



# SAFETY DATA SHEET

## SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

**042P**  
**SILVER PASTE**  
**UV CURABLE SCREEN PRINTING INK**

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

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 (Outside U.S.):**  
**703-527-3887 CHEMTREC**

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)  
**Emergency Phone (Outside U.S.):**  
**703-527-3887 CHEMTREC**

## SECTION 2 HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** Product is a metallic silver paste with acrylic odor that may irritate eyes, skin and respiratory system. Product may also cause allergic skin reaction. Avoid breathing vapors. Avoid spillage to sewers or waterways.

**ROUTES OF ENTRY:** Dermal, Inhalation, Ingestion

**ACUTE HEALTH EFFECTS:** Irritant to skin, eyes and respiratory tract. Effects may be delayed for several hours.

- **Skin Contact:** Potential irritant and can cause allergic skin reaction. Repeated or prolonged contact may cause sensitization.
- **Eye Contact:** Liquid, vapors, or mists may cause eye irritation. Protect eyes from repeated or prolonged contact.
- **Inhalation:** May cause irritation to upper respiratory tract upon prolonged or repeated inhalation.
- **Ingestion:** May be harmful if swallowed. Gastrointestinal tract irritation may result.

**CHRONIC HEALTH EFFECTS:** No data available

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** No data available. Repeated and prolonged overexposure may increase the potential for adverse health effects.

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

### GHS CLASSIFICATION:

Physical Hazards: Classification not possible for mixture

Health Hazards: Classification not possible for mixture

Environmental Hazards: Classification not possible for mixture

## SECTION 3 COMPOSITION

INGREDIENT	PERCENT BY WEIGHT	CAS#	EC#	Symbol	Risk Phrase
Aluminum	45-50%	7429-90-5	231-072-3	F	R10, R15, R36/37
Proprietary Photoinitiator	45-50%	Proprietary	Proprietary	Xn, N	R22, R50/53
Stearic Acid	<1.5%	57-11-4	200-313-4	Not available	Not available

## SECTION 4 FIRST AID MEASURES

**SKIN CONTACT:** Remove and isolate contaminated clothing and shoes. Remove excess material from skin with clean cloth. Flush skin with running lukewarm water. Wash affected areas using mild soap.

**EYE CONTACT:** Flush the eye and under lids with warm water for 15 minutes. Remove any contact lenses during the flushing. Get immediate medical attention if symptoms persist.

**INHALATION:** Move subject to fresh air and keep warm. If subject is not breathing, administer artificial respiration. If breathing is difficult, have qualified personnel administer oxygen and get medical attention.

**INGESTION:** If appreciable quantities are swallowed, seek immediate medical attention. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.



# SAFETY DATA SHEET

## SECTION 5 FIRE FIGHTING MEASURES

**EXTINGUISHING METHOD:** Dry chemical ONLY

**UNUSUAL FIRE & EXPLOSION HAZARDS:** This product contains aluminum powder which may react with water to liberate hydrogen gas which will spread the fire. Burning aluminum may also react with halogenated hydrocarbon extinguishing agents resulting in serious or violent reactions.

**SPECIAL FIREFIGHTING PROCEDURES:** Do **NOT** use water or fire extinguishers containing halogenated hydrocarbons to fight a fire in this product. Use only an NFPA Class D extinguisher containing dry chemical and equipped with a low velocity nozzle to extinguish the fire. Evacuate area of all non-emergency personnel. Fire fighters must wear full emergency equipment with self-contained breathing apparatus.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

Cover and soak up spills with absorbent, non-combustible material such as sand, sweeping compound or diatomaceous earth. Collect material and place it in labeled, closed containers for disposal as solid in accordance with Section 13. Wear recommended personal protective equipment from Section 8. For large spills, dike the area to prevent runoff from contacting public drains, sewers, or streams.

## SECTION 7 HANDLING AND STORAGE

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Protect containers from physical damage. Storage of containers should conform to flammable and combustible liquid regulations.

**OTHER PRECAUTIONS:** Store away from heat and sunlight. Store below 90° F (32° C).

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

**EXPOSURE LIMITS:** Not established for mixture.

Component	Exposure Limit
Aluminum	ACGIH TLV 10 mg/m <sup>3</sup> as total dust
Photoinitiator Mixture	None known
Stearic Acid	ACGIH TLV 3 mg/m <sup>3</sup> respirable particles and 10 mg/m <sup>3</sup> inhalable particles.

**ENGINEERING CONTROLS/VENTILATION:** Investigate engineering techniques to reduce exposures. Provide ventilation if necessary to minimize exposure. Dilution ventilation is acceptable, but local mechanical exhaust ventilation is preferred, if practical, at sources of air contamination.

**EYE PROTECTION:** Use splash-proof safety goggles or safety glasses that are ANSI approved to prevent eye contact. Eyewash availability is also recommended.

**HAND PROTECTION:** Use solvent resistant 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.

**SKIN PROTECTION:** Protective or disposable outer clothing is recommended.

**RESPIRATORY PROTECTION:** Use of NIOSH approved respirators is recommended where exposure is exceeded. If exposures cannot be kept at a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for given application. Respiratory protection programs must comply with 29 CFR 1910.134.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE, ODOR & PHYSICAL STATE:** Metallic silver paste with mild acrylic odor

