

# SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Name:** Chromium Carbide Cr<sub>7</sub>C<sub>3</sub>

**CAS #:** 12075-40-0

**Relevant identified uses of the substance:** Scientific research and development

**Supplier details:**

Stanford Advanced Materials

E-mail: [sales@samaterials.com](mailto:sales@samaterials.com)

Tel: (949) 407-8904

Address: 23661 Birtcher Dr., Lake Forest, CA 92630 U.S.A.

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## SECTION 2. HAZARDS IDENTIFICATION

Physical hazards Not classified.

Health hazards Sensitization, skin Category 1

Carcinogenicity Category 1

Hazardous to the aquatic environment, acute Category 1  
hazard

Environmental hazards

Hazardous to the aquatic environment, Category 1  
long-term hazard

OSHA defined hazards Not classified

Label elements

Signal word Danger

Hazard statement May cause an allergic skin reaction. May cause cancer. Very toxic to aquatic life.

Very toxic to

aquatic life with long lasting effects.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read

and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Response If on skin: Wash with plenty of water. If exposed or concerned: Get medical advice/attention. If

skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. Collect spillage.

Storage Store locked up.

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

Hazard(s) not otherwise

classified (HNOC)

None known.

Supplemental information None.

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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Chemical name Common name and synonyms CAS number %

Chromium Carbide 12075-40-0 100

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a

trade secret.

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## SECTION 4. FIRST AID MEASURES

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

Skin contact

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important May cause an allergic skin reaction. Dermatitis. Rash.

symptoms/effects, acute and

delayed

Provide general supportive measures and treat symptomatically. Keep victim under observation.

Symptoms may be delayed.

Indication of immediate medical

attention and special treatment

needed

IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

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## SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from During fire, gases hazardous to health may be formed.

the chemicalSpecial protective equipment Self-contained breathing apparatus and full protective clothing must be

worn in case of fire.

and precautions for firefighters

Fire fighting Use water spray to cool unopened containers.

equipment/instructions

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

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

Personal precautions, protective

equipment and emergency

procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation.

Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for

containment and cleaning up

Stop the flow of material, if this is without risk. Prevent product from entering drains. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

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

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Provide adequate ventilation. Avoid breathing dust/fume/gas/mist/vapors/spray.

Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Should be handled in

closed systems, if possible. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage,

including any incompatibilities

Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Occupational exposure limits

US. OSHA Table Z-2 (29 CFR 1910.1000)

Material Type Value

Chromium Carbide (CAS Ceiling 0.1 mg/m<sup>3</sup>

12075-40-0)

Biological limit values

ACGIH Biological Exposure Indices Material Value Determinant Specimen Sampling Time

Chromium Carbide (CAS 25 µg/l Total chromium Urine \*

12075-40-0)

10 µg/l Total chromium Urine \*

\* - For sampling details, please see the source document.

Control parameters Follow standard monitoring procedures.

Individual protection measures, such as personal protective equipment

Eye/face protection If contact is likely, safety glasses with side shields are recommended.

Skin protection

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Hand protection

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

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

Appearance

Physical state Solid.

Form Solid. Powder

Color Not available.

Odor N/A.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling

range

N/A

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower

(%)

Not available.

Flammability limit - upper

(%)

Not available

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient

(n-octanol/water)Not available.

Auto-ignition temperature N/A

Decomposition temperature Not available.

Viscosity Not available.

Other information

Explosive properties Not explosive.

Molecular formula C<sub>3</sub>Cr<sub>7</sub>

Oxidizing properties Not oxidizing

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## SECTION 10. STABILITY AND REACTIVITY

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

Conditions to avoid Contact with incompatible materials.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition No hazardous decomposition products are known.

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## SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation Prolonged inhalation may be harmful.

Skin contact May cause an allergic skin reaction.

Eye contact Direct contact with eyes may cause temporary irritation.

Ingestion Expected to be a low ingestion hazard.

Symptoms related to the

physical, chemical and

toxicological characteristics

May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity May cause an allergic skin reaction.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye Direct contact with eyes may cause temporary irritation.

irritation

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization May cause an allergic skin reaction.

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Germ cell mutagenicity

Carcinogenicity May cause cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Chromium Carbide (CAS 12075-40-0) 3 Not classifiable as to carcinogenicity to humans.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity -

single exposure

Not classified. Specific target organ toxicity -

repeated exposure



Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

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## **SECTION 12. ECOLOGICAL INFORMATION**

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation

potential, endocrine disruption, global warming potential) are expected from this component.

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Disposal instructions

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations

Dispose in accordance with all applicable regulations

Hazardous waste code

The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused

products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see:

Disposal instructions).

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

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## **SECTION 14. TRANSPORT INFORMATION**

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

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## **SECTION 15. REGULATORY INFORMATION**

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Immediate Hazard - Yes

Delayed Hazard - Yes

Fire Hazard - No

Pressure Hazard - No

Reactivity Hazard - No

Hazard categories

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous Yes

chemical

SARA 313 (TRI reporting)

Chemical name CAS number % by wt.

Chromium Carbide 12075-40-0 100

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Chromium Carbide (CAS 12075-40-0)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Priority pollutant

Toxic pollutant

Clean Water Act (CWA)

Section 112(r) (40 CFR

68.130)

0.1 mg/l

0.1 mg/l

Safe Drinking Water Act

(SDWA)

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit.

22, 69502.3, subd. (a))

Chromium Carbide (CAS 12075-40-0)

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Chromium Carbide (CAS 12075-40-0)

US. Pennsylvania RTK - Hazardous Substances

Not regulated.

US. Pennsylvania Worker and Community Right-to-Know Law

Chromium Carbide (CAS 12075-40-0)

US. Rhode Island RTK Chromium Carbide (CAS 12075-40-0)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain

any chemicals currently listed as carcinogens or reproductive toxins.

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## **SECTION 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.