

# Safety data sheet

according to 1907/2006/EC, Article 31

Revision: 29.07.2011

Printing date 02.07.2013

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

### 1.1 Product identifier

Trade name

**alpha-Methylstyrene**

Stock number:

L03609

CAS Number:

98-83-9

EC number:

202-705-0

Index number:

601-027-00-6

### 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.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

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

Xi; Irritant

R36/37: Irritating to eyes and respiratory system.

N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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, GHS07, GHS09

Warning

H226 Flammable liquid and vapour.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H411 Toxic to aquatic life with long lasting effects.

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

P405

Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

### 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:

98-83-9 alpha-Methylstyrene

Identification number(s):

202-705-0

EC number:

601-027-00-6

Index number:

Note: stabilized with 10-15ppm 4-tert-butylcatechol

Additional information:

## 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.

Seek immediate medical advice.

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

Seek medical treatment.

After eye contact

After swallowing

### 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

CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

### 5.2 Special hazards arising from the substance or mixture

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.

### 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.  
Store in cool, dry place in tightly closed containers.  
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: Further information about storage conditions:

No special requirements.  
Store away from oxidizing agents.

### 7.3 Specific end use(s)

Keep container tightly sealed.  
Store in cool, dry conditions in well sealed containers.  
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.

### Components with critical values that require monitoring at the workplace:

alpha-Methylstyrene

ACGIH TLV TWA	50 ppm; 100 ppm-STEL
Australia TWA	50 ppm; 100 ppm-STEL
Finland TWA	100 ppm; 150 ppm-STEL
France VME	50 ppm
Norway TWA	50 ppm
Netherlands MAC-TGG	50 ppm
Switzerland MAK-W	50 ppm
Russia	5 mg/m <sup>3</sup> -STEL
Korea TLV TWA	50 ppm; 100 ppm-STEL
Denmark TWA	50 ppm
EC TWA	50 ppm; 100 ppm-STEL
United Kingdom TWA	50 ppm; 100 ppm-STEL
OSHA PEL	100 ppm-CL

### 8.1 Control parameters

#### Components with critical values that require monitoring at the workplace:

#### 98-83-9 alpha-Methylstyrene (100,0%)

AGW (Germany)	250 mg/m <sup>3</sup> , 50 ppm 2(l);DFG, EU
PEL (USA)	Short-term value: C 480 mg/m <sup>3</sup> , C 100 ppm
REL (USA)	Short-term value: 485 mg/m <sup>3</sup> , 100 ppm Long-term value: 240 mg/m <sup>3</sup> , 50 ppm
TLV (USA)	48 mg/m <sup>3</sup> , 10 ppm

### 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.  
Avoid contact with the eyes and skin.  
Maintain an ergonomically appropriate working environment.

#### Breathing equipment:

#### Protection of hands:

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.

#### Material of gloves

#### Penetration time of glove material

Impervious gloves  
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**Eye protection:** Safety glasses  
Face protection  
**Body protection:** Protective work clothing.

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

**Form:** Liquid  
**Colour:** Colourless  
**Smell:** Not determined  
**Odour threshold:** Not determined.

**pH-value:** Not determined.

**Change in condition**

**Melting point/Melting range:** -23 °C  
**Boiling point/Boiling range:** 166-169 °C  
**Sublimation temperature / start:** Not determined

**Flash point:** 45 °C  
**Inflammability (solid, gaseous)** Not applicable.  
**Ignition temperature:** Not determined  
**Decomposition temperature:** Not determined  
**Self-inflammability:** Not determined.  
**Critical values for explosion:**  
**Lower:** Not determined  
**Upper:** Not determined  
**Steam pressure:** Not determined  
**Density at 20 °C** 0,909 g/cm<sup>3</sup>  
**Relative density** Not determined.  
**Vapour density** Not determined.  
**Evaporation rate** Not determined.  
**Solubility in / Miscibility with**  
**Water:** Not determined  
**Partition coefficient (n-octanol/water):** Not determined.  
**Viscosity:**  
**dynamic:** Not determined.  
**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:** No decomposition if used and stored according to specifications.  
**10.3 Possibility of hazardous reactions** No dangerous reactions known  
**10.5 Incompatible materials:** Oxidizing agents  
**10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide

**SECTION 11: Toxicological information****11.1 Information on toxicological effects**

**Acute toxicity:** No effects known.  
**LD/LC50 values that are relevant for classification:** No data  
**Skin irritation or corrosion:** Irritant for skin and mucous membranes.  
**Eye irritation or corrosion:** Causes serious eye irritation.  
**Sensitization:** No sensitizing effect known.  
**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):** Mutagenic effects have been observed on tests with human lymphocytes.  
**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.  
**Ecotoxicological effects:**  
**Remark:** Toxic for fish  
**Additional ecological information:**  
**General notes:** Do not allow product to reach ground water, water bodies or sewage system.  
Do not allow material to be released to the environment without proper governmental permits.  
Toxic for aquatic organisms  
Water hazard class 2 (Self-assessment): hazardous for water.  
Danger to drinking water if even small quantities leak into soil.  
Also poisonous for fish and plankton in water bodies.  
Toxic to aquatic life.  
May cause long lasting harmful effects to aquatic life.  
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.

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**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**

UN2303

**14.2 UN proper shipping name  
ADR  
IMDG, IATA**2303 ISOPROPENYLBENZENE  
ISOPROPENYLBENZENE**14.3 Transport hazard class(es)  
ADR****Class  
Label  
IMDG, IATA**3 (F1) Flammable liquids.  
3**Class  
Label**3 Flammable liquids.  
3**Packing group  
ADR, IMDG, IATA**

III

**14.5 Environmental hazards:**

Environmentally hazardous substance, liquid

**14.6 Special precautions for user  
Kemler Number:**Warning: Flammable liquids.  
30**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):  
Limited quantities (LQ)  
Tunnel restriction code**E1  
5L  
D/E**UN "Model Regulation":**

UN2303, ISOPROPENYLBENZENE, 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  
Standard for the Uniform Scheduling of  
Drugs and Poisons  
National regulations  
Information about limitation of use:**

Substance is listed.  
Substance is not listed.  
Employment restrictions concerning young persons must be observed.  
For use only by technically qualified individuals.

**Water hazard class:  
Other regulations, limitations and prohibitive  
ELINCS (European List of Notified Chemical  
Substances)  
Substances of very high concern (SVHC)  
according to REACH, Article 57  
REACH - Pre-registered substances  
15.2 Chemical safety assessment:**

Water hazard class 2 (Self-assessment): hazardous for water.  
regulations  
Substance is not listed.  
Substance is not listed.  
Substance is listed.  
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:  
Abbreviations and acronyms:**

Health, Safety and Environmental Department.  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
ICAO: International Civil Aviation Organization  
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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