

<a href="#">Chromium Carbide</a>	<a href="#">Pricing &gt;</a>
<a href="#">Chromium Carbide Nanoparticles / Nanopowder</a>	<a href="#">Pricing &gt;</a>
<a href="#">Chromium Carbide Powder</a>	<a href="#">Pricing &gt;</a>
<a href="#">Chromium Carbide Sputtering Target</a>	<a href="#">Pricing &gt;</a>

<b>Linear Formula</b>	Cr <sub>3</sub> C <sub>2</sub>
<b>Pubchem CID</b>	3650773
<b>MDL Number</b>	MFCD00016041
<b>EC No.</b>	234-576-1
<b>IUPAC Name</b>	N/A
<b>Beilstein/Reaxys No.</b>	N/A
<b>SMILES</b>	[Cr]#C[Cr]C#[Cr]
<b>Inchl Identifier</b>	InChI=1S/2C.3Cr
<b>Inchl Key</b>	UFGZSIPAQKLCGR-UHFFFAOYSA-N
<b>Signal Word</b>	N/A
<b>Hazard Statements</b>	N/A
<b>Hazard Codes</b>	N/A
<b>Risk Codes</b>	N/A
<b>Safety Statements</b>	N/A
<b>Transport Information</b>	N/A

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## SAFETY DATA SHEET

Date Accessed: 04/23/2024

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### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #12012-35-0

**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

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## SECTION 2. HAZARDS IDENTIFICATION

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

GHS02 Flame

Flam. Sol. 2 H228 Flammable solid.

Hazards not otherwise classified No data available

GHS label elements, including precautionary  
statements

Hazard pictograms



GHS02

Signal word Warning

Hazard statements

H228 Flammable solid.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot  
surfaces. No smoking.

P280 Wear protective gloves/protective clothing/eye  
protection/face protection.

P240 Ground/bond container and receiving  
equipment.

P241 Use explosion-proof  
electrical/ventilating/lighting/equipment.

P370+P378 In case of fire: Use for extinction: CO2,  
powder or water spray.

WHMIS classification

B4 - Flammable solid

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH

FIRE

REACTIVITY

1

2

1

Health (acute effects) = 1

Flammability = 2

Physical Hazard = 1

Other hazards

Results of PBT and vPvB assessment

PBT: N/A

vPvB: N/A

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### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substances

CAS No. / Substance Name:

12012-35-0 Chromium carbide

Identification number(s):

EC number: 234-576-1

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### **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

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### **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media

Suitable extinguishing agents CO<sub>2</sub>, sand, extinguishing powder. Do not use water.

Special hazards arising from the substance or mixture

Contact with water releases flammable gases

If this product is involved in a fire, the following can be released:

Toxic metal oxide fume

Flammable gases/vapors

Advice for firefighters

Protective equipment:

Wear self-contained respirator.  
Wear fully protective impervious suit.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures  
Use personal protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation  
Keep away from ignition sources  
Environmental precautions: Do not allow material to be released to the environment without official permits.  
Methods and materials for containment and cleanup:  
Keep away from ignition sources.  
Ensure adequate ventilation.  
Prevention of secondary hazards: Keep away from ignition sources.  
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.

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## **SECTION 7. HANDLING AND STORAGE**

Handling  
Precautions for safe handling  
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:  
Protect from humidity and water.  
Protect against electrostatic charges.  
Conditions for safe storage, including any incompatibilities  
Requirements to be met by storerooms and receptacles: Store in a cool location.  
Information about storage in one common storage facility: No data available  
Further information about storage conditions:  
Keep container tightly sealed.  
Store in cool, dry conditions in well-sealed containers.  
Specific end use(s) No data available

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## **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:

Chromium (II) compounds, as Cr  
mg/m<sup>3</sup>

Belgium TWA 0.5

Denmark TWA 0.5

Finland TWA 0.01

France TWA 0.5

Ireland TWA 0.5

Sweden TWA 0.5

United Kingdom TWA 0.5

USA PEL 0.5

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.

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.

The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

Penetration time of glove material (in minutes) No data available

Eye protection: Safety glasses

Body protection: Protective work clothing.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Information on basic physical and chemical properties

Appearance:

Form: Powder or solid in various forms

Color: Grey

Odor: Odorless

Odor threshold: No data available.  
pH: N/A  
Melting point/Melting range: 1890 °C (3434 °F)  
Boiling point/Boiling range: 3800 °C (6872 °F)  
Sublimation temperature / start: No data available  
Flash point: N/A  
Flammability (solid, gas) Highly flammable.  
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): 6.68 g/cm<sup>3</sup> (55.745 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

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## **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 No dangerous reactions known  
Conditions to avoid No data available  
Incompatible materials:  
Bases  
No data available  
Hazardous decomposition products:  
Methane  
Toxic metal oxide fume

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## **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: Irritant to skin and mucous membranes.  
Eye irritation or corrosion: Irritating effect.  
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: No effects known.  
Aspiration hazard: No effects known.  
Subacute to chronic toxicity:  
Chromium powder, chromium (II) and chromium (III) compounds may cause nausea, diarrhea, vomiting, skin and eye irritation and pneumoconiosis. Although less likely than Cr(VI) compounds, the NTP considers all chromium to be potentially carcinogenic.  
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.

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## **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 material to be released to the environment without official permits.

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

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## **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.

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## **SECTION 14. TRANSPORT INFORMATION**

UN-Number  
DOT, IMDG, IATA UN3178  
UN proper shipping name  
DOT Flammable solid, inorganic, n.o.s. (chromium carbide)  
IMDG, IATA FLAMMABLE SOLID, INORGANIC, N.O.S. (chromium carbide)  
Transport hazard class(es)  
DOT  
Class 4.1 Flammable solids, self-reactive substances and solid desensitised explosives.  
Label 4.1  
Class 4.1 (F3) Flammable solids, self-reactive substances and solid desensitised explosives  
Label 4.1  
IMDG, IATA  
Class 4.1 Flammable solids, self-reactive substances and solid desensitised explosives.  
Label 4.1  
Packing group  
DOT, IMDG, IATA III  
Environmental hazards: N/A  
Special precautions for user Warning: Flammable solids, self-reactive substances and solid desensitised explosives  
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code N/A  
Transport/Additional information:  
DOT  
Marine Pollutant (DOT): No  
UN "Model Regulation": UN3178, Flammable solid, inorganic, n.o.s. (chromium carbide), 4.1, III

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## **SECTION 15. REGULATORY INFORMATION**

Safety, health and environmental regulations/legislation specific for the substance or mixture  
GHS label elements, including precautionary statements  
Hazard pictograms



GHS02

Signal word Warning

Hazard statements

H228 Flammable solid.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P370+P378 In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.

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 Domestic Substances List (DSL).

SARA Section 313 (specific toxic chemical listings)

12012-35-0 Chromium carbide

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.

This product contains chromium and is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986

and 40CFR372.

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.

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## 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 of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.

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