

Safety data sheet
according to 1907/2006/EC, Article 31

Revision: 14.05.2012

Printing date 01.07.2013

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

1.1 Product identifier
Trade name **2-Chlorostyrene**
Stock number: BZ1551, L07876
CAS Number: 2039-87-4
EC number: 218-026-8

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

Informing department:
1.4 Emergency telephone number:

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008



Skin Irrit. 2 H315 Causes skin irritation.
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

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

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

Precautionary statements

The substance is classified and labelled according to the CLP regulation.
GHS07
Warning
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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: 2039-87-4 2-Chlorostyrene
Identification number(s):
EC number: 218-026-8
Impurities and stabilising additives: Stabilised with:
4-tert-Butylcatechol (CAS# 98-29-3)

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

After swallowing

Seek medical treatment.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

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

CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

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

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

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.

(Contd. on page 2)
DE/E

Safety data sheet
according to 1907/2006/EC, Article 31

Revision: 14.05.2012

Printing date 01.07.2013

Trade name 2-Chlorostyrene

(Contd. of page 1)

6.3 Methods and material for containment and cleaning up:

Do not allow to enter the ground/soil.

Prevention of secondary hazards: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.
Ensure good ventilation/exhaustion at the workplace.**Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

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:Refrigerate
Store in the dark.
Protect from heat.
Store away from oxidizing agents.**Further information about storage conditions:**Keep container tightly sealed.
Protect from the effects of light.**7.3 Specific end use(s)**Refrigerate
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:****2039-87-4 2-Chlorostyrene (100,0%)**

REL (USA)	Short-term value: 428 mg/m ³ , 75 ppm Long-term value: 285 mg/m ³ , 50 ppm
TLV (USA)	Short-term value: 425 mg/m ³ , 75 ppm Long-term value: 283 mg/m ³ , 50 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 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****Eye protection:**

Impervious gloves

Not determined

Safety glasses

Face protection

Body protection:

Protective work clothing.

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

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

pH-value: Not determined.

Change in condition

Melting point/Melting range:	-63 °C
Boiling point/Boiling range:	189 °C
Sublimation temperature / start:	Not determined

Flash point:	65 °C
Inflammability (solid, gaseous)	Not determined.
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	1,091 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
dynamic:	Not determined.
kinematic:	Not determined.

(Contd. on page 3)
DE/E

Safety data sheet
according to 1907/2006/EC, Article 31

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Trade name **2-Chlorostyrene**

(Contd. of page 2)

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 Reacts with strong oxidizing agents
 Danger of polymerisation
 Spontaneous polymerisation can be caused in unstabilised product e.g. by ambient heat
10.5 Incompatible materials: Oxidizing agents
 Heat
 Light
 Ultraviolet radiation
 Free radical initiators
10.6 Hazardous decomposition products: Carbon monoxide and carbon dioxide
 Hydrogen chloride (HCl)
Additional information: Avoid loss of stabilizer.
 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: The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.
LD/LC50 values that are relevant for classification: No data
Skin irritation or corrosion: Causes skin irritation.
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.
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.
 Generally not hazardous for water.
 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, ADN, IMDG, IATA Not applicable
14.2 UN proper shipping name
ADR, ADN, IMDG, IATA Not applicable
14.3 Transport hazard class(es)
ADR, ADN, IMDG, IATA
Class Not applicable
Packing group
ADR, IMDG, IATA Not applicable
14.5 Environmental hazards: Not applicable.
14.6 Special precautions for user Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.
UN "Model Regulation": -

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 not listed.
Standard for the Uniform Scheduling of Drugs and Poisons Substance is not listed.
National regulations
Information about limitation of use: For use only by technically qualified individuals.

(Contd. on page 4)
DE/E

Safety data sheet
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Revision: 14.05.2012

Trade name **2-Chlorostyrene**

(Contd. of page 3)

Employment restrictions concerning young persons must be observed.

Generally not hazardous for water.

Water hazard class:**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:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

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

DE/E