

# MATERIAL SAFETY DATA SHEET

## SECTION 1 PRODUCT IDENTIFIER

PPC Series U.V. CURABLE INK

**NOR-COTE INTERNATIONAL, INC.**

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## SECTION 2 INGREDIENTS

PRINCIPAL COMPONENTS:	WT%	CAS#	EXPOSURE LIMITS
<b>MIXTURE OF:</b>			
Acrylated Monomers	18-20%	Proprietary	Not established
n-vinyl-2-pyrrolidone	14-24%	88-12-0	0.1ppm supplier recommendation
Photoinitiators	10%	Proprietary	Not established
Acrylated Oligomers	28-34%	Proprietary	Not established
HDODA	5-8%	13048-33-4	ACGIH TWA - 1mg/m3 skin

## SECTION 3 HAZARDS IDENTIFICATION

**HMIS: HEALTH - 2 FLAMMABILITY - 1 REACTIVITY - 1 PERSONAL PROTECTION "C"**

**EFFECTS OF OVEREXPOSURE:** Ingredients are a potential irritant to eyes, skin and respiratory tract. Effects may be delayed for several hours. Prolonged or repeated exposure may result in sensitization. N-Vinyl-2-pyrrolidone (NVP) is moderately toxic by ingestion and may be absorbed via skin or inhalation. Acute and subchronic animal studies indicate that overexposure to NVP by ingestion or inhalation may result in liver and kidney injury. Rats exhibited minor liver changes at airborne levels of 15 PPM and irritation of the nasal mucous at 5 PPM. Rats exposed to 5, 10, and 20 PPM exhibited benign or malignant tumors of the nasal tissues. Only benign tumors observed among females at 10 PPM, and males and females at 5 PPM.

**PRIMARY ROUTE OF ENTRY:** Dermal, inhalation, and ingestion

**SKIN AND EYE CONTACT: WARNING!** Can cause allergic skin reaction. May cause eye irritation. Protect skin and eyes from repeated or prolonged contact. Wash thoroughly after handling.

**INHALATION:** Do not inhale vapors. May cause irritation to upper respiratory tract upon prolonged or repeated inhalation.

**INGESTION:** May be harmful if swallowed.

**CARCINOGENICITY:** IARC? No NTP? No OSHA? No

## SECTION 4 FIRST AID MEASURES

### EMERGENCY & FIRST-AID PROCEDURES:

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

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

**EYE CONTACT:** Flush the eye and under lids with warm water for 15 minutes. Get medical attention.

**INGESTION:** If appreciable quantities are swallowed, seek immediate medical attention

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## SECTION 5 FIRE FIGHTING MEASURES

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### SPECIAL FIRE FIGHTING PROCEDURES:

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.

**FLASHPOINT:**

>200° F

**METHOD:**

Open Cup

**FLAMMABLE LIMITS: (Vol. % in air)**

Not established

**EXTINGUISHING METHOD:**

Water fog, carbon dioxide (CO<sub>2</sub>) or dry chemical

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## SECTION 6 ACCIDENTAL RELEASE MEASURES

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**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** Remove all sources of ignition. Ventilate area. Avoid skin and eye contact. Use respiratory protection. Absorb with inert materials such as dry clay or sand and place in closed container for disposal as solid waste in accordance with Federal, State and Local regulations.

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## SECTION 7 HANDLING AND STORAGE

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**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 to prevent spontaneous polymerization.

Store below 120° F (49° C).

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## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

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**RESPIRATORY PROTECTION:** Use local exhaust to control vapors and mists. Use of NIOSH approved respirators for organic vapors, is recommended where TLV is exceeded.

**SKIN PROTECTION:** Rubber gloves are required. Protective or disposable outer clothing is recommended.

**EYE PROTECTION:** Safety goggles or safety glasses with splash shields are required. Full-face shield is recommended. **DO NOT WEAR CONTACT LENSES.**

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## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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**BOILING POINT (°F):** Not Applicable (NA)

**SPECIFIC GRAVITY:** NE

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

**VOC:** < 7.0 grams/liter

**SOLUBILITY IN WATER:** Not Soluble

**EVAPORATION RATE:** <1

**APPEARANCE AND ODOR:** Moderate viscosity liquid with mild odor

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## SECTION 10 REACTIVITY / STABILITY HAZARD DATA

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**STABILITY:** This material is stable under recommended storage and handling conditions. Store at less than 120°F and away from sunlight.

**CONDITIONS TO AVOID:** Excessive heat, ignition sources and contamination with dirt and other foreign materials.

**INCOMPATIBILITY:** Avoid contamination or inappropriate mixing with strong oxidizing agents, peroxides, strongly caustic materials and metal corrosion products including rust. Do not expose to UV light during storage.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal oxidation or pyrolysis (as in fire) may yield carbon dioxide, carbon monoxide and volatile organic fragments which are flammable, irritating or toxic.

**HAZARDOUS POLYMERIZATION:** Under certain conditions (excess temperatures and contamination) hazardous polymerization may occur. Avoid high temperature and contamination with foreign materials.

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## SECTION 11 TOXICOLOGICAL INFORMATION

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**TOXICOLOGICAL DATA:** Slightly toxic by ingestion.

**LD50** - is greater than 1000 mg/kg of body weight. The test article is not a poisonous material as defined in 49 CFR173.132 (a)(1)(ii) **LC50** - N/D

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## SECTION 12 ECOLOGICAL INFORMATION

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**ECOLOGICAL INFORMATION:** No determination made on ecological impact

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## SECTION 13 DISPOSAL CONSIDERATIONS

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**WASTE DISPOSAL:** Dispose of this product by incineration by a licensed and approved chemical waste facility, or other approved methods for disposal of non-hazardous waste in accordance with all applicable State, Federal, and local regulations.

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## SECTION 14 TRANSPORTATION INFORMATION

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**DEPARTMENT OF TRANSPORTATION:** Not regulated as a hazardous substance.

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## SECTION 15 REGULATORY INFORMATION

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**TSCA:** All chemicals in this product are TSCA listed

**WHMIS:** (Canada)

**OSHA INFORMATION:** Class IIIB combustible liquid.

**CLEAN AIR ACT INFORMATION:** No ozone depleting substances (ODS) are contained in this product or the raw materials used in its formulation.

**HAZARDOUS WASTE, 40 CFR 261:** Not regulated as a hazardous substance

**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.

**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.

### SARA TITLE III

**302 EHS:** None

**302 CERCLA:** None

**311-312 Product Hazard Class**

**Acute - Yes    Chronic - No    Fire-No    Sudden Release - No    Reactivity - No**

**313 Reportable Toxic Chemicals:** None

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## SECTION 16 OTHER INFORMATION

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### Hazardous Materials Identification System (HMIS)

**4 = Severe Hazard**  
**3 = Serious Hazard**  
**2 = Moderate Hazard**  
**1 = Slight Hazard**  
**0 = Minimal Hazard**

**TWA – Time Weighted Average**

**TLV – Threshold Limit Value**

**STEL – Short Term Exposure Limit**

**CAS# - Chemical Abstract Service Number**

**TSCA – Toxic Substance Control Act**

**PEL – Permissible Exposure Limit**

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