



ALLYL ACRYLATE

Safety Data Sheet ENEAA0020

Date of issue: 08/18/2017

Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product name : ALLYL ACRYLATE
 Product code : ENEAA0020
 Product form : Substance
 Physical state : Liquid
 Formula : C₆H₈O₂
 Synonyms : 3-ACRLOXYPROPENE
 2-PROPENYL ACRYLATE
 ACRYLIC ACID, ALLYL ESTER
 2-PROPENOIC ACID, 2-PROPENYL ESTER
 Chemical family : ESTER

1.2. Recommended use of the chemical and restrictions on use

Recommended use : Chemical intermediate
 For research and industrial use only

1.3. Details of the supplier of the safety data sheet

GELEST, INC.

11 East Steel Road

Morrisville, PA 19067

USA

T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST

info@gelest.com - www.gelest.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Flammable liquids Category 3 H226
 Acute toxicity (oral) Category 3 H301
 Acute toxicity (dermal) Category 3 H311
 Acute toxicity (inhalation:vapor) Category 2 H330
 Skin corrosion/irritation Category 2 H315
 Serious eye damage/eye irritation Category 2 H319
 Hazardous to the aquatic environment - Acute Hazard Category 1 H400
 Full text of H statements : see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS02



GHS06



GHS07



GHS09

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H226 - Flammable liquid and vapor
 H301+H311 - Toxic if swallowed or in contact with skin
 H315 - Causes skin irritation
 H319 - Causes serious eye irritation
 H330 - Fatal if inhaled
 H400 - Very toxic to aquatic life

Precautionary statements (GHS-US) :

P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P284 - [In case of inadequate ventilation] wear respiratory protection
 P310 - Immediately call a doctor
 P210 - Keep away from heat, open flames, sparks. - No smoking
 P240 - Ground/Bond container and receiving equipment
 P241 - Use explosion-proof electrical equipment
 P242 - Use only non-sparking tools
 P243 - Take precautionary measures against static discharge

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P260 - Do not breathe vapors
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P273 - Avoid release to the environment
P330 - Rinse mouth
P301+P310 - If swallowed: Immediately call a doctor
P303+P361+P353 - If on skin (or hair): take off immediately all contaminated clothing. rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep 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
P337+P313 - If eye irritation persists: Get medical advice/attention
P312 - Call a doctor if you feel unwell
P320 - Specific treatment is urgent (see first aid instructions on this label)
P332+P313 - If skin irritation occurs: Get medical advice/attention
P361+P364 - Take off immediately all contaminated clothing and wash it before reuse
P370+P378 - In case of fire: Use water spray or fog, foam, carbon dioxide, dry chemical to extinguish
P391 - Collect spillage
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P403+P235 - Keep in a cool place
P405 - Store locked up
P501 - Dispose of contents/container to licensed waste disposal facility.

2.3. Hazards not otherwise classified (HNOC)

No additional information available

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type : Mono-constituent
Name : ALLYL ACRYLATE
CAS No : 999-55-3

Name	Product identifier	%	GHS-US classification
Allyl acrylate	(CAS No) 999-55-3	95 - 100	Flam. Liq. 3, H226 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 2 (Inhalation), H330 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Aquatic Acute 1, H400

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

4.1. Description of first aid measures

First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.

First-aid measures after skin contact : Wash with plenty of soap and water. Immediately call a poison center or doctor/physician.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Immediately call a poison center or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : Fatal if inhaled. May cause irritation to the respiratory tract.

Symptoms/effects after skin contact : Toxic in contact with skin. Causes skin irritation. May cause sensitization. Repeated exposure to this material can result in absorption through skin causing significant health hazard.

Symptoms/effects after eye contact : Lachrymator. Causes serious eye irritation.

Symptoms/effects after ingestion : Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Water fog. Foam. Carbon dioxide. Dry chemical.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapor. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

Explosion hazard : May form flammable/explosive vapor-air mixture.

5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapor and mist.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Eliminate ignition sources. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

Protective equipment : Wear protective equipment as described in Section 8.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if liquid enters sewers or public waters. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Collect spillage. Clean up any spills as soon as possible, using an absorbent material to collect it. Use only non-sparking tools.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.

Precautions for safe handling : Material should be handled in a laboratory hood whenever possible. Avoid all eye and skin contact and do not breathe vapor and mist. Provide good ventilation in process area to prevent accumulation of vapors. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Use only non-sparking tools.

Hygiene measures : Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical equipment.

Storage conditions : Keep container tightly closed. Store in sealed containers, below 25°C. Store < 5°C. Avoid exposure to light. Store locked up.

Incompatible materials : Oxidizing agent.

