

[Ammonium Hexachloroosmate](#)

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Linear Formula	(NH ₄) ₂ OsCl ₆
Pubchem CID	11729867
MDL Number	MFCD00010883
EC No.	235-188-5
IUPAC Name	diazanium; hexachloroosmium(2-)
Beilstein/Reaxys No.	N/A
SMILES	Cl[Os-2](Cl)(Cl)(Cl)(Cl)Cl.[NH4+].[NH4+]
Inchi Identifier	InChI=1S/6ClH.2H3N.Os/h6*1H;2*1H3;/q;:::;+4/p-4
Inchi Key	SRBXXQDKBKTWOC-UHFFFAOYSA-J
Signal Word	Warning
Hazard Statements	H315-H319-H335
Hazard Codes	Xi
Risk Codes	36/37/38
Safety Statements	26-36
RTECS Number	N/A
Transport Information	N/A
WGK Germany	3

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SAFETY DATA SHEET

Date Accessed: 04/27/2024

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SECTION 1. IDENTIFICATION

Product Identifiers: All applicable American Elements product codes for CAS #12125-08-5

Relevant identified uses of the substance:
Scientific research and development

Supplier details:
American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
Fax: +1 310-208-0351

Emergency telephone number:
Domestic, North America +1 800-424-9300
International +1 703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture in
accordance with 29 CFR 1910 (OSHA HCS)
GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

Hazards not otherwise classified

No data available

GHS label elements

GHS label elements, including precautionary
statements

Hazard pictograms



GHS07

Signal word

Warning

Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Precautionary statements

P261

Avoid breathing dust/fume/gas/mist/vapors/spray.

P280

Wear protective gloves/protective clothing/eye
protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with
water for several minutes. Remove contact lenses, if
present and easy to do. Continue rinsing.

P304+P340

IF INHALED: Remove person to fresh air and keep
comfortable for breathing.

P405

Store locked up.

P501

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

WHMIS classification

D2B - Toxic material causing other toxic effects

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

Health (acute effects) = 1

Flammability = 0

Physical Hazard = 1
Other hazards
Results of PBT and vPvB assessment
PBT: N/A
vPvB: N/A

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances
CAS No. / Substance Name:
12125-08-5 Ammonium hexachloroosmate(IV)
Identification number(s):
EC number:
235-188-5

SECTION 4. FIRST AID MEASURES

Description of first aid measures
If inhaled:
Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.
In case of skin contact:
Immediately wash with soap and water; rinse thoroughly.
Seek immediate medical advice.
In case of eye contact:
Rinse opened eye for several minutes under running water. Consult a physician.
If swallowed:
Seek medical treatment.
Information for doctor
Most important symptoms and effects, both acute and delayed
No data available
Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media
Suitable extinguishing agents
Product is not flammable. Use fire-fighting measures that suit the surrounding fire.
Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
Nitrogen oxides (NO_x)

Hydrogen chloride (HCl)
Metal oxide fume
Advice for firefighters
Protective equipment:
Wear self-contained respirator.
Wear fully protective impervious suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Environmental precautions:
Do not allow product to enter drains, sewage systems, or other water courses.
Methods and materials for containment and cleanup:
Ensure adequate ventilation.
Prevention of secondary hazards:
No special measures required.
Reference to other sections
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

Handling
Precautions for safe handling
Handle under dry protective gas.
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.
Information about protection against explosions and fires:
The product is not flammable
Conditions for safe storage, including any incompatibilities
Requirements to be met by storerooms and receptacles:
No special requirements.
Information about storage in one common storage facility:
Store away from water/moisture.
Store away from oxidizing agents.
Further information about storage conditions:
Store under dry inert gas.
This product is hygroscopic.

Keep container tightly sealed.
Store in cool, dry conditions in well-sealed containers.
Protect from humidity and water.
Specific end use(s)
No data available

SECTION 8. EXPOSURE CONTROLS/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.
Control parameters
Components with limit values that require monitoring at the workplace:
None.
Additional information:
No data
Exposure controls
Personal protective equipment
Follow typical protective and hygienic practices for handling chemicals.
Keep away from foodstuffs, beverages and feed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.
Breathing equipment:
Use suitable respirator when high concentrations are present.
Protection of hands:
Impervious gloves
Inspect gloves prior to use.
Suitability of gloves should be determined both by material and quality, the latter of which may vary by manufacturer.
Penetration time of glove material (in minutes)
No data available
Eye protection:
Safety glasses
Body protection:
Protective work clothing

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance:
Form:
Crystalline or powder
Color:
Brown to black
Odor:
No data available
Odor threshold:
No data available.
pH:
N/A
Melting point/Melting range:
170 °C (338 °F) (subl.)
Boiling point/Boiling range:
No data available
Sublimation temperature / start:
No data available
Flammability (solid, gas)
No data available.
Ignition temperature:
No data available
Decomposition temperature:
No data available
Autoignition:
No data available.
Danger of explosion:
No data available.
Explosion limits:
Lower:
No data available
Upper:
No data available
Vapor pressure:
N/A
Density at 20 °C (68 °F):
2.9 g/cm³ (24.201 lbs/gal)
Relative density
No data available.
Vapor density
N/A
Evaporation rate
N/A
Solubility in / Miscibility with
Water:
No data available
Partition coefficient (n-octanol/water):
No data available.
Viscosity:
Dynamic:
N/A
Kinematic:
N/A
Other information
No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided:

Decomposition will not occur if used and stored according to specifications.

