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SAFETY DATA SHEET

Section 1- IDENTIFICATION		
COMPOSITION CrN		PRODUCT NAME Chromium Nitride
SUPPLIER: Plasmaterials, Inc. 2268 Research Drive Livermore, CA 94550 Ph: 925-447-4030	RECOMMENDED USE: Laboratory Chemicals Scientific Research	EMERGENCY TELEPHONE NUMBERS US: 001-800-424-9300 Europe: 001-703-527-3887

Section 2- HAZARD(S) IDENTIFICATION	
Classification: Classification according to Regulation (EC) No 1272/2008 GHS07	
Acute Toxicity (Oral): Category 4 (H302)	Acute Toxicity (Inhalation): Category 4 (H332)
Skin Irritation: Category 2 (H315)	Eye Irritation: Category 2 (H319)
Specific Target Organ Toxicity – single exposure: Category 3 (H335)	
LABEL ELEMENTS: Signal Word: Warning	
	
HAZARD STATEMENTS	
-H302: Harmful if swallowed -H315: Causes skin irritation -H319: Causes serious eye irritation -H332: Harmful if inhaled -H335: May cause respiratory irritation	
PRECAUTIONARY STATEMENTS	
-P261: Avoid breathing dust/fume/gas/mist/vapors/spray -P280: Wear protective gloves, protective clothing, eye protection and face protection -P304 + P340: IF INHALED: Remove victim to fresh air and keep comfortable for breathing -P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. -P405: Store locked up -P501: Dispose of contents/container in accordance with local/regional/national/international regulations	
Hazards not otherwise classified (HNOC):	
-None identified	

Section 3- COMPOSITION/INFORMATION ON INGREDIENTS		
COMPONENT	CAS-No	Molecular Weight
Chromium Nitride	24094-93-7	66.003 g/mol

Section 4- FIRST AID MEASURES

GENERAL ADVICE: 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. Move out of dangerous area. Wash contaminated clothing before reuse.

INHALATION: Remove victim from exposure to fresh air. Give oxygen if breathing is difficult. If not breathing, give artificial respiration. Consult a physician if symptoms develop or persist. Seek medical advice

SKIN CONTACT: Instantly wash off with soap and plenty of water and rinse thoroughly. Seek immediate medical advice.

EYE CONTACT: Flush eyes with lukewarm water, lifting upper and lower lids, for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Consult a physician.

INGESTION: Seek medical treatment

MOST IMPORTANT SYMPTOMS/EFFECTS: The most important known symptoms and effects are described in the labeling (see section 2).

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED: No data available

Section 5- FIREFIGHTING MEASURES

Suitable Extinguishing Media:

Extinguishing Powder, Dry Sand, Carbon Dioxide

Unsuitable Extinguishing Media:

Do not use water.

Specific Hazards Arising from the Chemical:

Nitrogen oxides (NOx), Toxic metal oxide smoke

Protective Equipment & Precautions for Firefighters:

As in any fire, Firefighters must wear full face, self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective clothing to prevent contact with skin and eyes.

Firefighting 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.

Section 6- ACCIDENTAL RELEASE MEASURES

Personal Precautions: Ensure adequate ventilation. Use personal protective equipment. Avoid breathing dust, vapors, mist or gas. Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. For personal protection see Section 8.

Environmental Precautions: Do not allow material to be released to the environment without official permits.

Methods for Containment & Clean Up: Ensure adequate ventilation. Keep in suitable, closed containers for disposal. For disposal see Section 13.

Section 7- HANDLING AND STORAGE

Handling: Keep containers tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation/exhaustion at the workplace. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Avoid release to the environment.

Storage: Store in original tightly closed container. Store in a cool, dry and well-ventilated place. Store away from incompatible materials (see Section 10). Never allow product to get in contact with water during storage.

Section 8- EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines:

Chromium compound (Cr)

ACGIH TLV 0.5mg/m³; A4

USA PEL 0.5mg/m³

Biological Limit Values:

No biological exposure limits noted for ingredient(s).

