

1 Identification of substance**Product details**

Trade name

Metaldehyde

Stock number:

A15292

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG
Zeppelinstrasse 7
D-76185 Karlsruhe / GermanyE-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:

Xn Harmful
F Highly flammable

Information pertaining to particular dangers for man and environment

R 11 Highly flammable.
R 22 Harmful if swallowed.

GHS label elements

**Warning**

H228 - Flammable solid.

**Warning**

H302 - Harmful if swallowed.

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P264 Wash thoroughly after handling.

Response:

P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.

Disposal:

P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.**3 Composition/information on ingredients**

Chemical characterization:

Designation: (CAS#)

2,4,6,8-Tetramethyl-1,3,5,7-tetroxocane (CAS# 108-62-3)

Identification number(s):

EINECS Number:

203-600-2

Index number:

605-005-00-7

4 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 immediate medical advice.

5 Fire fighting measures

Suitable extinguishing agents

In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.

For safety reasons unsuitable extinguishing agents

Water.

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
Wear self-contained breathing apparatus.
Wear full protective suit.

Protective equipment:

6 Accidental release measures

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

Measures for environmental protection:

Keep away from ignition sources
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:

Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
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.**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:

Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Fumes can combine with air to form an explosive mixture.

Storage

Requirements to be met by storerooms and containers:

Store in cool location.

Information about storage in one common storage facility:

Store away from oxidizing agents.
Store in the dark.
Protect from heat.

Further information about storage conditions:

Keep container tightly sealed.

Trade name **Metaldehyde**

Store in cool, dry conditions in well sealed containers.
Protect from the effects of light.

(Contd. of page 1)

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.
Avoid contact with the eyes and skin.

Breathing equipment:

Use breathing protection with high concentrations.

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:

Face protection
Protective work clothing.

9 Physical and chemical properties:**General Information**

Form: Powder
Colour: White
Smell: Odourless

Change in condition

Melting point/Melting range: 192-196°C (subl)
Boiling point/Boiling range: Not determined
Sublimation temperature / start: Not determined

Flash point: 55°C**Inflammability (solid, gaseous)** Highly flammable.**Ignition temperature:** 580°C**Decomposition temperature:** >80°C**Critical values for explosion:**

Lower: Not determined
Upper: Not determined

Steam pressure at 28°C: 1.3 hPa**Density at 20°C** 0.808 g/cm³**Solubility in / Miscibility with Water at 20°C:**

0.2 g/l

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
Light
Heat

Dangerous reactions:

No dangerous reactions known

Dangerous products of decomposition:

Carbon monoxide and carbon dioxide

11 Toxicological information**Acute toxicity:****LD/LC50 values that are relevant for classification:**

Oral	LD50	200 mg/kg (mouse) 227 mg/kg (rat)
Dermal	LD50	2275 mg/kg (rat)
Inhalative	LC50/4H	203 mg/m ³ /4H (rat)

Primary irritant effect:**on the skin:** Irritant for skin and mucous membranes.**on the eye:** Irritant effect.**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:**General notes:**

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.
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.

Trade name **Metaldehyde**

(Contd. of page 2)

14 Transport information**Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)**

ADR/RID-GGVS/E Class: 4.1 (F1) Flammable solids, self-reactive substances and solid desensitized explosives.
 Kemler Number: 40
 UN-Number: 1332
 Packaging group: III
 Label: 4.1
 Designation of goods: 1332 METALDEHYDE
 Limited quantities (LQ): LQ9
 Transport category: 3
 Tunnel restriction code: E

Maritime transport IMDG/GGVSea:

IMDG/GGVSea Class: 4.1
 UN Number: 1332
 Label: 4.1
 Packaging group: III
 Marine pollutant: No
 Correct technical name: METALDEHYDE

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: 4.1
 UN/ID Number: 1332
 Label: 4.1
 Packaging group: III
 Correct technical name: METALDEHYDE

UN "Model Regulation":

UN1332, METALDEHYDE, 4.1, III

15 Regulatory information**Designation according to EC guidelines:****Code letter and hazard designation of product:**

Xn Harmful
 F Highly flammable

Risk phrases:

11 Highly flammable.
 22 Harmful if swallowed.

Safety phrases:

13 Keep away from food, drink and animal feedingstuffs.
 16 Keep away from sources of ignition - No smoking.
 25 Avoid contact with eyes.
 46 If swallowed, seek medical advice immediately and show this container or label.

National regulations**Information about limitation of use:**

For use only by technically qualified individuals.
 Employment restrictions concerning young persons must be observed.

Water hazard class:

Water hazard class 1 (Self-assessment): slightly 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