

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

Printing date 02.07.2013

Revision: 04.02.2010

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

1.1 Product identifier

4-Nitrostyrene

H30118

100-13-0

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



GHS08 health hazard

Muta. 2 H341 Suspected of causing genetic defects.



Acute Tox. 4 H302 Harmful if swallowed.

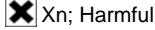
Acute Tox. 4 H312 Harmful in contact with skin.

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

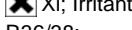
Eye Irrit. 2 H319 Causes serious eye irritation.

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



Xn; Harmful

R20/21/22-68: Harmful by inhalation, in contact with skin and if swallowed. Possible risk of irreversible effects.



Xi; Irritant

R36/38: Irritating to eyes and skin.

Information concerning particular hazards for human and environment:
Other hazards that do not result in classification

Not applicable

No information known.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

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

GHS07, GHS08

Warning

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H332 Harmful if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H341 Suspected of causing genetic defects.

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.

Precautionary statements

Not applicable.

Not applicable.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT:

vPvB:

Not applicable.

Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Substances

100-13-0 4-Nitrostyrene

CAS# Designation:

Stabilized with 3,5-di-tert-butylcatechol

Additonal 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.

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 skin contact

No further relevant information available.

After eye contact

No further relevant information available.

After swallowing

No further relevant information available.

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

SECTION 5: Firefighting measures

5.1 Extinguishing media

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

Suitable extinguishing agents

If this product is involved in a fire, the following can be released:

5.2 Special hazards arising from the substance or mixture

Carbon monoxide and carbon dioxide

Nitrogen oxides (NOx)

Possibly Hydrogen cyanide (HCN)

Protective equipment:

Wear self-contained breathing apparatus.

Safety data sheet
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Printing date 02.07.2013

Revision: 04.02.2010

Trade name 4-Nitrostyrene

(Contd. of page 1)

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

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.

6.2 Environmental precautions:

Dispose of contaminated material as waste according to item 13.

Ensure adequate ventilation.

No special measures required.

See Section 7 for information on safe handling

See section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

6.3 Methods and material for containment and cleaning up:**Prevention of secondary hazards:****6.4 Reference to other sections****SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Handle under dry protective gas.

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:

No information known.

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.

Store away from air.

Store under dry inert gas.

This product is air sensitive.

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

No further relevant information available.

7.3 Specific end use(s)**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:**

Not required.

No data

Additional information:**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.

Impervious gloves

Not determined

Safety glasses

Face protection

Protective work clothing.

Breathing equipment:**Protection of hands:****Material of gloves****Penetration time of glove material****Eye protection:****Body protection:****SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Appearance:**

Low melting solid

Pale yellow

Not determined

Not determined.

Odour threshold:

Not applicable.

pH-value:

Not applicable.

Change in condition

25-28 °C

93-96 °C (3 mmHg)

Not determined

Melting point/Melting range:**Boiling point/Boiling range:****Sublimation temperature / start:**

Not determined

Flash point:

109 °C

Inflammability (solid, gaseous)

Not determined.

Ignition temperature:

Not determined

Decomposition temperature:

Not determined

Self-inflammability:

Not determined.

Danger of explosion:

Product is not explosive.

Critical values for explosion:

Not determined

Lower:

Not determined

Upper:

Not applicable.

Steam pressure:

1,163 g/cm³

Density at 20 °C

Not determined.

Relative density

Not applicable.

Vapour density

Not applicable.

Evaporation rate

Not applicable.

(Contd. on page 3)

DE/E

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Trade name 4-Nitrostyrene

(Contd. of page 2)

Solubility in / Miscibility with	
Water:	Insoluble
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
dynamic:	Not applicable.
kinematic:	Not applicable.
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:	Air Carbon monoxide and carbon dioxide Nitrogen oxides (NOx) Possibly Hydrogen cyanide (HCN)

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

Acute toxicity:	Harmful if inhaled. Harmful in contact with skin. Harmful if swallowed. Danger by skin resorption.
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LD/LC50 values that are relevant for classification:

Skin irritation or corrosion:	No data Causes skin irritation.
Eye irritation or corrosion:	Causes serious eye irritation.
Sensitization:	No sensitizing effect known.
Germ cell mutagenicity:	Suspected of causing genetic defects.
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:	No effects known.
Aspiration hazard:	No effects known.
Other information (about experimental toxicology):	Mutagenic effects have been observed on tests with bacteria.
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	None
ADR, IMDG, IATA	
14.2 UN proper shipping name	None
ADR, IMDG, IATA	
14.3 Transport hazard class(es)	None
ADR, IMDG, IATA	
Class	
Packing group	None
ADR, IMDG, IATA	
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.
Transport/Additional information:	Not dangerous according to the above specifications.

DE/E

(Contd. on page 4)

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

Australian Inventory of Chemical

Substances is not listed.

Standard for the Uniform Scheduling of
Drugs and Poisons

Substances is not listed.

National regulations

For use only by technically qualified individuals.

Employment restrictions concerning young persons must be observed.

Information about limitation of use:

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)

Substances is not listed.

Substances of very high concern (SVHC)

according to REACH, Article 57

Substance is not listed.

REACH - Pre-registered substances

Substance is not 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

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

DE/E