



TRIDENT
AN ITW COMPANY
INDUSTRIAL INKJET

U.S. Material Safety Data Sheet
European Safety Data Sheet

MSDS Number: 28 Rev. A	Date: January 27, 2004
Product: BreezeMark™ UV ink	Page 1 of 4

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Section 1: CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product Identifier: BreezeMark™ UV ink
 Manufacturer: TRIDENT, An ITW Company
 1114 Federal Road
 Brookfield, CT 06804-1140
 Telephone: +1 203-740-9333 Fax: +1 203-740-3527

Section 2: COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	EINECS#	CAS#	%[wL/wL.]	Symbols	R-Phrase
Multifunctional Acrylate Nos			30-60	Xi	R36/38
Acrylic Acid, Monoalkyl, =Aryl or -Arkylaryl (Esters of Nos)			5-10	Xi, N	R36/37/38, 51/53
Vinylcaprolactam	218-787-6	2235-00-9	10-30	Xn	R22, 36
2-Benzyl-2-Dimethylamino-4-Morpholinobutyrophenone	404-360-3	119313-12-1	1-5	N	R50/53

The full texts for all R-phases are shown in section 16.

Section 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Irritating to eyes and skin. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Section 4: EMERGENCY FIRST AID MEASURES

INHALATION: Move the exposed person to fresh air at once.
 INGESTION: DO NOT INDUCE VOMITING! NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Remove victim immediately from source of exposure. Get medical attention.
 SKIN CONTACT: Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water for several minutes. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing.
 EYE CONTACT: Remove victim immediately from source of exposure. Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eyelids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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SECTION 5: FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD:	>90°C CC
EXTINGUISHING MEDIA:	Fire can be extinguished using: Powder, foam or CO2. DO NOT use water if avoidable.
SPECIAL FIRE FIGHTING PROCEDURES:	Use water SPRAY only to cool containers! Do not put water on leaked material. Avoid water in straight hose stream; will scatter and spread fire.
UNUSUAL FIRE & EXPLOSION HAZARDS:	Generates massive smoke during fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

GENERAL:	Wear necessary protective equipment.
SPILL:	Absorb in vermiculite, dry sand or earth and place into containers. Shovel into dry containers. Cover and move the containers. Flush the area with water.

SECTION 7: HANDLING AND STORAGE

USAGE PRECAUTIONS:	Avoid inhalation of vapors. Avoid spilling, skin and eye contact.
STORAGE PRECAUTIONS:	Keep in cool, dry, ventilated storage and closed containers. Keep in original container. Protect from light, including direct sunrays. Store separate from: Acids, Alkalies. Oxidizing material. Avoid storing for very long periods.

SECTION 8: EXPOSURE CONTROLS & PERSONAL PROTECTION

INGREDIENT COMMENTS:	OES = Occupational Exposure Standard
PROCESS CONTROL MEASURES:	Provide eyewash station.
VENTILATION:	All handling to take place in well-ventilated area.
RESPIRATORS:	No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.
PERSONAL PROTECTION:	
EYE PROTECTION:	Wear chemical splash-proof eye goggles to prevent any possibility of eye contact.
PROTECTIVE GLOVES:	Protective gloves and goggles must be used if there is a risk of direct contact or splash. Use protective gloves made of: Multi-layer material (e.g.4H, Saranex). Nitrile. Unsuitable materials: Rubber (natural, latex).
OTHER PROTECTION:	Wear appropriate clothing to prevent any possibility of skin contact.
HYGENIC WORK ROUTINES:	DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. No eating or drinking while working with this material.

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SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE: black liquid with characteristic odor.	FLAMMABLE LIMITS: None established.
FLASHPOINT AND METHOD: >90°C CC	VISCOSITY: 10-30 cps @ 25°C
VAPOR PRESSURE: <1.0 mm Hg @ 25°C	EVAPORATION RATE (n-butyl acetate = 1): <0.05
SPECIFIC GRAVITY: 1.02 – 1.1 @ 25°C	PERCENT VOLATILES: <90% est.
SOLUBILITY: Soluble in: Organic solvents (most)	BOILING POINT (°C): >100°C @ 760 mmHg.
SOLUBILITY VALUE (G/100G H2O/20°C): <10	VAPOR DENSITY (air=1): >1
pH= Not applicable. Product does not dissolve in water	

SECTION 10: STABILITY & REACTIVITY

STABILITY:	Normally stable. Avoid: Heat, sparks, flames
CONDITIONS TO AVOID:	Will react violently with: Free radical initiators. Strong oxidizing agents. Strong alkalis.
HAZARDOUS POLYMERIZATION:	May polymerize.
POLYMERIZATION DESCRIPTION:	Store in original container to avoid contamination. Avoid alkalis, strong acids and heat.
HAZARDOUS DECOMPOSITION PRODUCTS:	Fire creates: Carbon monoxide (CO). Carbon dioxide (CO2).

SECTION 11: TOXICOLOGICAL INFORMATION

TOXIC CON.-LC50:	No std.
TOXICOLOGICAL INFORMATION:	Acrylate components have irritant properties. Prolonged or repeated contact with skin or mucous membranes may result in irritant symptoms such as redness, blistering or dermatitis. Symptoms may be delayed.
SKIN:	Irritating to skin.
EYES:	Irritating to eyes.

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL HAZARDS: Dangerous for the environment: May cause long-term adverse effects in the aquatic environment.

SECTION 13: DISPOSAL CONSIDERATIONS

GENERAL / CLEANING: European Waste Catalogue Number (EWC) 08 03 12

DISPOSAL METHODS: Incinerate in suitable combustion chamber. Collect in marked containers and deliver to approved depot. Dispose of in accordance with Local Authority requirements. Dispose of containers as special waste.

SECTION 14: TRANSPORT INFORMATION: (Not meant to be all inclusive)

GENERAL:	NOT REGULATED
LABEL FOR CONVEYANCE:	No transport warning sign required.

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SECTION 15: REGULATORY INFORMATION

LABEL FOR SUPPLY:



RISK PHRASES:	R-36/38 R-52/53	Irritating to eyes and skin. Harmful to aquatic organisms may cause long-term adverse effects in the aquatic environment.
SAFETY PHRASES:	S-24/25 S-26 S-60	Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. This material and its container must be disposed of as hazardous waste.
UK REGULATORY REFERENCES:	Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 (CHIP 3), S.I. 2002 No. 1689.	
UK ENVIRONMENTAL LISTINGS:	Rivers (Prevention of Pollution) Act 1961. Control of Pollution (Special Waste Regulations) Act 1980.	
EC DIRECTIVES:	Dangerous Preparations Directive 1999/45 and its amendments.	
APPROVED CODE OF PRACTICE:	Classification and Labeling of Substances and Preparations Dangerous for Supply.	
GUIDANCE NOTES:	Occupational Exposure Limits EH40. Introduction to Local Exhaust Ventilation HS(G)37. CHIP for everyone HSG(108)	

SECTION 16: OTHER INFORMATION.

INFORMATION SOURCES:	Dangerous Properties of Industrial Materials Report, N.Sax et.al.	
REVISION DATE:	Revision 1, 27-02-2003	
REVISION SUMMARY:	Initial release from Trident.	
R-PHRASES (Full Text):	R-22	Harmful if swallowed
	R-36	Irritating to eyes
	R-36/37/38	Irritating to eyes, respiratory system and skin.
	R-36/38	Irritating to eyes and skin.
	R-50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
	R-51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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