



MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

038P
SILVER POWDER

North America:
NOR-COTE INTERNATIONAL, INC.
506 Lafayette Avenue
Crawfordsville, Indiana 47933
United States
Phone: 765-362-9180 (day phone)
MSDS Issuer: EHS Department
Emergency Phone:
CHEMTREC (United States)
800-424-9300

Europe:
NOR-COTE INTERNATIONAL LTD.
Unit 8 Warrior Park, Eagle Close
Chandlers Ford Industrial Estate
Eastleigh, Hampshire
SO53 4NF England
Tel: +44 (0) 23 80270542 (day phone)
Emergency Phone:
CHEMTREC (Outside U.S.)
703-527-3887

Asia:
NOR-COTE INTERNATIONAL PTE. LTD.
Blk 4012 Ang Mo Kio Ave 10
#05-08 Techplace 1,
Singapore 569628
Tel: +65 6291-0898 (day phone)

SECTION 2 INGREDIENTS

CHEMICAL NAME	PERCENT BY WEIGHT	CAS#	EXPOSURE LIMITS	EC#
Aluminum	74-76	7429-90-5	10 mg/m ³ (ACGIH TLV) 15 mg/m ³ (OSHA PEL)	231-072-3
Aliphatic Alcohol	24-26	90604-31-2	50 ppm (EH40-OES)	292-324-6

SECTION 3 HAZARDS IDENTIFICATION


GENERAL HEALTH EFFECTS:

ACUTE: Skin Contact: Prolonged or repeated contact may cause irritation.

CHRONIC: Not known

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Repeated and prolonged exposure is not known to aggravate medical condition.

HMIS ® RATING: Health - 2 Flammability - 1 Physical Hazard - 1 PPE - C

EC HAZARD SYMBOLS:  Xi - IRRITANT **EC RISK/SAFETY PHRASES:** R38 - Irritating to Skin

SECTION 4 FIRST AID MEASURES

SKIN CONTACT: Flush skin with running lukewarm water. Wash affected areas using mild soap. Contact a physician if irritation or redness persists.

EYE CONTACT: Flush the eye and under lids with warm water for minimum of 15 minutes. Remove any contact lenses during the flushing. Get immediate medical attention if irritation persists.

INHALATION: Move subject to fresh air and keep warm. If subject is not breathing, administer artificial respiration and get immediate medical attention.

INGESTION: Do NOT induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms appear.

SECTION 5 FIRE FIGHTING MEASURES

FLASHPOINT: >200°F (93.3°C)

METHOD: Not available

FIRE HAZARDS IN THE PRESENCE OF VARIOUS SOURCES: Slightly flammable to flammable in presence of open flames, sparks and static discharge.

EXPLOSIVE PROPERTIES: Not available

FLAMMABLE/EXPLOSIVE LIMITS (Volume % in air): Not established

AUTO-IGNITION TEMPERATURE: Not established

EXTINGUISHING METHOD: Use chemical foam, dry chemical, or carbon dioxide (CO₂) media to extinguish flames. Water may be used to cool fire-exposed containers.

UNUSUAL FIRE AND EXPLOSION HAZARDS: This material will not burn or burns with difficulty. Overheated containers may build up pressure and explode. Cool using water spray or extinguishing media to prevent overheating and rupture. Vapors may travel along the ground or may move ventilation and ignite by pilot lights, flames, sparks, heaters, smoking, electric motors, static



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discharge, or other ignition sources distant from the handling point.

FIRE FIGHTING MEASURES: Do not use water or halogenated extinguishing agents to fight a fire involving this product. Water reacts with burning aluminum to liberate hydrogen gas. Halogenated extinguishing agents will react violently with burning aluminum. Evacuate area of all non-emergency personnel. Fire fighters must wear full emergency equipment with self-contained breathing apparatus. At elevated temperatures hazardous polymerization may occur causing container rupture and in extreme cases, explosion. Fight fires from upwind and cool intact containers with water spray or stream at maximum range.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Wear recommended personal protective equipment from Section 8. Put material into a convenient waste disposal container.

