

Safety data sheet Hydrogen selenide

Creation date : 01.10.2005
Revision date : 18.10.2005

Version : 3.0

DE / E

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1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

Product name

Hydrogen selenide

Chemical formula H₂Se

Known uses

Not known.

Company identification

Linde AG, Gas and Engineering, Linde Gas Division Seitnerstraße
70, D-82049 Höllriegelskreuth

Emergency phone numbers: 089-7446-0

2 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Preparation: Substance

Components/Impurities

CAS Nr: 7783-07-5

EEC Nr (from EINECS) : 231-978-9

Contains no other components or impurities which will influence the classification of the product.

3 HAZARDS IDENTIFICATION

Classification

Extremely flammable.

Very toxic by inhalation.

Risk advice to man and the environment

Liquefied gas

4 FIRST AID MEASURES

Inhalation

Very toxic by inhalation. Delayed adverse effects possible. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

Ingestion

Ingestion is not considered a potential route of exposure.

5 FIRE FIGHTING MEASURES

Specific hazards

Exposure to fire may cause containers to rupture/explode.

Hazardous combustion products

If involved in a fire the following toxic and/or corrosive fumes may be produced by thermal decomposition:

Suitable extinguishing media

All known extinguishants can be used.

Specific methods

If possible, stop flow of product. Use of water may result in the formation of very toxic aqueous solutions. Specialist clean-up methods may be required. Move container away or cool with water from a protected position. Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous/explosive re-ignition may occur. Extinguish any other fire. Extinguish any other fire.

Special protective equipment for fire fighters

Use self-contained breathing apparatus and chemically protective clothing.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions

Ensure adequate air ventilation. Evacuate area. Eliminate ignition sources. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

Environmental precautions

Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

Clean up methods

Ventilate area.

7 HANDLING AND STORAGE

Handling and storage

Ensure equipment is adequately earthed. Suck back of water into the container must be prevented. Purge air from system before introducing gas. Do not allow backfeed into the container. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Keep away from ignition sources (including static discharges). Segregate from oxidant gases and other oxidants in store. Refer to supplier's container handling instructions. Keep container below 50°C in a well ventilated place. Observe "Technische Regeln Druckgase (TRG) 280 Ziffer 5"

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit value

Value type	value	Note
Germany - MAK	0,05 ppm	TRGS 900

Personal protection

Protect eyes, face and skin from liquid splashes.

9 PHYSICAL AND CHEMICAL PROPERTIES

General information

Appearance/Colour: Colourless gas

Odour: Pungent Poor warning properties at low concentrations.

Important information on environment, health and safety

Autoignition temperature: Not known

Flammability range: Not known

Relative density, gas: Heavier than air

Relative density, liquid: 2

Vapour Pressure 20 °C: 9,5 bar

Other data

Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

10 STABILITY AND REACTIVITY

Stability and reactivity

Can form explosive mixture with air. May react violently with oxidants.

11 TOXICOLOGICAL INFORMATION

12 ECOLOGICAL INFORMATION

General

Toxic to water organisms.

13 DISPOSAL CONSIDERATIONS

General

Avoid discharge to atmosphere. Do not discharge into any place where its accumulation could be dangerous. Toxic and corrosive gases formed during combustion should be scrubbed before discharge to atmosphere. Do not discharge into areas where there is a risk of forming an explosive mixture with air. Waste gas should be flared through a suitable burner with flash back arrestor. Waste gas should be flared through a suitable burner with flash back arrestor. Contact supplier if guidance is required.

14 TRANSPORT INFORMATION

ADR/RID

Class 2 Classification Code 2TF

UN number and proper shipping name

UN 2202 Selenwasserstoff,wasserfrei

UN 2202 Selenwasserstoff,wasserfrei

ADR/RID-Labels 6.1, 3 Hazard number 263

Other transport information

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Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers ensure that they are firmly secured and: - cylinder valve is closed and not leaking - valve outlet cap nut or plug (where provided) is correctly fitted - valve protection device (where provided) is correctly fitted - there is adequate ventilation. - compliance with applicable regulations.

15 REGULATORY INFORMATION

Number in Annex I of Dir 67/548

Not included in Annex I.

EC Classification

F+; R12, R26

Labelling

- Symbols

T+ Very toxic.
F+ Extremely flammable.

- Risk Phrases

R12 Extremely flammable.
R26 Very toxic by inhalation.

- Safety Phrases

S1 Keep locked up.
S9 Keep container in well ventilated place.
S16 Keep away from ignition source - No smoking.
S33 Take precautionary measures against static discharges.
S36 Wear suitable protective clothing.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Further national regulations

Regulations for the prevention of industrial accidents
Pressure Vessel Regulation

16 OTHER INFORMATION

Ensure all national/local regulations are observed. Ensure operators understand the flammability hazard. Users of breathing apparatus must be trained. Ensure operators understand the toxicity hazard. Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted. Details given in this document are believed to be correct at the time of going to press.

Advice

Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted. Details given in this document are believed to be correct at the time of going to press.

Further informations

Hommel: Handbook of dangerous goods
Linde safety advice

End of document