Engineering Measures: Ventilate as needed to control airborne dust. Avoid contact with eyes and skin. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

Personal Protective Equipment:

Eye/Face Protection: Wear safety glasses with side shields or goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin and Body Protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Wear suitable 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: Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of Environmental Exposure: No information available

Section 9- PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid

Appearance: No data available

Odor: No data available

Odor Threshold: No data available

pH: No data available

Melting Point/Range: >1800°C / 3272°F

Boiling Point/Range: No data available

Flash Point: No data available

Evaporation Rate: No data available

Flammability (solid,gas): No data available

Flammability or Exposure Limits:

Upper: No data available

Lower: No data available

Vapor Pressure: No data available

Vapor Density: No data available

Density: 5.9 g/cm³ at 20°C (68°F)

Relative Density: No data available

Solubility: Insoluble

Partition coefficient; n-octanol/water: No data available

Auto Ignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity: No data available

Explosive Properties: No data available

Oxidizing Properties: No data available

Section 10- STABILITY AND REACTIVITY

Reactive Hazard: No data available

Stability: Stable under recommended storage conditions.

Conditions to Avoid: Contact with incompatible materials

Incompatible Materials: Oxidizing agents

Hazardous Decomposition Products: Nitrogen oxides (NOx); Metal oxide
Hazardous Polymerization: No data available
Hazardous Reactions: Contact with acids releases flammable gases

Section 11- TOXICOLOGICAL INFORMATION

<p>Information on Toxicological Effects:</p> <p>Acute toxicity: No data available.</p> <p>Inhalation: Harmful if inhaled.</p> <p>Ingestion: Harmful if swallowed</p> <p>Skin Corrosion/Irritation: Causes skin irritation</p> <p>Serious eye damage/irritation: Causes serious eye irritation</p> <p>Respiratory Sensitization: No data available</p> <p>Skin Sensitization: No data available</p> <p>Carcinogenicity: This product is not considered to be a carcinogen by IARC-3, EPA-D or ACGIH A4</p> <p>Germ Cell Mutagenicity: No data available</p> <p>Reproductive Toxicity: No data available</p> <p>Specific Target Organ Toxicity – single exposure: May cause respiratory irritation</p> <p>Specific Target Organ Toxicity – repeated exposure: No data available</p> <p>Aspiration Hazard: No information available</p> <p>Additional Information:</p> <p>-RTECS: Not available</p> <p>To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.</p>

Section 12- ECOLOGICAL INFORMATION

<p>Toxicity: No information available</p> <p>Persistence and Degradability: No information available</p> <p>Bioaccumulation/Accumulation: No information available</p> <p>Mobility in Soil: No information available</p> <p>Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.</p> <p>Water Hazard Class 1 (Self-assessment): Slightly hazardous for water. Do not allow undiluted product or large quantities to reach groundwater, water courses or sewage systems.</p> <p>Other Adverse Effects: Avoid transfer into the environment. Do not allow material to be released to the environment without official permits.</p>
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Section 13- DISPOSAL CONSIDERATIONS

<p>Waste Disposal Methods: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Must be specially treated under adherence to official regulations. Dispose of contaminated packaging as unused product. This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.</p>
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Section 14- TRANSPORT INFORMATION

DOT: Not regulated as dangerous goods
IATA: Not regulated as dangerous goods
IMDG/IMO: Not regulated as dangerous goods

Section 15- REGULATORY INFORMATION

US Federal Regulations:

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt.D): No information available

U.S. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): No information available

CERCLA Hazardous Substance List (40 CFR 302.4): No information available

SARA 302: No information available

SARA 313: No information available

SARA 311/312 Hazards: No information available

SARA 304 Emergency Release Notification: No information available

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List: No information available

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): No information available

Clean Water Act (CWA) Section 112 (r) (40 CFR 68.130): No information available

Safe Drinking Water Act (SDWA): No information available

US Massachusetts Right To Know: No information available

US New Jersey Right to Know: No information available

US Pennsylvania Right to Know: No information available

US California Proposition 65: No information available

US California Candidate Chemicals List Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3 subd. (a)): No information available

Section 16- OTHER INFORMATION

The above information is accurate to the best of our knowledge. However, since data, safety standards and government regulations are subject to change, the conditions of handling and use, or misuse are beyond our control, Plasmaterials, Inc. makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. Users should satisfy themselves that they have all current data relevant to their particular use.

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