SECTION 7 HANDLING AND STORAGE

HANDLING: To avoid static electricity discharge, ground drums and pails before transferring material. Avoid any unnecessary contact with skin, eyes and clothing. Use protective clothing specified in Section 8. Keep away from incompatibles.

STORAGE: Use original container. Keep drum away from sources of ignition and out of sun.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

HAND PROTECTION: Use gloves to minimize contact. Wash all affected areas prior to eating and at completion of handling. Replace immediately if punctured or torn or when a change of appearance (color, elasticity, shape) occurs.

EYE PROTECTION: Use safety glasses that are ANSI approved to prevent eye contact. Eyewash availability is also recommended.

SKIN PROTECTION: Protective or disposable outer clothing is recommended.

RESPIRATORY PROTECTION: Use proper general or local exhaust ventilation to maintain concentrations below exposure limits in Section 1. If adequate ventilation is not available, use of a NIOSH approved respirator for environments containing solvents is recommended where exposure limits are exceeded.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Silver solid paste with slight odor

BOILING POINT: 1202 °F (based on data for aluminum)

SPECIFIC GRAVITY: 1.3148 g/ml

SOLUBILITY: Partially soluble in methanol
Very slightly soluble in n-octanol, acetone.
Insoluble in cold water, hot water.

FREEZING POINT: Not available

DENSITY: 1.73 g/cm³ (weighted average)

pH: Not applicable

NON-VOLATILE CONTENT: 98.5% min. by weight

SECTION 10 REACTIVITY / STABILITY HAZARD DATA

STABILITY: This material is stable when used under normal conditions.

CONDITIONS TO AVOID: Stable under recommended storage and handling conditions.

INCOMPATIBILITY (MATERIALS TO AVOID): Oxidizing agents, acids, and alkalis.

SECTION 11 TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA: Aliphatic Alcohol is hazardous in case of skin contact (irritant).

LD50 – >2000 mg/kg (Oral, Rat)

REPRODUCTIVE TOXICITY: Not determined

TERATOGENICITY: Not determined

MUTAGENICITY: Not determined

CARCINOGENICITY: IARC? No

NTP? No

OSHA? No

SECTION 12 ECOLOGICAL INFORMATION

No evidence of biodegradability.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste material must be disposed of in accordance with all applicable federal, state, provincial, and local laws and regulations.



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SECTION 14 TRANSPORTATION INFORMATION

This product, as supplied, is not regulated nor classified as a hazardous material/dangerous good by United States Department of Transportation (DOT). Transport this product in accordance with all applicable laws and regulations.

SECTION 15 REGULATORY INFORMATION

This Material Safety Data Sheet has been formatted to the best of our ability in accordance with American National Standards Institute (ANSI).

Occupational Safety and Health Act (OSHA): This product is classified as a Class IIIA combustible material.

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III:

Section 313 – Toxic Chemical List (TCL): This product contains the following chemicals regulated under the Toxic Chemical Release Reporting requirements under 40 CFR 372: Aluminum

Toxic Substances Control Act (TSCA)

Section 8(b) – Inventory Status: All chemicals in this product are TSCA listed.

SECTION 16 OTHER INFORMATION

HMIS® ratings are a registered trade and service mark of the National Paint and Coatings Association with the following scale:

* = Chronic health effect	PPE Index
4 = Severe Hazard	A = Safety Glasses
3 = Serious Hazard	B = Safety Glasses and Gloves
2 = Moderate Hazard	C = Safety Glasses, Gloves and Protective Apron
1 = Slight Hazard	D = Face Shield, Gloves and Protective Apron
0 = Minimal Hazard	E = Safety Glasses, Gloves and Respirator

Definitions

TWA – Time Weighted Average
TLV – Threshold Limit Value
STEL – Short Term Exposure Limit
CAS# - Chemical Abstract Service Number
NTP – National Toxicology Program
PEL – Permissible Exposure Limit
IARC - International Agency for Research on Cancer
ANSI – American National Standards Institute
EH40-OES – Occupational Exposure Standards (Europe, 2001)

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