# **SECTION 1: Identification**

#### 1.1 GHS Product identifier

Product name Stibine

#### 1.2 Other means of identification

Product number - Other names -

#### 1.3 Recommended use of the chemical and restrictions on use

**Identified uses**Industrial and scientific research uses.

Uses advised against no data available

# **SECTION 2: Hazard identification**

#### 2.1 Classification of the substance or mixture

Flammable gases, Category 1A, Flammable gas Acute toxicity - Category 1, Inhalation

# 2.2 GHS label elements, including precautionary statements

Pictogram(s)







Signal word Danger

Hazard statement(s) H220 Extremely flammable gas

H280 Contains gas under pressure; may explode if heated

H330 Fatal if inhaled

**Precautionary statement(s)** 

Prevention P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smoking.

P260 Do not breathe dust/fume/gas/mist/vapours/spray. P271 Use only outdoors or in a well-ventilated area.

P284 [In case of inadequate ventilation] wear respiratory protection.

P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

P381 In case of leakage, eliminate all ignition sources.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P316 Get emergency medical help immediately. P320 Specific treatment is urgent (see ... on this label).

**Storage** P403 Store in a well-ventilated place.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

**Disposal** P501 Dispose of contents/container to an appropriate treatment and disposal facility in

accordance with applicable laws and regulations, and product characteristics at time of

disposal.

# 2.3 Other hazards which do not result in classification

no data available

Response

# **SECTION 3: Composition/information on ingredients**

## 3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Stibine	Stibine	7803-52-3	-	100%

# **SECTION 4: First-aid measures**

# 4.1 Description of necessary first-aid measures

### If inhaled

Fresh air, rest. Half-upright position. Artificial respiration may be needed. Refer immediately for medical attention.

### Following skin contact

ON FROSTBITE: rinse with plenty of water, do NOT remove clothes. Refer immediately for medical attention.

### Following eye contact

Rinse with plenty of water (remove contact lenses if easily possible). Refer immediately for medical attention.

### **Following ingestion**

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

# 4.2 Most important symptoms/effects, acute and delayed

no data available

# 4.3 Indication of immediate medical attention and special treatment needed, if necessary

no data available

# **SECTION 5: Fire-fighting measures**

### 5.1 Suitable extinguishing media

Use dry chemical, carbon dioxide or alcohol-resistant foam.

### 5.2 Specific hazards arising from the chemical

Extremely flammable. Gives off irritating or toxic fumes (or gases) in a fire. Gas/air mixtures are explosive. Risk of fire and explosion on contact with ozone or nitric acid.

### 5.3 Special protective actions for fire-fighters

Shut off supply; if not possible and no risk to surroundings, let the fire burn itself out. In other cases extinguish with water spray. In case of fire: keep cylinder cool by spraying with water. Combat fire from a sheltered position.

### **SECTION 6: Accidental release measures**

### 6.1 Personal precautions, protective equipment and emergency procedures

Remove all ignition sources. Evacuate danger area! Consult an expert! Personal protection: gas-tight chemical protection suit including self-contained breathing apparatus. Ventilation.

#### **6.2** Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided

# 6.3 Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

# **SECTION 7: Handling and storage**

# 7.1 Precautions for safe handling

NO open flames, NO sparks and NO smoking. Closed system, ventilation, explosion-proof electrical equipment and lighting. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

# 7.2 Conditions for safe storage, including any incompatibilities

Fireproof. Cool.

# **SECTION 8: Exposure controls/personal protection**

# 8.1 Control parameters

#### Occupational Exposure limit values

TLV: 0.1 ppm as TWA

#### **Biological limit values**

no data available

### 8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

# 8.3 Individual protection measures, such as personal protective equipment (PPE)

# Eye/face protection

Wear eye protection in combination with breathing protection.

## Skin protection

Cold-insulating gloves.

# Respiratory protection

Use closed system or ventilation.

no data available

# SECTION 9: Physical and chemical properties and safety characteristics

Physical state COLOURLESS COMPRESSED GAS WITH PUNGENT ODOUR.

