



SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

09-CL3

MATTE CLEAR 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 moderate viscose liquid with a mild 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:** Possible irritant and can cause allergic reaction. Repeated or prolonged contact may cause sensitization.
- **Eye Contact:** May cause severe eye irritation.
- **Inhalation:** Harmful if inhaled.
- **Ingestion:** May be harmful if swallowed.

CHRONIC HEALTH EFFECTS: Possible cancer hazard with N-Vinyle-2-Pyrrolidone, based on animal studies. Animal studies for N-Vinyle-2-Pyrrolidone indicate that inhalation can cause liver and nasal damage.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: No data available.

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

SECTION 3 COMPOSITION

INGREDIENT	PERCENT BY WEIGHT	CAS#	EC#	Symbol	Risk Phrase
Talc	37-43%	1407-96-6	238-877-9	N/A	N/A
N-Vinyl-2-Pyrrolidone	<15%	88-12-0	201-800-4	Xn, N	R20/21/22, R37,R40,R41,48/20
Photoinitiators	3-7%	Proprietary	Proprietary	Xi	R22, R50/53
Acrylated Oligomers	20-25%	Proprietary	Proprietary	Xi, N	R36,37,38
Acrylate Monomers	16-20%	Proprietary	Proprietary	Xi, N	R36,37,38,R50/53

SECTION 4 FIRST AID MEASURES

SKIN CONTACT: Remove and isolate contaminated clothing. Remove excess material from skin with clean cloth. Flush skin with running lukewarm water. Wash affected areas using mild soap and water. Consult a physician if irritation persists.

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.

SECTION 5 FIRE FIGHTING MEASURES

FLASHPOINT: >93.3°C (>200°C)

METHOD: Open Cup



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

AUTO-IGNITION TEMPERATURE: Not established

EXTINGUISHING METHOD: Dry chemical, water fog, carbon dioxide

UNUSUAL FIRE & EXPLOSION HAZARDS: Closed containers may rupture or explode due to pressure build-up when exposed to extreme heat

SPECIAL FIREFIGHTING PROCEDURES: Fire fighters must wear full emergency equipment with self-contained breathing apparatus and the usual protective gear. Use water spray to cool fire exposed containers and stay upwind if possible. Evacuate area promptly.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Eliminate all sources of ignition, prevent entry into drains, sewers, and other waterways. Use approved respirator, avoid personal contact, ventilate area. Wear proper protective equipment. Absorb with clay, sand or vermiculite and place in a closed container for proper disposal.

SECTION 7 HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Protect containers from physical damage. Avoid breathing vapors/mists, use adequate ventilation. Wash thoroughly after using, particularly before eating or smoking. Wear personal protective equipment appropriate to task. Avoid contact with skin, eyes, and clothing. Store containers away from incompatible materials. Keep container closed when not in use.

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. N-Vinyl-2-Pyrrolidone (NVP): ACGIH ACGIH TLV TWA – 0.05ppm

Component	Exposure Limit
Talc	ACGIH TLV TWA 2mg/m3 (E,R.)
N-Vinyl-2-Pyrrolidone	ACGIH TLV TWA 0.05 ppm
Photoinitiators	Not Establish
Acrylated Oligomers	Not Establish
Acrylate Monomers	Not Establish

ENGINEERING CONTORLS/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: Safety glasses, goggles or face shield.

HAND PROTECTION: Use of Butyl or Nitrile gloves is recommended. Recommended a minimum of 0.45mm for long duration up to 4 hours or single use disposable for short duration not exceeding 30 minutes.

SKIN PROTECTION: Wear adequate protective clothing.

RESPIRATORY PROTECTION: Use of NIOSH approved organic respirators is recommended where exposure is exceeded. If spray, mist, or dust forming conditions are created, a P100 respirator is recommended in addition to organic vapor respirator.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Liquid with mild odor, moderate viscosity

BOILING POINT: Not established

SPECIFIC GRAVITY: 1.43530

VAPOR DENSITY: Heavier than air

SOLUBILITY IN WATER: Not soluble

EVAPORATION RATE: <1

FREEZING POINT: Not established

VISCOSITY (at 25°): Not established

VOC: <7.0 g/l

pH: Not established

DENSITY: 4.87 kg/gal

SECTION 10 REACTIVITY / STABILITY HAZARD DATA

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

HAZARDOUS POLYMERIZATION: May occur under conditions of instability.



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HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon (CO, CO₂) Flammable, irritating or toxic fumes.

CONDITIONS TO AVOID: Avoid contact with heat and sunlight. Avoid contamination of any kind, all ignition sources and exposure to UV light.

INCOMPATIBILITY (MATERIALS TO AVOID): Peroxides, strong caustics, strong agents, metal corrosion products.

SECTION 11 TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA: No data available

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.

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 does not contain any known chemicals that are considered by the state of California to cause cancer or reproductive harm.

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

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.

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).

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: None Know

Toxic Substances Control Act (TSCA) Section 8(b) – Inventory Status: All components in this product are TSCA listed.



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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

Supersedes:

May-31-2006

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.