

SAFETY DATA SHEET

Version: v1

Revision Date: 2024-01-26

Print Date: 2024-02-02

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Tricarbonyl(2-methylcyclopentadienyl)manganese
Product Number : T302629
Brand : aladdin
CAS-No. : 12108-13-3

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances.

1.3 Company

Company : ALADDIN SCIENTIFIC CORPORATION
Address : 14078 Meridian Parkway,
Riverside, CA. 92518
Telephone : +1 (833) 552-7181
Fax : no data available

1.4 Emergency telephone number

CHEMTREC®, Inside the USA : 1-800-424-9300
CHEMTREC®, Outside the USA :

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, oral (category 3), H301

Acute toxicity, inhalation (category 1), H330

Acute toxicity, dermal (category 2), H310

Skin corrosion/irritation (category 2), H315

Specific target organ toxicity (repeated exposure), inhalation (category 1), lung, H372

Acute (short-term) aquatic hazard (category 1), H400

Long-term aquatic hazard (category 1), H410

2.2 GHS Label elements, including precautionary statements

Pictogram



Danger

Signal word

Hazard statement(s)

H301	Toxic if swallowed
H315	Causes skin irritation
H372	Causes damage to organs through prolonged or repeated exposure
H410	Very toxic to aquatic life with long lasting effects
H310+H330	Fatal in contact with skin or if inhaled

Precautionary statement(s)

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash hands [and ...] thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	[In case of inadequate ventilation] Wear respiratory protection.
P310	Immediately call a POISON CENTER or doctor/physician.
P314	Get medical advice/attention if you feel unwell.
P330	Rinse mouth.
P391	Collect spillage.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
P302+P352	IF ON SKIN: wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P332+P313	IF SKIN irritation occurs: Get medical advice/attention.
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms	: no data available
Formula	: C ₉ H ₇ MnO ₃
Molecular weight	: 218.09
CAS No.	: 12108-13-3

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EC-NO. : no data available

Component	Classification	Concentration
Tricarbonyl(2-methylcyclopentadienyl)manganese	Acute Toxicity Category 3; Acute Toxicity Category Category 1; Acute toxicity Category 2; Skin rot Erosion/irritation category 2; specific target organ Systemic toxicity (repeated exposure) category 1; Acute (short-term) aquatic hazard category 1; Long-term aquatic hazard category 1; H301, H330, H310, H315, H372, H400, H410	98%

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air.

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.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water mist, alcohol-resistant foam, dry powder or carbon dioxide to extinguish fire

Unsuitable extinguishing media

no data available

5.2 Special hazards arising from the substance or mixture

Carbon oxide manganese/manganese oxide

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear a breathing mask. Avoid breathing vapor, mist or gas. Ensure adequate ventilation. Evacuate people to a safe area. For personal protection, see section 8.

6.2 Environmental precautions

If safety can be ensured, measures can be taken to prevent further leakage or overflow. Do not let the product enter the drain. Avoid release to the surrounding environment.

6.3 Methods and materials for containment and cleaning up

Absorb with inert absorbent material and treat it as hazardous waste. Place in a suitable closed container for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid breathing vapor or mist. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling this product. For preventive measures, see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool place. Keep the container tightly closed and store in a dry and ventilated place. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls

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

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166(EU).

Skin protection

Gloves must be checked before use. Please use proper methods to remove the gloves (do not touch the outer surface of the gloves), and avoid any skin parts contacting the product. After use, please handle the contaminated gloves carefully according to relevant laws and regulations and effective laboratory rules and procedures. Please clean and blow dry the protective gloves selected for your hands must meet the specifications given in regulation (EU) 2016 / 425 and the en 374 standard derived from it.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface 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).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	no data available
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	-1 °C
f) Initial boiling point and boiling range	232-233°C
g) Flash point	96°C
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	no data available
n) Water solubility	no data available
o) Partition coefficient: n-octanol/water	no data available

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p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties N	no data available
t) Oxidizing properties N	no data available

9.2 Other safety information

no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Strong oxidants

10.6 Hazardous decomposition products

no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral-Rat-Male and Female-58 mg/kg

(OECD Test Guideline 423)

LC50 inhalation-rat-male-4 h-0.07 mg/l

(OECD Test Guideline 403)

LD50 percutaneous-rabbit-male and female-196.7 mg/kg

(OECD Test Guideline 402)

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Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

Inhalation-Prolonged or repeated exposure can cause damage to organs. - lung

Aspiration hazard

no data available

Additional Information

Registration of Toxic Effects of Chemical Substances: OP1450000

Men exposed to manganese dust exhibit decreased fertility. Chronic manganese poisoning first manifests in the central nervous system. Early symptoms include weakness, lethargy, and

leg weakness. In more cases, the face will feel numb and masked, and the emotions will be out of control, such as uncontrollable laughter and cramps during walking, easy to fall

fall. Pneumonia was occasionally found in some workers who are often exposed to dust from manganese compounds.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish semi-static test LC50-Cyprinus carpio (carp)-0.21 mg/l-96 h

(OECD Test Guideline 203)

Toxicity to water flea and other aquatic invertebrates

Static test EC50-Daphnia magna (Water flea)-0.83 mg/l-48 h

12.2 Persistence and degradability

Aerobic-exposure time 56 d Result: 4%-not biodegradable. (OECD Test Guideline 301D)

12.3 Bioaccumulative potential

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no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

It is extremely toxic to aquatic life and has long-lasting effects.

SECTION 13:

13.1 Disposal considerations

Product

Hand over the remaining and non-recyclable solution to a licensed company for disposal.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number: 3281

Packing group: II

Class: 6.1

Proper shipping name: Metal carbonyls, liquid,
n.o.s. ((Methylcyclopentadienyl)manganese(I)
tricarbonyl)

Reportable Quantity(RQ): no data
available

Poison Inhalation Hazard: no data
available

Environmental Hazards: No

IMDG

UN number: 3281

Packing group: II

EMS-No: no data available

Proper shipping name: Metal carbonyls, liquid, n.o.s. ((Methylcyclopentadienyl)manganese(I) tricarbonyl)

IATA

UN number: 3281

Packing group: II

Class: 6.1

Proper shipping name: Metal carbonyls, liquid, n.o.s. ((Methylcyclopentadienyl)manganese(I) tricarbonyl)

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

SECTION 16: Other information

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Creation Date

21-Oct-2021

Revision Date

26-Jan-2024

Print Date

02-Feb-2024

Revision Summary

SDS sections updated v1

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