

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

Revision: 13.07.2010

Printing date 13.07.2010

1 Identification of substance**Product details**

Trade name

Dimethylzinc

Stock number:

39563

Manufacturer/Supplier:

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

Informing department:

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

Emergency information:

2 Hazards identification

Hazard designation:

C Corrosive
F Highly flammable
N Dangerous for the environment

Information pertaining to particular dangers for man and environment

R 14 Reacts violently with water.
R 17 Spontaneously flammable in air.
R 34 Causes burns.
R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

GHS label elements

**Danger**H250 - Catches fire spontaneously if exposed to air.
H260+EUH014 - In contact with water releases flammable gases which may ignite spontaneously. Reacts violently with water.
H252 - Self-heating in large quantities; may catch fire.**Danger**

H314 - Causes severe skin burns and eye damage.

**Warning**H400 - Very toxic to aquatic life.
H410 - Very toxic to aquatic life with long lasting effects.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Prevention:

Response:

Storage:

Disposal:

P405 Store locked up.
P422 Store contents under inert gas.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.**3 Composition/information on ingredients**

Chemical characterization:

Designation: (CAS#)

Dimethylzinc (CAS# 544-97-8)

Identification number(s):

EINECS Number:

208-884-1

Index number:

030-004-00-8

4 First aid measures

General information

After inhalation

After skin contact

After eye contact

After swallowing

Instantly remove any clothing soiled by the product.
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 immediate medical advice.**5 Fire fighting measures**Suitable extinguishing agents
For safety reasons unsuitable extinguishing agents

Extinguishing powder. Do not use water.

Water.

Special hazards caused by the material, its products of combustion or flue gases:

Reacts violently with water
Spontaneously flammable in air.
Wear self-contained breathing apparatus.
Wear full protective suit.

Protective equipment:

6 Accidental release measures

Person-related safety precautions:

Measures for environmental protection:

Measures for cleaning/collecting:

Additional information:

Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources
Do not allow material to be released to the environment without proper governmental permits.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose of contaminated material as waste according to item 13.
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:

Information about protection against explosions and fires:

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.

Keep ignition sources away - Do not smoke.

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Substance/product is auto-flammable.

Storage Requirements to be met by storerooms and containers:
Information about storage in one common storage facility:

No special requirements.
Store away from water.
Do not store together with acids.
Store away from oxidizing agents.
Store away from alcohols.
Store away from air.

Further information about storage conditions:

Protect from humidity and keep away from water.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Store under dry inert gas.
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:
Additional information:

Not required.
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 in case of insufficient ventilation.
Use breathing protection with high concentrations.

Eye protection:

Safety glasses
Tightly sealed safety glasses.
Full face protection
Face protection

Body protection:

Protective work clothing.

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

Form: Liquid
Colour: Colourless
Smell: Not determined

Change in condition
Melting point/Melting range: -40°C
Boiling point/Boiling range: 46°C
Sublimation temperature / start: Not determined

Flash point: Not determined

Ignition temperature: Not determined

Decomposition temperature: Not determined

Self-inflammability: Spontaneously flammable in air.

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

Steam pressure: Not determined

Density at 20°C 1.386 g/cm³

Solubility in / Miscibility with Water: Reacts violently

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

Materials to be avoided:

Water/moisture
Acids
Oxidizing agents
Alcohols
Air
Halocarbons
Sulfur
Active metals
Spontaneously flammable in air.
Reacts violently with water
Carbon monoxide and carbon dioxide
Metal oxide
Methane

Dangerous reactions:

Dangerous products of decomposition:

11 Toxicological information

Acute toxicity:
Primary irritant effect:
on the skin:

Corrosive effect on skin and mucous membranes.
Irritant for skin and mucous membranes.

on the eye:

Strong corrosive effect.
Irritant effect.

Sensitization:

No sensitizing effect known.

Additional toxicological information:

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

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12 Ecological information:

Ecotoxicological effects:
Remark: Very toxic for fish
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.
Also poisonous for fish and plankton in water bodies.
Do not allow material to be released to the environment without proper governmental permits.
Very toxic for aquatic organisms

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.

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

ADR/RID-GGVS/E Class: 4.2 (SW) Substances liable to spontaneous combustion.
Kemler Number: X333
UN-Number: 3394
Packaging group: I
Label: 4.2+4.3
Special marking: Symbol (fish and tree)
Designation of goods: 3394 ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER- REACTIVE (Dimethylzinc)
Limited quantities (LQ): LQ0
Transport category: 0
Tunnel restriction code: B/E

Maritime transport IMDG/GGVSea:

IMDG/GGVSea Class: 4.2
UN Number: 3394
Label: 4.2+4.3
Packaging group: I
EMS Number: F-G,S-M
Marine pollutant: No
Correct technical name: ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER- REACTIVE (Dimethylzinc)

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: 4.2
UN/ID Number: 3394
Label: 4.2+4.3
Packaging group: I
Correct technical name: ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER- REACTIVE

UN "Model Regulation":

Environmental hazards: UN3394, ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER- REACTIVE, 4.2 (4.3), I
Environmentally hazardous substance, liquid; Marine Pollutant

15 Regulatory information**Designation according to EC guidelines:**

Code letter and hazard designation of product:



C Corrosive
F Highly flammable
N Dangerous for the environment

Risk phrases:

14 Reacts violently with water.
17 Spontaneously flammable in air.
34 Causes burns.
50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:

16 Keep away from sources of ignition - No smoking.
43 In case of fire, use powdered extinguishing agent. Never use water.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
60 This material and its container must be disposed of as hazardous waste.
61 Avoid release to the environment. Refer to special instructions/safety data sheets.

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)

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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)

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