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**HMIS RATING**

Health 2  
Flammability 1  
Reactivity 1

**MATERIAL SAFETY DATA SHEET**

**SECTION I - PRODUCT IDENTIFICATION AND USE**

PRODUCT NAME: **IMAGEMARK XR SERIES**

PRODUCT USE: UV CURABLE PRINTING INK

EMERGENCY TELEPHONE NO: (613)996-6666

**SECTION II - HAZARDOUS INGREDIENTS**

HAZARDOUS INGREDIENTS	%	CAS NUMBER	LD50 OF INGREDIENT (SPECIFY SPECIES & ROUTE)	LC50 (SPECIFY SPECIES)
ACRYLATE ESTER BLEND	10-20	TRADE SECRET	NOT AVAILABLE	NOT AVAILABLE
ACRYLATE ESTER	10-20	48145-04-6	NOT AVAILABLE	NOT AVAILABLE
1,6 HEXANEDIOL DIACRYLATE	10-20	13048-33-4	NOT AVAILABLE	NOT AVAILABLE
KETONE INITIATOR	5-10	TRADE SECRET	NOT AVAILABLE	NOT AVAILABLE
AMINE SYNERGIST	3-7	105-59-9	NOT AVAILABLE	NOT AVAILABLE

**SECTION III - PHYSICAL AND CHEMICAL DATA**

<b>PHYSICAL STATE</b> LIQUID	<b>ODOR AND APPEARANCE</b> VARIOUS COLORS MILD ODOUR	<b>ODOR THRESHOLD (PPM)</b> NOT AVAILABLE	<b>VAPOR PRESSURE (mmHg)</b> No information available
<b>VAPOR DENSITY</b> Heavier than air	<b>EVAPORATION RATE</b> No information available	<b>BOILING PT (°C)</b> >149°C / >300°F	
<b>FREEZING PT. (°C)</b> NOT AVAILABLE	<b>SPECIFIC GRAVITY</b> 0.97 - 1.10	<b>PH</b> NOT AVAILABLE	<b>PHOTOCHEMICALLY REACTIVE</b> NO
<b>AUTOIGNITION TEMP. (°C)</b> No information available	<b>FLASH PT (°C)</b> > 93C/200F	<b>LOWER FLAMMABLE LIMIT(% VOL)</b> UNKNOWN	<b>UPPER FLAMMABLE LIMIT</b> UNKNOWN

**SECTION IV - FIRE -FIGHTING MEASURES**

<b>Flammable Properties:</b>	No information available
<b>Suitable Extinguishing Media:</b>	Foam. Carbon dioxide (CO2). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Protective Equipment and</b>	As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear. Keep away from fire, sparks and heated surfaces.
<b>Precautions for Firefighters:</b>	Keep container tightly closed. Cool containers / tanks with water spray. Polymerization is a highly exothermic reaction and may generate sufficient heat to cause thermal decomposition and/or rupture containers. To avoid thermal decomposition, do not overheat. Fire or intense heat may cause violent rupture of packages.
<b>Specific Hazards Arising from the Chemical:</b>	May cause sensitization by skin contact. Thermal decomposition can lead to release of irritating gases and vapors. Burning produces obnoxious and toxic fumes.

## SECTION V - ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions:</b>	Remove all sources of ignition. Heat, flames and sparks. Ventilate the area. Avoid breathing dust or vapor. Avoid contact with skin, eyes and clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
<b>Methods for Cleaning Up:</b>	Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Do not use sparking tools.
<b>Environmental Precautions:</b>	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

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## SECTION VI - HANDLING AND STORAGE

<b>Handling:</b>	Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Remove and wash contaminated clothing before re-use. Discard contaminated shoes. When using do not smoke. Take notice of labels and material safety data sheets for the working chemicals. Do not take internally. Harmful or fatal if swallowed.
<b>Storage:</b>	Keep at temperatures between 9.9°C and 31.9°C. Keep container closed when not in use. Keep out of the reach of children. Keep away from direct sunlight.

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## SECTION VII – STABILITY AND REACTIVITY

<b>Chemical Stability:</b>	Stable under normal conditions.
<b>Conditions to Avoid:</b>	Temperatures above 93°C. Keep away from direct sunlight.
<b>Incompatible Products:</b>	Strong acids. Strong bases. Strong oxidizing agents. Reducing agents.
<b>Hazardous Decomposition Products:</b>	Thermal decomposition can lead to release of irritating gases and vapors. Carbon dioxide (CO <sub>2</sub> ). Carbon monoxide
<b>Possibility of Hazardous Reactions:</b>	None under normal processing. Do not store for longer periods at temperatures above 93°C.

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## SECTION VIII - TOXICOLOGICAL INFORMATION

<b>Sensitization:</b>	May cause sensitization of susceptible persons.
<b>Mutagenic Effects:</b>	No information available
<b>Reproductive Effects:</b>	No information available
<b>Developmental Effects:</b>	No information available
<b>Teratogenicity:</b>	No information available
<b>Chronic Effects:</b>	Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure.

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## SECTION IX - PREVENTIVE MEASURES

<b>Engineering Measures:</b>	Use only with adequate ventilation. Use ventilation adequate to keep exposures below recommended exposure limits. See MSDS. In case of insufficient ventilation, wear suitable respiratory equipment.
<b><u>Personal Protective Equipment:</u></b>	
<b>Respiratory Protection:</b>	Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust). Respirator with a vapour filter.
<b>Eye Protection:</b>	Ensure that eyewash stations and safety showers are close to the workstation location. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield.
<b>Skin Protection:</b>	Wear protective gloves/clothing. Solvent-resistant apron and boots.
<b>General Hygiene Considerations:</b>	Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before eating, drinking, or smoking. Remove and wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.
<b>Waste Disposal:</b>	Dispose of waste only on approved treatment facility.
<b>Handling Procedures &amp; Equipment:</b>	Group and bond all equipment and containers. Use spark resistant tools. Smoking or eating should not be allowed before washing hands.
<b>Storage Equipment:</b>	Store in cool, ventilated area. Keep away from heat, sparks, and other sources of ignition.
<b>Special Shipping Information:</b>	Refer to local or federal regulation.

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## SECTION X - FIRST AID MEASURES

<b>Eye:</b>	May produce an allergic reaction.  Wash immediately with plenty of water for at least 15 minutes and get medical aid.
<b>Skin:</b>	May cause allergic skin reaction. In the case of skin irritation or allergic reactions see a physician. Immediately wash the affected areas with plenty of soap and water. Get medical aid if symptoms persist. Remove contaminated clothing.
<b>Ingestion:</b>	Move to fresh air. Give two glasses of water to drink if patient is conscious. Do not induce vomiting. Get medical and immediately.
<b>Inhalation:</b>	May produce an allergic reaction. Move patient to fresh air. Restore breathing if necessary. Keep patient warm and quiet and get medical aid.

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## SECTION XI - PREPARATION DATE OF MSDS

**Prepared By:** Technical Department  
**Phone Number:** (416) 743 – 4111  
**Date:** 01/31/2017