Storage area : Store in a well-ventilated place. Store away from heat.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls : Handle in an enclosing hood with exhaust ventilation. Provide local exhaust or general room ventilation.

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Personal protective equipment	: Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Hand protection	: Neoprene or nitrile rubber gloves.
Eye protection	: Chemical goggles. Contact lenses should not be worn.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: Wear respiratory protection. NIOSH-certified full face organic vapor (black cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear liquid.
Molecular mass	: 112.13 g/mol
Color	: No data available
Odor	: Acrid. Mildly lachrymatory.
Odor threshold	: No data available
Refractive index	: 1.436
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: ~ 1
Melting point	: No data available
Freezing point	: < 0 °C
Boiling point	: 46 - 47 °C @ 40 mm Hg
Flash point	: 32 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable liquid and vapor
Vapor pressure	: < 10 mm Hg @ 20°C
Relative vapor density at 20 °C	: > 1
Relative density	: 0.935
VOC content	: < 3 %
Solubility	: Slightly. Soluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Unstable.

10.3. Possibility of hazardous reactions

May occur if heated in the presence of radical initiators or exposure to ultraviolet light.

10.4. Conditions to avoid

Heat. Open flame. Sparks.

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

Organic acid vapors.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Toxic if swallowed. Dermal: Toxic in contact with skin. Inhalation:vapour: Fatal if inhaled.

ALLYL ACRYLATE (999-55-3)	
ATE US (oral)	100 mg/kg body weight
ATE US (dermal)	300 mg/kg body weight
ATE US (vapors)	0.5 mg/l/4h
Allyl acrylate (999-55-3)	
LC50 inhalation rat (ppm)	152 ppm/4h
LDLo oral rat	500 mg/kg
ATE US (oral)	100 mg/kg body weight
ATE US (dermal)	300 mg/kg body weight
ATE US (gases)	152 ppmV/4h
ATE US (vapors)	0.5 mg/l/4h
ATE US (dust, mist)	0.05 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified None of the components in this product at concentrations >0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: Fatal if inhaled. May cause irritation to the respiratory tract.
Symptoms/effects after skin contact	: Toxic in contact with skin. Causes skin irritation. May cause sensitization. Repeated exposure to this material can result in absorption through skin causing significant health hazard.
Symptoms/effects after eye contact	: Lachrymator. Causes serious eye irritation.
Symptoms/effects after ingestion	: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Very toxic to aquatic life.

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other adverse effects	: This substance may be hazardous to the environment.
Effect on ozone layer	: No additional information available
Effect on the global warming	: No known effects from this product.
GWPmix comment	: No known effects from this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations	: Incinerate. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.
Additional information	: Handle empty containers with care because residual vapors are flammable.
Ecology - waste materials	: Avoid release to the environment.

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SECTION 14: Transport information

14.1. UN number

UN-No.(DOT) : 2929
DOT NA no. UN2929

14.2. UN proper shipping name

Transport document description : UN2929 Toxic liquids, flammable, organic, n.o.s. (ALLYL ACRYLATE), 6.1 (3), II
Proper Shipping Name (DOT) : Toxic liquids, flammable, organic, n.o.s.
(ALLYL ACRYLATE)
Class (DOT) : 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132
Packing group (DOT) : II - Medium Danger
Hazard labels (DOT) : 6.1 - Poison
3 - Flammable liquid



Dangerous for the environment : Yes
Marine pollutant : Yes



DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 243
DOT Packaging Exceptions (49 CFR 173.xxx) : 153
DOT Symbols : G - Identifies PSN requiring a technical name

14.3. Additional information

Emergency Response Guide (ERG) Number : 131
Other information : No supplementary information available.

Transport by sea

DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

Air transport

DOT Quantity Limitations Passenger aircraft/rail : 5 L
(49 CFR 173.27)
DOT Quantity Limitations Cargo aircraft only (49 : 60 L
CFR 175.75)

SECTION 15: Regulatory information

15.1. US Federal regulations

Allyl acrylate (999-55-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Allyl acrylate (999-55-3)

Listed on the Canadian NDSL (Non-Domestic Substances List)

EU-Regulations

Allyl acrylate (999-55-3)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

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National regulations

Allyl acrylate (999-55-3)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)

15.3. US State regulations

No additional information available

SECTION 16: Other information

Full text of H-phrases::

H226	Flammable liquid and vapor
H301	Toxic if swallowed
H311	Toxic in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H330	Fatal if inhaled
H400	Very toxic to aquatic life

Abbreviations and acronyms

: Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor.

HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above 100 F. as well as liquids with flash points between 73 F and 100 F. (Classes IB & IC)

Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Prepared by safety and environmental affairs.

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SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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