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 Section I - IDENTIFICATION
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Eutectic Canada Inc.
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 Vaudreuil-Dorion, Québec
 J7V 5V5

Emergency Telephone: (514) 695-7500

Product Name: 2162 C
 AWS standard terminology: Thermal Spray Powder
 WHMIS Classification: D2B

Transportation Information: U.S.A DOT: Not regulated

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 Section II - HAZARDOUS INGREDIENTS
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Ingredient	Range wt%	CAS Number	Exposure Limit mg/m3
Tungsten carbide	>99	12070-12-1	5

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 Section III - PHYSICAL / CHEMICAL CHARACTERISTICS
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The following data should only be used in the context of the Material Safety Data Sheet.

Physical State: Powder
 Appearance and Odour: Grey colored powder
 Solubility in Water : Practically insoluble

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 Section IV - FIRE AND EXPLOSION DATA
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FLAMMABLE PROPERTIES: Non-flammable.
 Flash Point: None Method Used: Not applicable.
 Flammable Limits (% by Volume in Air):
 Lower: None Upper: None.
 AUTO-IGNITION TEMPERATURE: Not applicable.
 HAZARDOUS COMBUSTION PRODUCTS: Acrid smoke and irritating fumes.
 EXTINGUISHING MEDIA: For localized powder fires, smother with dry sand, dry dolomite, sodium chloride or soda ash.
 FIREFIGHTING INSTRUCTIONS: Finely divided tungsten carbide powder or dust from grinding are expected to be a fire and explosive hazard when exposed to high temperatures or ignition sources. Particle size and dispersion in air determine reactivity. Tungsten carbide product, except as powder or dust, is not a fire hazard. Move container from fire area if possible. Cool containers exposed to flame with water from side until well after fire is out. For massive fire in cargo area, use unmanned hose holder or monitor nozzles; else withdraw and let the fire burn.

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 Section V - REACTIVITY
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CHEMICAL STABILITY (CONDITIONS TO AVOID): Stable.
 INCOMPATIBILITY: Chlorine trifluoride, fluorine, nitrogen dioxide, nitrous oxides, iodine pentafluoride, lead oxide.
 HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may release acrid smoke and irritating fumes.
 HAZARDOUS POLYMERIZATION: None.

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 Section VI - HEALTH HAZARD DATA
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The body can be affected if fumes and gases are inhaled, and/or come into contact with eyes.

Potential Health Effects(For exposure to powder, dust or mist. None reported for solid form).

EYES: May cause irritation with redness, pain and itching.

SKIN: May cause irritation with dermatitis, eczema, and itching. May also cause sensitization dermatitis if previously exposed.

INHALATION: May cause coughing, dyspnea, soreness in the chest, weight loss, hemoptysis, bronchitis, and asthma. May also cause pulmonary fibrosis and radiological changes may be noticed in the lungs.

INGESTION: May cause gastrointestinal irritation. Large doses may cause diarrhea.

MEDICAL CONDITIONS AGGRAVATED: Certain pulmonary and skin conditions may be aggravated by exposure.

CHRONIC OVEREXPOSURE: May cause "hard metal lung" with symptoms as described above for inhalation. Previously exposed individuals may be at increased risk. May cause contact dermatitis or conjunctivitis.

ACUTE OVEREXPOSURE: See eyes, skin, and inhalation.

CARCINOGENICITY: None.

FUMES AND GASES CAN BE DANGEROUS TO YOUR HEALTH (GENERAL INFORMATION)

SHORT TERM (ACUTE) over exposure to welding fumes may result in discomfort such as dizziness, nausea or irritation of the nose, throat or eyes.

FLUORIDES - compounds evolved may cause skin and eye burns and/or pulmonary edema.

MANGANESE, MANGANESE DIOXIDE - toxicity caused by inhalation of dust or fumes. Remove from exposure. Wash eyes and/or skin with water to remove dust.

SILICON, SILICON OXIDE - Possible eye irritant. Remove by washing eyes with lots of water.

CHROMIUM - Inhalation of fume with chromium (VI) compounds can cause irritation of the respiratory system, damage lungs and asthma. Swallowing chromium (VI) salts can cause severe injury or death. Dusts on the skin can form ulcers. Eyes can be burned by chromium (VI) compounds.

NICKEL, NICKEL OXIDE - Inhalation of fume with nickel compounds may cause metallic taste, nausea, tightness in chest, fever, allergic reactions.

MOLYBDENUM -Trioxide has caused irritation of the eyes, nose and throat, weight loss and digestive disturbances in animals.

BARIUM - Inhalation of fumes with barium compounds may cause aching eyes, rhinitis, frontal headache, wheezing, laryngeal spasms, salivation, anorexia.