Possibility of hazardous reactions

Reacts with strong oxidizing agents

Conditions to avoid

No data available

Incompatible materials:

Water/moisture

Oxidizing agents

Hazardous decomposition products:

Nitrogen oxides

Hydrogen chloride (HCl)

Metal oxide fume

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity:

No effects known.

LD/LC50 values that are relevant for classification:

No data

Skin irritation or corrosion:

Causes skin irritation.

Eye irritation or corrosion:

Causes serious eye irritation.

Sensitization:

No sensitizing effects known.

Germ cell mutagenicity:

No effects known.

Carcinogenicity:

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

Reproductive toxicity:

No effects known.

Specific target organ system toxicity - repeated exposure:

No effects known.

Specific target organ system toxicity - single exposure:

May cause respiratory irritation.

Aspiration hazard:

No effects known.

Subacute to chronic toxicity:
No effects known.
Additional toxicological information:
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known

SECTION 12. ECOLOGICAL INFORMATION

Toxicity
Aquatic toxicity:
No data available
Persistence and degradability
No data available
Bioaccumulative potential
No data available
Mobility in soil
No data available
Additional ecological information:
Do not allow undiluted product or large quantities to reach groundwater, water courses, or sewage systems. Avoid transfer into the environment.
Results of PBT and vPvB assessment
PBT:
N/A
vPvB:
N/A
Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Recommendation
Consult official regulations to ensure proper disposal.
Uncleaned packagings:
Recommendation:
Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION

UN-Number
DOT, ADN, IMDG, IATA
N/A
UN proper shipping name
DOT, ADN, IMDG, IATA
N/A
Transport hazard class(es)
DOT, ADR, ADN, IMDG, IATA

Class
N/A
Packing group
DOT, IMDG, IATA
N/A
Environmental hazards:
N/A
Special precautions for user
N/A
Transport in bulk according to Annex II of
MARPOL73/78 and the IBC Code
N/A
Transport/Additional information:
DOT
Marine Pollutant (DOT):
No

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental
regulations/legislation specific for the substance or
mixture
GHS GHS label elements, including precautionary
statements
Hazard pictograms
GHS07
Signal word
Warning
Hazard statements
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
Precautionary statements
P261
Avoid breathing dust/fume/gas/mist/vapors/spray.
P280
Wear protective gloves/protective clothing/eye
protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with
water for several minutes. Remove contact lenses, if
present and easy to do. Continue rinsing.
P304+P340
IF INHALED: Remove person to fresh air and keep
comfortable for breathing.
P405
Store locked up.
P501
Dispose of contents/container in accordance with
local/regional/national/international regulations.
National regulations
All components of this product are listed in the U.S.
Environmental Protection Agency Toxic Substances

Control Act Chemical substance Inventory.
All components of this product are listed on the
Canadian Non-Domestic Substances List (NDSL).
SARA Section 313 (specific toxic chemical listings)
Substance is not listed.
California Proposition 65
Prop 65 - Chemicals known to cause cancer
Substance is not listed.
Prop 65 - Developmental toxicity
Substance is not listed.
Prop 65 - Developmental toxicity, female
Substance is not listed.
Prop 65 - Developmental toxicity, male
Substance is not listed.
Information about limitation of use:
For use only by technically qualified individuals.
Other regulations, limitations and prohibitive
regulations
Substance of Very High Concern (SVHC) according to
the REACH Regulations (EC) No. 1907/2006.
Substance is not listed.
The conditions of restrictions according to Article 67
and Annex XVII of the Regulation (EC) No 1907/2006
(REACH) for the manufacturing, placing on the market
and use must be observed.
Substance is not listed.
Annex XIV of the REACH Regulations (requiring
Authorisation for use)
Substance is not listed.
Chemical safety assessment:
A Chemical Safety Assessment has not been carried
out.

16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No.
1907/2006 (REACH). The above information is
believed to be correct but does not purport to be all
inclusive and shall be used only as a guide. The
information in this document is based on the present
state of our knowledge and is applicable to the
product with regard to appropriate safety precautions.
It does not represent any guarantee of the properties
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