SAFETY DATA SHEET

according to Regulation (FPC) No. 0102/2009

Revision Date Jan. 08, 2018 Version 1.1

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

1.1 Product identifier

Catalogue No.	800835
Product name	2-Ethylhexyl 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 (FPC) No 0102/2009, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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.merck-chemicals.com).

1.3 Details of the supplier of the safety data sheet

Company	Formosa Plastics Corporation R.O.C.
Responsible Department	Linyuan AE Plant +886-07-6419911 Ext 510

1.4 Emergency telephone number

Please contact the regional company representation in your country.

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Specific target organ toxicity - single exposure, Category 3, H335 Skin irritation, Category 2, H315
Skin sensitization, Category 1, H317

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

Classification

	Sensitising	R43
Xi	Irritant	R37/38

For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements

Labelling (REGULATION (FPC) No 1272/2008)

Hazard pictograms



Signal word

Warning

Hazard statements
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.

Precautionary statements
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.

Reduced labelling (≤125 ml)

Hazard pictograms



Signal word
Warning

Hazard statements
H317 May cause an allergic skin reaction.

Precautionary statements
P280 Wear protective gloves.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

Index-No. 607-107-00-7

Labelling (67/548/EEC or 1999/45/EC)

Symbol(s)	Xi	Irritant
R-phrase(s)	37/38-43	Irritating to respiratory system and skin. May cause sensitization by skin contact.
S-phrase(s)	24-37	Avoid contact with skin. Wear suitable gloves.
EC-No.	203-080-7	EC Label

Reduced labelling (≤125 ml)

Symbol(s)	Xi	Irritant
R-phrase(s)	43	May cause sensitization by skin contact.
S-hrase(s)	24-37	Avoid contact with skin. Wear suitable gloves.

2.3 Other hazards
None known.

SECTION 3. Composition/information on ingredients

Formula	$CH_2=CHCOOCH_2CH(C_2H_5)(CH_2)_3CH_3$	$C_{11}H_{20}O_2$ (Hill)
CAS-No.	103-11-7	
Index-No.	607-107-00-7	
EC-No.	203-080-7	
Molar mass	184,27 g/mol	

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

Chemical Name (Concentration)			
CAS-No.	EC-No. / Registration number	Index-No.	Classification
hydroquinone monomethyl ether (>= 1 % - < 10 %)			
150-76-5	205-769-8 / *)	604-044-00-7	Acute toxicity, Category 4, H302 Eye irritation, Category 2, H319 Skin sensitization, Category 1, H317

*) 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 (FPC) 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.

Hazardous components (1999/45/EC)

Chemical Name (Concentration)			
CAS-No.	EC-No.	Index-No.	Classification
hydroquinone monomethyl ether (>= 1 % - < 10 %)			
150-76-5	205-769-8	604-044-00-7	Xn, Harmful; R22 Xi, Irritant; R36 R43

For the full text of the R-phrases mentioned in this Section, see Section 16.

SECTION 4. First aid measures

4.1 Description of first aid measures

After inhalation: fresh air.

After skin contact: wash off with plenty of water. Remove contaminated clothing.

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

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

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO_2), Foam, 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 material

Vapours are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.
Explosive decomposition possible on heating.
Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Special protective equipment for fire-fighters
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
Prevent fire extinguishing water from contaminating surface water or the ground water system.

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. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

6.2 Environmental precautions

Do not empty into drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.
Observe possible material restrictions (see sections 7.2 and 10.5).
Take up 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

Observe label precautions.

7.2 Conditions for safe storage, including any incompatibilities

Protected from light. Tightly closed. In V_2A/V_4A-steel containers. Fill containers only to 80% to maintain stabiliser effect. Air contact necessary.

Store at +15°C to +25°C.

7.3 Specific end uses

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.

