
SAFETY DATA SHEET (SDS)

According to Regulation (EC) No. 1907/2006 (REACH) & OSHA HazCom Standard (29 CFR 1910.1200)

SECTION 1: Identification of the Substance / Mixture and of the Company

Product Name: Chromium Carbide Powder

Chemical Name: Chromium Carbide

Chemical Formula: Cr₃C₂

CAS Number: 12012-35-0

EC Number: 234-576-1

Product Grade: 99.8% Min.

Recommended Use

- Thermal spray materials
- Wear-resistant coatings
- Hardfacing alloys
- Cermet and ceramic materials
- Advanced materials research

Supplier

Metalstek Engineering

Website: <https://www.metalstek.com>

Email: sales@metalstek.com

Emergency Contact

Chemical Emergency Service
Available during business hours

SECTION 2: Hazard Identification

Classification of the Substance (GHS)

The product is **not classified as hazardous** according to GHS criteria when handled under normal industrial conditions.

However, **dust generation may cause irritation.**

Label Elements

Signal Word

Warning

Hazard Statements

H335 – May cause respiratory irritation.

Precautionary Statements

P261 – Avoid breathing dust.

P264 – Wash hands thoroughly after handling.

P271 – Use only in well-ventilated areas.

P280 – Wear protective gloves and eye protection.

Other Hazards

Fine powder may form **dust clouds in air** and present **mechanical irritation hazards.**

SECTION 3: Composition / Information on Ingredients

Component	CAS Number	EC Number	Content
Chromium Carbide (Cr ₃ C ₂)	12012-35-0	234-576-1	≥ 99.8%

No hazardous impurities above reporting thresholds.

SECTION 4: First Aid Measures

Inhalation

Move exposed person to fresh air.
If respiratory irritation occurs, seek medical attention.

Skin Contact

Wash skin with soap and water.

Eye Contact

Flush eyes with plenty of water for **at least 15 minutes**.

Ingestion

Rinse mouth with water.
Seek medical advice if symptoms develop.

SECTION 5: Fire Fighting Measures

Suitable Extinguishing Media

Dry chemical powder
Carbon dioxide (CO₂)
Sand

Unsuitable Media

Water jets may disperse powder.

Specific Hazards

Heating may generate:

- Chromium oxides
- Carbon monoxide
- Carbon dioxide

Protective Equipment

Firefighters should wear **self-contained breathing apparatus (SCBA)**.

SECTION 6: Accidental Release Measures

Personal Precautions

Avoid dust formation.

Wear protective equipment.

Environmental Precautions

Prevent entry into:

- drains
- surface water
- soil

Cleanup Methods

Collect powder using:

- HEPA vacuum
- damp sweeping

Place material in suitable sealed containers.

SECTION 7: Handling and Storage

Handling

Avoid generating airborne dust.

Use:

- local exhaust ventilation
- appropriate PPE

Avoid contact with eyes and skin.

Storage

Store in:

- tightly sealed containers
- dry environment
- well-ventilated area

Keep away from **strong oxidizing agents**.

SECTION 8: Exposure Controls / Personal Protection

Occupational Exposure Limits

No specific exposure limits established for chromium carbide.

Follow general dust exposure guidelines:

OSHA PEL (nuisance dust)

Total dust:

15 mg/m³

Respirable dust:

5 mg/m³

Engineering Controls

Use **local exhaust ventilation** when handling powder.

Personal Protective Equipment

Respiratory Protection

NIOSH-approved dust respirator (N95 or better).

Eye Protection

Safety goggles.

Skin Protection

Protective gloves and laboratory clothing.

SECTION 9: Physical and Chemical Properties

Property	Value
Appearance	Dark gray to black powder
Odor	Odorless
Molecular Weight	180.01 g/mol
Density	~6.68 g/cm ³
Melting Point	~1895 °C
Solubility	Insoluble in water
Boiling Point	Not applicable
Stability	Stable under normal conditions

SECTION 10: Stability and Reactivity

Chemical Stability

Stable under recommended storage conditions.

Conditions to Avoid

- Excessive heat
- Dust dispersion
- Strong oxidizers

Hazardous Decomposition

May produce:

- Chromium oxides
 - Carbon oxides
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SECTION 11: Toxicological Information

Acute Toxicity

Low toxicity expected.

Inhalation

Dust may cause respiratory irritation.

Skin Irritation

May cause mild irritation.

Eye Irritation

Mechanical irritation possible.

Carcinogenicity

Not classified as carcinogenic in carbide form.

SECTION 12: Ecological Information

Ecotoxicity

Limited ecological data available.

Persistence

Insoluble inorganic compound.

Bioaccumulation

Not expected to bioaccumulate significantly.

Environmental Precautions

Avoid uncontrolled environmental release.

SECTION 13: Disposal Considerations

Dispose of in accordance with:

- local regulations
- regional regulations
- national regulations

Industrial waste disposal recommended.

SECTION 14: Transport Information

This product is **not regulated as dangerous goods**.

Regulation	Status
UN Number	Not regulated
Transport Hazard Class	Not applicable
Packing Group	Not applicable
IMDG	Not dangerous goods
IATA	Not dangerous goods

SECTION 15: Regulatory Information

EU Regulations

Complies with:

REACH Regulation (EC) No. 1907/2006

U.S. Regulations

OSHA Hazard Communication Standard
29 CFR 1910.1200

TSCA Status

Listed or exempt.

SECTION 16: Other Information

This Safety Data Sheet is provided for information and guidance regarding the safe handling, storage, transportation, and disposal of the product.

The information is believed to be accurate but **does not constitute a guarantee of product properties.**

Users are responsible for ensuring compliance with applicable regulations.