

Safety data sheet

according to 1907/2006/EC, Article 31

Revision: 08.06.2010

Printing date 01.07.2013

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

1.1 Product identifier

Trade name

n-Butyl methacrylate

Stock number:

A19068, L14637

CAS Number:

97-88-1

EC number:

202-615-1

Index number:

607-033-00-5

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

Identified use:

SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG
A Johnson Matthey Company
Zeppelinstr. 7b
76185 Karlsruhe / Germany
Tel: +49 (0) 721 84007 280
Fax: +49 (0) 721 84007 300
Email: tech@alfa.com
www.alfa.com

Informing department:

Product safety Tel + +049 (0) 7275 988687-0

1.4 Emergency telephone number:

Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)

Poison Information Center Mainz

www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS06 skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

☒ Xi; Irritant

R36/37/38: Irritating to eyes, respiratory system and skin.

☒ Xi; Sensitising

R43: May cause sensitisation by skin contact.

R10: Flammable.

Information concerning particular hazards for human and environment:

Not applicable

Other hazards that do not result in classification

No information known.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

Signal word

Hazard statements

The substance is classified and labelled according to the CLP regulation.

GHS02, GHS06

Danger

H226 Flammable liquid and vapour.

H331 Toxic if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

P280

Wear protective gloves / protective clothing.

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

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

P312

Call a POISON CENTER or doctor/physician if you feel unwell.

Precautionary statements

2.3 Other hazards

Results of PBT and vPvB assessment

PBT:

Not applicable.

vPvB:

Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Substances

CAS# Designation:

97-88-1 n-Butyl methacrylate

Identification number(s):

202-615-1

EC number:

607-033-00-5

Index number:

SECTION 4: First aid measures

4.1 Description of first aid measures

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact

Seek immediate medical advice.

Instantly wash with water and soap and rinse thoroughly.

After eye contact

Seek immediate medical advice.

After swallowing

Rinse opened eye for several minutes under running water. Then consult doctor.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

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4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing agents**CO₂, sand, extinguishing powder. Do not use water.**5.2 Special hazards arising from the substance or mixture**

Danger of containers bursting upon heating.
If this product is involved in a fire, the following can be released:
Carbon monoxide and carbon dioxide

5.3 Advice for firefighters**Protective equipment:**

Wear self-contained breathing apparatus.
Wear full protective suit.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources

6.2 Environmental precautions:

Do not allow material to be released to the environment without proper governmental permits.
Do not allow product to reach sewage system or water bodies.
Do not allow to enter the ground/soil.

6.3 Methods and material for containment and cleaning up:

Keep away from ignition sources.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.

Prevention of secondary hazards:**6.4 Reference to other sections**

Keep away from ignition sources.
See Section 7 for information on safe handling
See section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Keep containers tightly sealed.
Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires:

Protect against electrostatic charges.
Fumes can combine with air to form an explosive mixture.

7.2 Conditions for safe storage, including any incompatibilities

Storage
Requirements to be met by storerooms and containers:
Information about storage in one common storage facility:

No special requirements.

Further information about storage conditions:

Store away from oxidizing agents.
Store in the dark.
Protect from heat.

7.3 Specific end use(s)

Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Protect from the effects of light.
No further relevant information available.

SECTION 8: Exposure controls/personal protection**Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

8.1 Control parameters**Components with critical values that require monitoring at the workplace:****97-88-1 n-Butyl methacrylate (100,0%)**

MAK (Germany) | vgl. Abschn. IV

Additional information:

No data

8.2 Exposure controls**Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.
Use breathing protection with high concentrations.
Check protective gloves prior to each use for their proper condition.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Breathing equipment:**Protection of hands:****Material of gloves****Penetration time of glove material****Eye protection:**

Impervious gloves
Not determined
Safety glasses
Face protection
Protective work clothing.

Body protection:**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Appearance:****Form:**

Liquid

Colour:

Colourless

Smell:

Fruit-like

Odour threshold:

Not determined.

pH-value:

Not determined.