COPPER - Metal fume fever can be caused by fresh copper oxide fumes.

LEAD - Inhalation of gases, fumes, dust or compounds (soluble or insoluble) can cause blood and cell problems.

SILVER - Salts of silver are corrosive. Ulceration and eye burns are treated by flushing with copious amounts of water.

ZINC - Inhalation of zinc fumes may cause chills, breathing difficulties, fever, cough, muscular pain, nausea and vomiting. Recovery generally complete.

CADMIUM - Fumes cause irritation of the nose and throat. Sufficient inhalation (after a delay of several hours) may develop coughing, chest pain, sweating, chills, shortness of breath and weakness. Death may occur.

TIN - Eye, skin and respiratory system irritation from fumes.

LONG TERM (CHRONIC) over exposure may lead to siderosis (iron deposits in lungs), affect pulmonary functions, blood and cell disorders.

FLUORIDES - Repeated exposure to fluorides can cause serious bone erosion.

MANGANESE, MANGANESE DIOXIDE - Long term over exposure to these compounds may affect the central nervous system. Symptoms include muscular weakness, tremors and behavioral and handwriting changes.

SILICON, SILICON OXIDE - Prolonged exposure to dust can cause pulmonary fibrosis (silicosis).

CHROMIUM - Chromium (VI) compounds are considered by OSHA to be carcinogenic. Absorption of chromium (VI) compounds through the skin can cause systemic poisoning primarily affecting the kidneys and liver.

NICKEL, NICKEL OXIDE - Long term over exposure to nickel compounds may cause lung fibrosis or pneumoconiosis. Nickel and its compounds are considered by the OSHA as carcinogenic.

MOLYBDENUM - Not known

BARIUM - Long term exposure to soluble barium compounds may cause nervous disorders and may have deleterious effects on the heart and circulatory systems.

COPPER - No adverse long-term effects have been reported.

LEAD - Repeated and prolonged exposures to gases, fumes or dusts are poisonous. This may lead to blood, cell, kidney, liver and/or generic disorders.

SILVER - Silver and its compounds cause pigmentation of the skin, eyes and respiratory tract (argyria).

ZINC - Severe and prolonged over exposure may cause pulmonary edema and pneumonia.

CADMIUM - Repeated and prolonged exposures to fumes may cause loss of smell, ulceration of the nose, shortness of breath (emphysema), kidney damage and mild anemia.

TIN - No significant long term effects.

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 Section VII - EMERGENCY FIRST AID
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EYES: If irritation occurs, wash eyes immediately with large amounts of water, occasionally lifting upper and lower lids, until no evidence of material remains (approximately 15-20 minutes). Get medical attention immediately.

SKIN: If irritation or rash occurs, remove contaminated clothing and shoes immediately. Wash affected area with soap or mild detergent and large amounts of water until no evidence of material remains (approximately 15-20 minutes). Get medical attention.

INHALATION: If symptoms of pulmonary involvement develop (coughing, wheezing, shortness of breath), remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep affected person warm and at rest. Get medical attention immediately.

INGESTION: If this material has been swallowed and person is conscious, immediately give person large amounts of water. After water has been swallowed, induce vomiting. Do not attempt to make an unconscious person vomit. Get medical attention immediately.

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 Section VIII - PREVENTIVE MEASURES
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Personal protective equipment: Use NIOSH approved respirator for protection against fumes in confined areas or where local exhaust or ventilation does not keep exposure below the recommended exposure limit. Wear protective helmet or use face shield with filter lens. Provide protective screens and flash goggles if necessary. Refer to CSA W117.2 - Safety in Welding and Cutting - for further information.

Storage and handling:

STORAGE: Keep away from sparks or ignition sources. Contents should be stored in a clean, dry, cool area. Keep container closed. Wash thoroughly after handling.

HANDLING: Avoid dispersion of dust in air. Finely divided particles, dust, or fumes may be flammable or explosive. Keep away from sparks or ignition sources.

SMALL/LARGE SPILL: Sweep up with a minimum of dust generation and place into suitable clean dry containers for later disposal or reclamation. Residue should be cleaned up using a high efficiency particulate filter vacuum or wet cleanup. Use appropriate respiratory protection.

Waste Disposal Method: Prevent waste from contaminating environment. Disposal should be in accordance with local, provincial and federal regulations.

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 Section IX - PREPARATION OF MATERIAL SAFETY DATA SHEET
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Prepared by: Director of Products and Services
 Contact number: 514-695-7500
 Date prepared: 30/09/99
 Date revised: 30/09/2010 - Expiration Date: 30/09/2013