Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 15.07.2010 *Revision: 15.07.2010*

1 Identification of substance

Product details

Trade name ***Thiosemicarbazide***

Stock number: A14630, L02683

Manufacturer/Supplier:
Alfa Aesar GmbH & Co.KG
Benzstrasse 3
D-76185 Karlsruhe / Germany
E-mail: gcat@matthey.com
www.alfa-chemcat.com

Informing department: Product safety department.

Emergency information:
Giftnotruf Universität Mainz / Poison Information Center Mainz
www.giftinfo.uni-mainz.de Telefon:+49(0)6131/19240

2 Hazards identification

Hazard designation:

T+ Very toxic

Information pertaining to particular dangers for man and environment
R 28 Very toxic if swallowed.

GHS label elements

Danger

H300 - Fatal if swallowed.

Prevention:
P264 Wash thoroughly after handling.
P270 Do no eat, drink or smoke when using this product.

Response:
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P321 Specific treatment (see on this label).

Storage:
P405 Store locked up.

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

3 Composition/information on ingredients

Chemical characterization:
Designation: (CAS#) Thiosemicarbazide (CAS# 79-19-6): 100%
Identification number(s):
EINECS Number: 201-184-7

4 First aid measures

General information
Instantly remove any clothing soiled by the product.
In case of irregular breathing or respiratory arrest provide artificial respiration.

After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
Seek immediate medical advice.

After skin contact
Instantly wash with water and soap and rinse thoroughly.
Seek immediate medical advice.

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

After swallowing
Do not induce vomiting; instantly call for medical help.
Seek immediate medical advice.

5 Fire fighting measures

Suitable extinguishing agents
Use fire fighting measures that suit the environment.

Special hazards caused by the material, its products of combustion or flue gases:
Can be released in case of fire:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)
Sulphur oxides (SOx)

Protective equipment:
Wear self-contained breathing apparatus.
Wear full protective suit.

6 Accidental release measures

Person-related safety precautions:
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

Measures for environmental protection:
Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting:
Dispose of contaminated material as waste according to item 13.

Additional information:
See Section 7 for information on safe handling
See section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

7 Handling and storage

Handling
Information 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:
The product is not flammable

Storage
Requirements to be met by storerooms and containers:
No special requirements.

Information about storage in one common storage facility:
Store away from oxidizing agents.

Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Store in a locked cabinet or with access restricted to technical experts or their assistants.

8 Exposure controls and 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:
Not required.

Additional information:
No data

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.

Breathing equipment:
Use breathing protection with high concentrations.

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Protection of hands: Check protective gloves prior to each use for their proper condition.
Material of gloves 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.
Eye protection: Safety glasses
Body protection: Protective work clothing.

9 Physical and chemical properties:

General Information

Form: Crystalline powder
Colour: White
Smell: Odourless

Change in condition
Melting point/Melting range: 180°C (dec)
Boiling point/Boiling range: Not determined
Sublimation temperature / start: Not determined

Flash point: Not applicable

Ignition temperature: Not determined

Decomposition temperature: Not determined

Danger of explosion: Product is not explosive.

Critical values for explosion:
Lower: Not determined
Upper: Not determined

Steam pressure: Not determined

Density Not determined

Solubility in / Miscibility with
Water: Soluble

10 Stability and reactivity

Thermal decomposition / conditions to be avoided: No decomposition if used and stored according to specifications.
Materials to be avoided: Oxidizing agents
Dangerous reactions: No dangerous reactions known
Dangerous products of decomposition: Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)
Sulphur oxides (SOx)

11 Toxicological information

Acute toxicity:

LD/LC50 values that are relevant for classification:

Oral	LD50	20 mg/kg (cat)
		10 mg/kg (dog)
		9160 µg/kg (rat)
		13 mg/kg (rabbit)
Dermal	LD50	2200 mg/kg (rabbit)

Primary irritant effect:
on the skin: The product is not skin irritating.
on the eye: May cause irritation
Sensitization: No sensitizing effect known.
Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information:

Additional ecological information:
General notes: Do not allow product to reach ground water, water bodies or sewage system.
Water hazard class 2 (Self-assessment): hazardous for water.
Danger to drinking water if even small quantities leak into soil.
Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations

Product:
Recommendation Consult state, local or national regulations for proper disposal.
Hand over to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.
Recommended cleaning agent: Water, if necessary with cleaning agent.

14 Transport information

Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)

ADR/RID-GGVS/E Class: 6.1 (T2) Toxic substances.
Kemler Number: 60
UN-Number: 2811
Packaging group: II
Label 6.1
Designation of goods: 2811 TOXIC SOLID, ORGANIC, N.O.S. (Thiosemicarbazide)
Limited quantities (LQ) LQ18
Transport category 2

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Tunnel restriction code D/E

Maritime transport IMDG/GGVSea:

IMDG/GGVSea Class: 6.1
UN Number: 2811
Label 6.1
Packaging group: II
Marine pollutant: No
Correct technical name: TOXIC SOLID, ORGANIC, N.O.S. (Thiosemicarbazide)

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: 6.1
UN/ID Number: 2811
Label 6.1
Packaging group: II
Correct technical name: TOXIC SOLID, ORGANIC, N.O.S. (Thiosemicarbazide)

UN "Model Regulation": UN2811, TOXIC SOLID, ORGANIC, N.O.S., 6.1, II

15 Regulatory information

Designation according to EC guidelines:

Code letter and hazard designation of product:

T+ Very toxic

Risk phrases: 28 Very toxic if swallowed.

Safety phrases:
22 Do not breathe dust.
28 After contact with skin, wash immediately with plenty of water.
36/37 Wear suitable protective clothing and gloves.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

National regulations

Information about limitation of use: Employment restrictions concerning young persons must be observed.
For use only by technically qualified individuals.

Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.

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.
Contact: Zachariah Holt
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)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
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)
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