



MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PX2-SERIES

UV CURABALE SCREEN PRINTING INK (Density in kilograms/gallon) [Specific gravity]

PX2010 MIXING CLEAR (4.08)[1.080]	PX2151 SCARLET RED (4.18)[1.106]	PX2305 JET BLACK (4.22)[1.115]
PX2012 OVERPRINT CLEAR (4.10)[1.083]	PX2155 RUBINE RED (4.27)[1.129]	PX2311 OPAQUE WHITE (5.09)[1.347]
PX2015 SATIN OVERPRINT CLEAR (4.61)[1.220]	PX2160 RHODAMINE RED (4.43)[1.172]	PX2325 CMG GREEN (4.27)[1.129]
PX2026 BARRIER WHITE (5.58) [1.476]	PX2164 CMG RED BS (4.21)[1.114]	PX2410 HT YELLOW (4.09)[1.082]
PX2030 SHADING BLACK (4.17)[1.103]	PX2165 CMG MAGENTA (4.21)[1.114]	PX2420 HT MAGENTA (4.11)[1.087]
PX2031 TINTING WHITE (4.54)[1.200]	PX2190 PROCESS BLUE (4.40)[1.164]	PX2430 HT CYAN (4.09)[1.082]
PX2101 PRIMROSE YELLOW (4.28)[1.133]	PX2200 PEACOCK BLUE (4.36)[1.154]	PX2440 HT BLACK (4.12)[1.091]
PX2111 LEMON YELLOW (4.23)[1.119]	PX2205 REFLEX BLUE (4.27)[1.131]	PX2450 HT BASE (4.06)[1.075]
PX2114 CMG ORANGE (4.23)[1.118]	PX2210 ULTRA BLUE (4.29)[1.135]	PX2485 WARM RED (4.30)[1.137]
PX2123 MEDIUM YELLOW (4.24)[1.121]	PX2220 EMERALD GREEN (4.34)[1.147]	PX2C789 SP 212 PINK (4.51)[1.193]
PX2127 CMG VIOLET (4.20)[1.110]	PX2230 CMG BLUE (4.23)[1.120]	PX2C2130 DURA HT YELLOW (4.09)[1.082]
PX2131 BRILLIANT ORANGE (4.25)[1.123]	PX2301 OPAQUE BLACK (4.22)[1.117]	PX2C2131 DURA HT BLACK (4.12)[1.090]
PX2141 FIRE RED (4.24)[1.120]		PX2C2138 HV OVERPRINT CLEAR (4.09) [1.083]

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 Singapore 198736
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Emergency Phone:
CHEMTREC (Outside U.S.)
703-527-3887

SECTION 2 INGREDIENTS

CHEMICAL NAME	PERCENT BY WEIGHT	CAS#	EXPOSURE LIMITS	EINECS#
1,6-Hexanediol Diacrylate	7-15%	13048-33-4	AIHA WEEL - 1mg/m3 skin	235-921-9
Trimethylolpropane Triacrylate	2-9%	15625-89-5	Not Established	239-701-3
2-Phenoxyethanol acrylate	1-14%	48145-04-6	Not Established	256-360-6
Acrylated oligomers	29-66%	Proprietary	Not established	Proprietary
Acrylated monomers	5-18%	Proprietary	Not established	Proprietary
Photoinitiators	3-11%	Proprietary	Not established	Proprietary
Carbon Black (030, 220, 301, 325, 440, C2131)	0.4-4%	1333-86-4	Not available	215-609-9
Copper Compound (127, 190, 200, 205, 210, 220, 230, 305, 430)	0.8-5.5%	147-14-8	Not available	205-685-1
Rosin (160)	0.5%	8050-09-7	Not available	232-475-7

SECTION 3 HAZARDS IDENTIFICATION

ROUTES OF ENTRY: Dermal, Inhalation, Ingestion

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

ACUTE:

- 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: No data available

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: Lung conditions, sensitization, allergies, skin and eye conditions.

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

EC HAZARD SYMBOLS:



Xi - IRRITANT



N - DANGEROUS TO THE ENVIRONMENT

EC RISK/SAFETY PHRASES:

R36/37/38, R43, R51/53
S24, S37, S61



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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.

SECTION 5 FIRE FIGHTING MEASURES

FLASHPOINT: Not tested but expected to be >200° F (> 93.3°C)

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

EXTINGUISHING METHOD: Water fog, carbon dioxide (CO₂) or dry chemical

AUTO-IGNITION TEMPERATURE: Not established

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

Remove all sources of ignition and 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 all applicable regulations.

SECTION 7 HANDLING AND STORAGE

HANDLING: Avoid any unnecessary contact. Use protective clothing specified in Section 8.

STORAGE: Store away from heat and sunlight to prevent spontaneous polymerization. Store below 100° F. Protect containers from physical damage.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

HAND PROTECTION: Use nitrile, butyl or other gloves that are resistant to chemicals in Section 2. Replace immediately if punctured or torn or when a change of appearance (color, elasticity, shape) occurs.

EYE PROTECTION: Use splash-proof safety goggles, safety glasses, or face shields 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 local exhaust to control vapors and mists. Use of NIOSH approved respirators for organic vapors, is recommended where TLV is exceeded.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Moderate viscosity with mild odor

BOILING POINT (°C): Not available

pH: Not available

VAPOR PRESSURE (mm Hg @ 20°C): <1

SOLUBILITY IN WATER: Not soluble

PHYSICAL STATE: Liquid

FREEZING POINT: Not available

EVAPORATION RATE: Slower than Diethyl ether

VAPOR DENSITY: Heavier than air

VOC: Not established but expected to be less than 1%

SECTION 10 REACTIVITY / STABILITY HAZARD DATA

STABILITY: This material is stable under recommended storage and handling conditions.

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, alkali, metal hydroxides, polymerization initiators, peroxides, inert gases, primary and secondary amines.



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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.

SECTION 11 TOXICOLOGICAL INFORMATION

No determination has been made on the toxicological impact of this product.

HDODA, one component of this product, was positive in a mouse lymphoma test indicating possible mutagenic potential. An Ames test for mutagenicity produced equivocal results. An 80 week carcinogenicity study in mice showed no increased incidence of tumors. In general, acrylates are not active in the Ames mutagenesis assay, but are positive in the mouse lymphoma assay. HDODA was not fetotoxic or teratogenic when administered orally to mice at a maternally toxic dose.

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 product in accordance with all applicable 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).

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) in regard to this product.

California Proposition 65 RTK: This product may contain trace chemicals not added as a part of the formulation but remaining as residuals from the manufacturing process of our raw materials suppliers, that are considered by the state of California to cause cancer: None Known

Superfund Amendments and Reauthorization Act of 1986 (SARA): This product contains the following components that are regulated under Title III Section 313: Copper Compound (CAS 147-14-8)
Glycol Ether (CAS 48145-04-6)

Toxic Substances Control Act (TSCA): All ingredients of this product are listed on the TSCA Inventory.

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
AIHA – American Industrial Hygiene Association
WEEL – Workplace Environmental Exposure Level



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Supersedes: 04-10-2005

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.