD Test Guideline 429

May cause an allergic skin reaction.

Germ cell mutagenicity

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	800841
Product name	Methyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

Genotoxicity in vivo

Micronucleus test

Mouse

male

inhalation (vapour)

Bone marrow

Result: negative

(ECHA)

Genotoxicity in vitro

Ames test

Result: negative

(IUCLID)

Carcinogenicity

Did not show carcinogenic effects in animal experiments.

Reproductive toxicity

Animal testing did not show any effects on fertility.

Teratogenicity

This information is not available.

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Target Organs: Respiratory system

Specific target organ toxicity - repeated exposure

This information is not available.

Aspiration hazard

This information is not available.

11.2 Further information

The Safety Data Sheets for catalogue items are available at www.merckgroup.com

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	800841
Product name	Methyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

Possible symptoms:

After absorption:

CNS disorders, Headache, Vomiting, somnolence

Damage to:

Liver, Lungs

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

12.1 Toxicity

Toxicity to fish

flow-through test LC50 *Oncorhynchus mykiss* (rainbow trout): 3,4 mg/l; 96 h

Analytical monitoring: yes

OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates

flow-through test EC50 *Daphnia magna* (Water flea): 2,6 mg/l; 48 h

Analytical monitoring: yes

OECD Test Guideline 202

Toxicity to algae

static test ErC50 *Pseudokirchneriella subcapitata* (green algae): 3,55 mg/l; 96 h

Analytical monitoring: yes

OECD Test Guideline 201

Toxicity to bacteria

static test EC10 activated sludge: > 100 mg/l; 72 h

Analytical monitoring: yes

(ECHA)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

flow-through test NOEC *Daphnia magna* (Water flea): 0,19 mg/l; 21 d

US-EPA

The value is given in analogy to the following substances: ethyl acrylate

12.2 Persistence and degradability

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 800841

Product name Methyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

Biodegradability

90 - 100 %; aerobic

OECD Test Guideline 310

Readily biodegradable

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water

log Pow: 0,739 (25 °C)

OECD Test Guideline 107

Bioaccumulation is not expected.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects

Discharge into the environment must be avoided.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	800841
Product name	Methyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

SECTION 13. Disposal considerations

Waste treatment methods

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14. Transport information

Land transport (ADR/RID)

14.1 UN number	UN 1919
14.2 Proper shipping name	METHYL ACRYLATE, STABILIZED
14.3 Class	3
14.4 Packing group	II
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
Tunnel restriction code	D/E

Inland waterway transport (ADN)

Not relevant

Air transport (IATA)

14.1 UN number	UN 1919
14.2 Proper shipping name	METHYL ACRYLATE, STABILIZED
14.3 Class	3
14.4 Packing group	II
14.5 Environmentally hazardous	--
14.6 Special precautions for user	no

Sea transport (IMDG)

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	800841
Product name	Methyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

14.1 UN number	UN 1919
14.2 Proper shipping name	METHYL ACRYLATE, STABILIZED
14.3 Class	3
14.4 Packing group	II
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
EmS	F-E S-D
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not relevant

SECTION 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Major Accident Hazard	SEVESO III
Legislation	Methyl acrylate 46 Quantity 1: 500 t Quantity 2: 2.000 t

Occupational restrictions	Take note of Dir 94/33/EC on the protection of young people at work. Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.
---------------------------	---

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	not regulated
---	---------------

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC	not regulated
---	---------------

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	800841
Product name	Methyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

Substances of very high concern (SVHC)

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of ≥ 0.1 % (w/w).

National legislation

Storage class 3

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16. Other information

Full text of H-Statements referred to under sections 2 and 3.

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

Training advice

Provide adequate information, instruction and training for operators.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	800841
Product name	Methyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

Labelling

Hazard pictograms



Signal word

Danger

Hazard statements

H225 Highly flammable liquid and vapour.
H302 + H312 Harmful if swallowed or in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P240 Ground/bond container and receiving equipment.
P273 Avoid release to the environment.
P280 Wear protective gloves.

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	800841
Product name	Methyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Regional representation

This information is given on the authorised Safety Data Sheet for your country.

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.