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

Eye/face protection

Safety glasses

Hand protection

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0,40 mm
Break through time:	> 480 min

splash contact:

Glove material:	butyl-rubber
Glove thickness:	0,7 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 730 Camatril® -Velours (full contact), KCL 898 Butoject® (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

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 entrepeneur 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 empty into drains.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid

Colour	colourless
Odour	sweet
Odour Threshold	No information available.
pH	No information available.
Melting point	-90 °C
Boiling point/boiling range	ca. 229 °C at 1.013 hPa
Flash point	86 °C Method: DIN 51755 Part 1
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	0,9 %(V)
Upper explosion limit	6,0 %(V)
Vapour pressure	0,12 hPa at 20 °C
Relative vapour density	6,35
Relative density	0,887 g/cm³ at 20 °C
Water solubility	0,1 g/l at 25 °C
Partition coefficient: n-octanol/water	log Pow: 4,64 (25 °C) OECD Test Guideline 107 Potential bioaccumulation
Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	1,54 mPa.s at 25 °C
Explosive properties	No information available.
Oxidizing properties	No information available.

9.2 Other data

Ignition temperature	230 °C Method: DIN 51794

Self-acceleraying polymerization temperature(SAPT)
Onest temperature 196.60 °C
Peak temperature 199.27 °C

SECTION 10. Stability and reactivity

10.1 Reactivity

Forms explosive mixtures with air on intense heating.

10.2 Chemical stability

heat-sensitive
Sensitivity to light
In case of decomposition in closed containers and tubes risk of bursting due to buildup of overpressure.

Stabilizer

hydroquinone monomethyl ether

10.3 Possibility of hazardous reactions

Violent reactions possible with:

Amines, peroxi compounds, polymerisation initiators, Strong oxidizing agents, Reducing agents, mercaptans, azides, Ether, Ketones, Aldehydes, nitrates, nitrites, Strong bases, Acid anhydrides, acid halides, mineral acids, metallic salts

10.4 Conditions to avoid

Strong heating.
A range from approx. 15 Kelvin below the flash point is to be rated as critical.

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: 4.435 mg/kg (IUCLID)
Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Acute inhalation toxicity

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

Acute dermal toxicity

LD50 rabbit: 7.522 mg/kg (IUCLID)

Skin irritation
rabbit
Result: Irritations
(IUCLID)

Causes skin irritation.

Eye irritation
rabbit
Result: Eye irritation

(IUCLID) (Regulation (FPC) No 1272/2008, Annex VI)

Sensitisation
Patch test: human
Result: positive
(IUCLID)

May cause an allergic skin reaction.

Genotoxicity in vivo
Mutagenicity (mammal cell test): chromosome aberration.
Result: negative
(IUCLID)

Genotoxicity in vitro
Ames test
Result: negative
(IUCLID)

Specific target organ toxicity - single exposure
May cause respiratory irritation.

Specific target organ toxicity - repeated exposure
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard
Based on available data the classification criteria are not met.

11.2 Further information

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

12.1 Toxicity

Toxicity to fish
LC50 Leuciscus idus (Golden orfe): 23 mg/l; 48 h (IUCLID)

Toxicity to daphnia and other aquatic invertebrates.
EC50 Daphnia magna (Water flea): 17 mg/l; 48 h (IUCLID)

Toxicity to algae
IC50 Desmodesmus subspicatus (green algae): 44 mg/l; 72 h (IUCLID)

Toxicity to bacteria
EC50 Pseudomonas putida: > 10.000 mg/l; 30 min
DIN 38412 (as an emulsion) (IUCLID)

12.2 Persistence and degradability

Biodegradability
75 %; 15 d
OECD Test Guideline 301C
Readily biodegradable.

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water
log Pow: 4,64 (25 °C)
OECD Test Guideline 107
Potential bioaccumulation

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

Additional ecological information

Discharge into the environment must be avoided.

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

Not classified as dangerous in the meaning of transport regulations.

SECTION 15. Regulatory information

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

EU regulations

Major Accident Hazard	96/82/EC
Legislation	Directive 96/82/EC does not apply
Occupational restrictions	Take note of Dir 94/33/EC on the protection of young people at work.
Storage class	10

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.

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Full text of R-phrases referred to under sections 2 and 3

R22	Harmful if swallowed.
R36	Irritating to eyes.
R37/38	Irritating to respiratory system and skin.
R43	May cause sensitization by skin contact.

Training advice

Provide adequate information, instruction and training for operators.

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.