1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Dimethyl sulfoxide-cig
Product Number: 156914
Brand: Aldrich
Supplier: Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63113
USA
Telephone: +1 800-325-5932
Fax: +1 800-325-5052
Emergency Phone # (For both supplier and manufacturer): (314) 776-6555
Preparation Information: Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview
OSHA Hazards
Combustible Liquid, Target Organ Effect
Target Organs
Skin
GHS Classification
Flammable liquids (Category 4)
GHS Label elements, including precautionary statements
Picture: none
Signal word: Warning
Hazard statement(s): H227
Precautionary statement(s): none
HMIS Classification
Health hazard: 0
Chronic Health Hazard: 0
Flammability: 2
Physical hazards: 0
NFPA Rating
Health hazard: 0
Fire: 2
Reactivity Hazard: 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Hazardous Dimethyl sulfoxide
(Methyl sulfoxide)-d6
DMSO-d6
Formula: C8H8O6S
Molecular Weight: 84.17 g/mol
Component: d(2H3)(Methyl) sulfoxide
CAS-No.: 2206-27-1
EC-No.: 218-611-9

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact
Wash off with soap and plenty of water. Consult a physician.
In case of eye contact
Flush eyes with water as a precaution.
If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability
Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat, sparks, open flames and hot surfaces. No smoking.
Suitable extinguishing media
Use water spray, alcohol resistant foam, dry chemical or carbon dioxide.
Special protective equipment for firefighters
Wear self-contained breathing apparatus for fire fighting if necessary.
Hazardous combustion products
Hazardous decomposition products formed under fire conditions: - Carbon oxides, Sulphur oxides
Further information
Use water spray to cool unopened containers.

5. ACCIDENTAL RELEASE MEASURES

Personal precautions
Avoid breathing vapors, mist or gas. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

[Signature] 12/26/2012

SIGMA-ALDRICH
Material Safety Data Sheet
Version 5.2
Revision Date: 06/12/2012
Print Date: 07/17/2012

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2 HAZARDS IDENTIFICATION

3 COMPOSITION/INFORMATION ON INGREDIENTS

4 FIRST AID MEASURES

5 FIREFIGHTING MEASURES

5 ACCIDENTAL RELEASE MEASURES
7. HANDLING AND STORAGE

Precautions for safe handling
Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Store under inert gas. Hygroscopic.

6. EXPOSURE CONTROLS: PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection
Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin and body protection
Impermeable clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form liquid
Colour no data available

Safety data
pH no data available
Melting point 18.4 °C (65.1 °F)
Boiling point 188 °C (372 °F) - lit.
Flash point 87.0 °C (188.6 °F) - closed cup
Ignition temperature 301 °C (574 °F)
Autoignition temperature no data available
Lower explosion limit 3.50 % (V)

Upper explosion limit 42.00 % (V)
Vapour pressure 0.55 kPa (0.41 mmHg) at 2000 °C (68.00 °F)
Density 1.10 g/mL at 25 °C (77 °F)
Water solubility no data available
Partition coefficient: log Pow: 2.000
n-Octanol/water Relative vapour density: 1.0 (Air = 1.0)
Odour no data available
Odour Threshold no data available
Evaporation rate no data available

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
No data available

Conditions to avoid
Heat, flames and sparks.

Materials to avoid
Acid chlorides, Phosphorus halides. Strong acids, Strong oxidising agents, Strong reducing agents

Hazardous decomposition products
Other decomposition products - no data available
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Sulphur oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity
Oral LD50
LD50 Oral - rat: 14,500 mg/kg

Inhalation LC50
LC50 Inhalation - rat: 4.00 h - 4025 ppm

Dermal LD50
LD50 Dermal - rabbit: 5,000 mg/kg

Other information on acute toxicity
No data available

Skin corrosion/irritation
Skin - rabbit: No skin irritation - 4.00 h

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a
carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
no data available

Teratogenicity
no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion May be harmful if swallowed. May cause skin irritation.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Aggravated Avoid contact with DMSO solutions containing toxic materials or materials with unknown toxicological properties. Dimethyl sulfoxide is readily absorbed through skin and may carry such materials into the body.

Medical Condition

Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects
no data available

Additional Information
RTECS: Not available

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish LC50: Oncorhynchus mykiss (rainbow trout) - 35,000 mg/l - 96.0 h

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

14. TRANSPORT INFORMATION

DOT (US)

NA-Number: 1993 Class: CBL

Proper shipping name: Combustible liquid, n.o.s. ([CH3][(CH3)2] sulfoxide)

Reportable Quantity (RQ):

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION

OSHA Hazards

Combustible Liquid, Target Organ Effect

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Five Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

d(CH3)[(CH3)2] sulfoxide CAS-No. 2206-27-1

New Jersey Right To Know Components

d(CH3)[(CH3)2] sulfoxide CAS-No. 2206-27-1

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further Information

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