**ODOR THRESHOLD:** Not applicable

**BOILING POINT (°F):** Not available

**MELTING / FREEZING POINT:** Not available

**SPECIFIC GRAVITY:** 1.89

**EVAPORATION RATE:** <1

**VAPOR PRESSURE (mm Hg):** Not available

**VAPOR DENSITY:** Heavier than air

**RELATIVE DENSITY:** 9.45 kg/gal

**SOLUBILITY IN WATER:** Not soluble

**VISCOSITY:** Not available

**VOC:** Not established, but expected to be <1%



# SAFETY DATA SHEET

**pH:** Not available  
**DENSITY:** See section 1  
**PARTITION COEFFICIENT:** Not available  
**AUTO-IGNITION TEMPERATURE:** Not available  
**FLASH POINT:** >210°F (>100°C)      **METHOD:** ASTM D 56 Close Cup  
**FLAMMABLE/EXPLOSIVE LIMITS (Volume % in air):** Not established  
**APPEARANCE AND ODOR:** Metallic silver paste with mild acrylic odor

## SECTION 10 REACTIVITY / STABILITY HAZARD DATA

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

**HAZARDOUS POLYMERIZATION:** Hazardous polymerization will not occur.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Combustion may produce carbon monoxide and /or carbon dioxide and aluminum oxide. Aluminum reacts with water, oxidizing agents, acids, and alkalis to produce hydrogen gas.

**CONDITIONS TO AVOID:** Avoid contact with heat and sunlight.

**INCOMPATIBILITY (MATERIALS TO AVOID):** Aluminum is incompatible with water, acids, caustics, halogenated hydrocarbons (including halogenated extinguishing agents) and oxidizers.

## SECTION 11 TOXICOLOGICAL INFORMATION

**TOXICOLOGICAL DATA:** No data available for mixture

**LD50 –** Not determined for mixture

**LC50 –** Not determined for mixture

**CARCINOGENICITY: IARC?** No

**NTP?** No

**OSHA?** No

**MUTAGENICITY:** Not determined for mixture

**REPRODUCTIVE EFFECTS:** Not determined for mixture

## SECTION 12 ECOLOGICAL INFORMATION

No determination has been made on ecological impact. However, it is highly recommended to prevent contamination of the environment with this product, i.e. soil, landfills, drains, sewers, surface waters, etc.

## SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of this material in accordance with all applicable federal, state, provincial, and local laws and regulations.

## SECTION 14 TRANSPORTATION INFORMATION

Transport this product in accordance with all applicable laws and regulations. This product, as supplied, is not regulated nor classified as a hazardous material/dangerous good by United States Department of Transportation (DOT), the International Civil Aviation Organization (ICAO), the International Maritime Organization (IMO), the Canadian Transportation of Dangerous Goods Act (TDG), or the International Air Transport Association (IATA).

**DEPARTMENT OF TRANSPORTATION:**

**Export Shipping Class:** Not applicable

**DOT (49 CFR)/IATA/IMDG Hazard Class:** Not applicable

**UN Number:** Not applicable

**Export Shipping Name:** Not applicable

## 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), European Communities (EC), and contains hazard criteria and all information required by the Canadian Controlled Products Regulation (CPR).

**Australian Inventory Status:** All components of this product are currently listed in the Australian Inventory of Chemical Substances (AICS) or otherwise comply with National Industrial Chemicals Notification and Assessment Scheme (NICNAS).

**Canadian Inventory Status:** All components of this product are currently listed on the Canadian Domestic Substance List (DSL).

**California Proposition 65 RTK:** This product contains the following components that are regulated by the state of California as a known carcinogen or reproductive toxin: None Known

**Clean Air Act- Hazardous Air Pollutants (HAP):** This product and its components do not contain any Hazardous Air Pollutants.



# SAFETY DATA SHEET

**Clean Air Act – Ozone Depleting Substances (ODS):** This product and its components do not contain Ozone Depleting Substances.

**Coalition of Northeastern Governors (CONEG):** This product meets the requirements of CONEG pertaining to heavy metals total content of no more than 100 PPM. No heavy metals are added as a part of the formulation, but raw materials may contain residual parts per million as naturally occurring elements.

**European Inventory Status:** All components of this product are listed on the European Inventory of Existing Commercial Substances (EINECS). This product is classified and labeled in accordance with EC directives.

**Food and Drug Administration (FDA) Food Packaging Status:** This product has not been cleared by the FDA for use in food packaging and/or other applications as an indirect food additive.

**Korean Inventory Status:** All components of this product are listed on the Korean Existing Chemicals List (ECL).

**Restriction of Hazardous Substances (RoHS):** Product is in compliance with 2002/95/EC.

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

**Section 302 – Extremely Hazardous Substances (EHS):** This product is not regulated as an EHS.

**Section 304 - CERCLA:** This product is not regulated for emergency release notification.

**Section 311/312 – Hazard Communication Standard (HCS):** This product is classified as an acute hazard.

**Section 313 – Toxic Chemical List (TCL):** This product contains the following components that are regulated under the Toxic Chemical Release Reporting requirements 40 CFR 372: Aluminum (CAS# 7429-90-5)

**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

### EU Risk Phrases

R10 = Flammable  
R15 = Contact with water liberates extremely flammable gases.  
R36/37/38 = Irritating to eyes, respiratory system and skin.  
R43 = May cause sensitization by skin contact.  
R50: Very toxic to aquatic organisms  
R51: Toxic to aquatic organisms  
R52: Harmful to aquatic organisms  
R53: May cause long-term adverse effects in the aquatic environment

### Definitions

ACGIH – American Conference of Governmental Industrial Hygienists  
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

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**Disclaimer:** To the best of our knowledge, the product information contained herein is based upon data believed to be reliable, however Nor-Cote makes no warranty and disclaims any liability whatsoever for its accuracy or completeness. Since the actual use of the product is beyond our control, no guarantee expressed or implied, is made by Nor-Cote as to the effects of such uses nor does Nor-Cote assume liability arising out of the use of this product by others. It remains the responsibility of the user to ensure that the use of the product herein is in accordance with all applicable laws and regulations.