Change in condition**Melting point/Melting range:**

-75 °C

Boiling point/Boiling range:

160-163 °C

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Sublimation temperature / start:	Not determined
Flash point:	49 °C
Inflammability (solid, gaseous)	Not determined.
Ignition temperature:	294 °C
Decomposition temperature:	Not determined
Self-inflammability:	Not determined.
Critical values for explosion:	
Lower:	2 Vol %
Upper:	8 Vol %
Steam pressure at 20 °C:	2,7 hPa
Density at 20 °C	0,894 g/cm³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water at 20 °C:	0,36 g/l
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
dynamic at 20 °C:	1,1 mPas
kinematic:	Not determined.
9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity	No information known.
10.2 Chemical stability	Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided:	Danger of containers bursting upon heating.
Stable until:	Depletion of inhibitor.
10.3 Possibility of hazardous reactions	Danger of polymerisation
10.5 Incompatible materials:	Oxidizing agents Heat Light Ultraviolet radiation Free radical initiators
10.6 Hazardous decomposition products:	Carbon monoxide and carbon dioxide
Additional information:	Unless inhibited, the product can polymerize resulting in a temperature and pressure increase that may rupture the container.

SECTION 11: Toxicological information

11.1 Information on toxicological effects	
Acute toxicity:	No effects known.

LD/LC50 values that are relevant for classification:

Oral	LD50	22600 mg/kg (rat)
Dermal	LD50	11300 mg/kg (rabbit)
Inhalative	LC50/4H	4910 mg/m3/4H (rat)

Skin irritation or corrosion:	Causes skin irritation.
Eye irritation or corrosion:	Causes serious eye irritation.
Sensitization:	May cause an allergic skin reaction.
Germ cell mutagenicity:	No effects known.
Carcinogenicity:	No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
Reproductive toxicity:	No effects known.
Specific target organ system toxicity - repeated exposure:	No effects known.
Specific target organ system toxicity - single exposure:	May cause respiratory irritation.
Aspiration hazard:	No effects known.
Other information (about experimental toxicology):	Reproductive effects have been observed on tests with laboratory animals.
Additional toxicological information:	To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12: Ecological information

12.1 Toxicity	
Aquatic toxicity:	No further relevant information available.
12.2 Persistence and degradability	No further relevant information available.
12.3 Bioaccumulative potential	No further relevant information available.
12.4 Mobility in soil	No further relevant information available.
Additional ecological information:	
General notes:	Do not allow material to be released to the environment without proper governmental permits. Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system. Avoid transfer into the environment.
12.5 Results of PBT and vPvB assessment	
PBT:	Not applicable.
vPvB:	Not applicable.
12.6 Other adverse effects	No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods	
Recommendation	Hand over to disposers of hazardous waste. Must be specially treated under adherence to official regulations. Consult state, local or national regulations for proper disposal.
Uncleaned packagings:	
Recommendation:	Disposal must be made according to official regulations.

SECTION 14: Transport information

UN-Number	
ADR, IMDG, IATA	UN2227
14.2 UN proper shipping name	
ADR	2227 n-BUTYL METHACRYLATE, STABILIZED

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IMDG, IATA	N-BUTYL METHACRYLATE, STABILIZED
14.3 Transport hazard class(es)	
ADR	
	
Class Label	3 (F1) Flammable liquids.
IMDG, IATA	3
	
Class Label	3 Flammable liquids.
Packing group	3
ADR, IMDG, IATA	III
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Warning: Flammable liquids.
Kemler Number:	39
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
ADR	
Excepted quantities (EQ):	E1
Limited quantities (LQ)	5L
Transport category	3
Tunnel restriction code	D/E
UN "Model Regulation":	UN2227, n-BUTYL METHACRYLATE, STABILIZED, 3, III

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Australian Inventory of Chemical****Substances**

Substance is listed.

Standard for the Uniform Scheduling of**Drugs and Poisons**

Substance is not listed.

National regulations**Information about limitation of use:**Employment restrictions concerning young persons must be observed.
For use only by technically qualified individuals.**Water hazard class:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.

Other regulations, limitations and prohibitive regulations**ELINCS (European List of Notified Chemical****Substances)**

Substance is not listed.

Substances of very high concern (SVHC)**according to REACH, Article 57**

Substance is not listed.

REACH - Pre-registered substances

Substance is listed.

15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing data specification sheet:

Health, Safety and Environmental Department.

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
 ICAO: International Civil Aviation Organization
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent

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