Colourno data availableOdourno data availableMelting point/freezing point-88°CBoiling point or initial boiling point-18°C

and boiling range

Flammability no data available
Lower and upper explosion no data available

limit/flammability limit

Flammable gas
Auto-ignition temperature no data available
Decomposition temperature no data available
pH no data available
Kinematic viscosity no data available
Solubility Solubility in water: poor
Partition coefficient n-octanol/water
Vapour pressure no data available

Vapour pressureno data availableDensity and/or relative density2.26 (-25°C)Relative vapour densityno data availableParticle characteristicsno data available

# **SECTION 10: Stability and reactivity**

# 10.1 Reactivity

no data available

# 10.2 Chemical stability

no data available

# 10.3 Possibility of hazardous reactions

The gas is heavier than air and may travel along the ground; distant ignition possible. Decomposes slowly at room temperature. Decomposes quickly at  $200 \text{Å}^{\circ}\text{C}$ . This produces metallic antimony and hydrogen. This increases fire hazard. Reacts violently with chlorine, concentrated nitric acid and ozone. This generates fire and explosion hazard.

#### 10.4 Conditions to avoid

no data available

#### 10.5 Incompatible materials

no data available

# 10.6 Hazardous decomposition products

no data available

# **SECTION 11: Toxicological information**

### Acute toxicity

- Oral: no data available
- Inhalation: no data available
- Dermal: no data available

# Skin corrosion/irritation

no data available

# Serious eye damage/irritation

no data available

# Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

# Carcinogenicity

no data available

#### Reproductive toxicity

no data available

### STOT-single exposure

Rapid evaporation of the liquid may cause frostbite. The substance is severely irritating to the respiratory tract. The substance may cause effects on the blood blood. This may result in destruction of blood cells. Exposure above the OEL could cause death. Medical observation is indicated.

#### STOT-repeated exposure

no data available

#### Aspiration hazard

A harmful concentration of this gas in the air will be reached very quickly on loss of containment.

# **SECTION 12: Ecological information**

# 12.1 Toxicity

- Toxicity to fish: no data available
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available

### 12.2 Persistence and degradability

no data available

# 12.3 Bioaccumulative potential

no data available

### 12.4 Mobility in soil

no data available

#### 12.5 Other adverse effects

no data available

# **SECTION 13: Disposal considerations**

#### 13.1 Disposal methods

#### **Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

# Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

# **SECTION 14: Transport information**

## 14.1 UN Number

ADR/RID: UN2676 (For reference only, please IMDG: UN2676 (For reference only, please IATA: UN2676 (For reference only, please check.) check.)

# 14.2 UN Proper Shipping Name

ADR/RID: STIBINE (For reference only, please IATA: STIBINE (For reference only, please please check.)

IMDG: STIBINE (For reference only, please IATA: STIBINE (For reference only, please check.)

# 14.3 Transport hazard class(es)

ADR/RID: 2.3 (For reference only, please check.)

IMDG: 2.3 (For reference only, please check.)

IATA: 2.3 (For reference only, please check.)

# 14.4 Packing group, if applicable

ADR/RID: (For reference only, please check.) IMDG: (For reference only, please check.) IATA: (For reference only, please check.)

## 14.5 Environmental hazards

ADR/RID: No IMDG: No IATA: No

# 14.6 Special precautions for user

# 14.7 Transport in bulk according to IMO instruments

no data available

# **SECTION 15: Regulatory information**

#### 15.1 Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
Stibine	Stibine	7803-52-3	-
European Inventory of Existing Commercial Chemical Substances (EINECS)			
EC Inventory			
United States Toxic Substances Control Act (TSCA) Inventory			Not Listed.
China Catalog of Hazardous chemicals 2015			
New Zealand Inventory of Chemicals (NZIoC)			
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			
Vietnam National Chemical Inventory			Not Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Not Listed.
Korea Existing Chemicals List (KECL)			

# **SECTION 16: Other information**

#### Information on revision

**Creation Date** July 15, 2019 **Revision Date** July 15, 2019

#### Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

#### References

- IPCS The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home
- HSDB Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm
- IARC International Agency for Research on Cancer, website: http://www.iarc.fr/
- eChemPortal The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request\_locale=en
- CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple
- ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp
- ERG Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg
- Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp
- ECHA European Chemicals Agency, website: https://echa.europa.eu/

#### Other Information

Explosive limits are unknown in literature, although the substance is combustible and has a flash point  $< 61 \text{Å}^{\circ}\text{C}$ . Depending on the degree of exposure, periodic medical examination is suggested. The relation between odour and the occupational exposure limit cannot be indicated.