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MATERIAL SAFETY DATA SHEET

MSDS Ref: MSDS0077
Valid from: 05-11-98

EMERGENCY NUMBERS
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SECTION I - IDENTIFICATION

Product Identifier: R119A Waterfast RedInk

SECTION II - COMPOSITION

Description: A glycol-based ink with glycol ether co-solvent and dye.

COMPONENT	CAS#	%	OSHA	ACGIH PEL	Symbols TLV	R-Phrase
Triethylene glycol	112-27-6	50-75	NE*	NE	Xi	R36/37/38
Diethylene glycol						
Ethyl ether	111-90-0	5-10	NE	NE	Xi	R36
Polyalkylene glycol						
Alkyl ether	Proprietary	10-20	NE	NE	None	None
Solvent blue dye salt	Proprietary	5-10	NE	NE	Xn	R22
Non-hazardous						
Ingredients	Proprietary	10-20	NE	NE	None	None

* Not established *** Very low risk materials. Does not require symbol or R&S phrases.

** Solvent Red 160 contains 3% trivalent chromium [Total Cr+3 in ink <0.15%]

Chromium is a necessary trace element both in the human body and in nature. Trivalent chromium compounds usually have very low orders of toxicity, are not carcinogenic, and are very little treat to the environment. Hexavalent chromium compounds, however, are highly toxix, usually carcinogenic, and very damaging to the enviroment. The trivalent chromium compound listed in this ink is safe when used as intended.

See section 3 for potential health effects. See section 11 for available toxicity information. See section 15 for regulatory information.

SECTION III - HAZARD IDENTIFICATION

Emergency Overview: Irritating to eyes, skin and respiratory tract.

Hazard Ratings: NFPA Health: 1 Flammability: 1 Reactivity: 0

Potential Health Affects

Eye Contact: Excessive redness and swelling of the conjunctiva may occur.

Skin Contact: May cause moderate redness and swelling. Dermatitis possible.

Ingestion: May cause slight gastric disturbance, incoordination, dizziness, drowsiness or headache.

Inhalation: Not expected to cause a problem at ambient conditions.

Chronic: May cause damage to kidneys and liver.

May Aggravate: Skin and respiratory disorders, CNS disorders and kidney disease.

SECTION IV - FIRST AID MEASURES

Ingestion: Never give anything orally to a patient who is losing consciousness, unconscious or convulsing. If c onscious, give 2-4 glasses of water. Do not induce vomiting. Seek immediate medical attention.

Inhalation: Remove to fresh air. For breathing difficulty, give oxygen. If symptoms persist, seek medical attention.

Eye Contact: Rinse with water. Remove contact lenses. Flush with copious amounts of cool water for at least 15 minutes. Seek medical advice.

Skin Contact: Wash thoroughly with soap and water. Launder clothing before reuse.

SECTION V - FIRE FIGHTING MEASURES

Flashpoint and Method:	approx. 119 C [PMCC].
Flammable Limits:	Not established.
Autoignition Temperature:	Not established.
Extinguishing Media:	Water, foam, dry chemical, CO2.
Special Fire Fighting Procedures:	Self contained breathing apparatus and full turn out gear. Keep water runoff from entering streams and sewers.
Unusual Fire and Explosion Hazards:	Fire can float on the liquid. Fumes from burning materials are toxic and dangerous
Hazardous Decomposition Products:	Oxides of carbon, nitrogen & sulfur, chromium oxides.

SECTION VI - ACCIDENTAL RELEASE MEASURES

General:	Wear proper protective clothing. Prevent runoff into waterways and sewers.
Spill:	Contain, collect with absorbent, and dispose of properly according to local, regional and national regulations.

SECTION VII - HANDLING AND STORAGE

Keep away from children. Store in cool dry area in closed containers. Keep away from ignition sources.

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limit:	See section 2 for component exposure limits. There are no exposure limits established for this ink.
Engineering Controls (ventilation):	Good general room ventilation. Local exhaust only if necessary.
Personal Protection:	
Eye Protection:	Safety glasses or chemical goggles required.
Protective Gloves:	Chemical resistant gloves recommended. Vinyl sufficient for short low level exposures, but PVC recommended for longer, high exposure situations.
Respiratory:	If necessary to prevent exposure above the TLVs, use NIOSH/MSHA approved respirator.
Other:	An eye wash facility and safety shower must be available.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Opaque red liquid with very mild odour.		
Flammable Limits:	Not Established		
Personal Protection:	119 C [PMC]	Autoignition Temperature:	NE
Vapour Pressure:	estimate <0.08	Evaporation Rate (n-butyl Acetate=1):	<0.01 est.
Specific Gravity:	approx. 1.1	Percent Volatiles:	est.<80%
Solubility in water:	nil	Boiling Point:	est. >200°C
pH:	approx. 6.5	Vapour Density:	NE
Melting/freezing Point:	<-20°C	Viscosity (Brookfield):	approx. 60 cps @25°C

SECTION X - STABILITY AND REACTIVITY

Stability:	stable
Hazardous Polymerisation:	Will not occur.
Conditions to avoid:	Heat, sparks, static discharge.
Incompatibility:	Strong oxidizing materials.
Hazardous Thermal Decomposition Products:	Oxides of carbon, nitrogen and sulfur. May form chromic oxides.

SECTION XI - TOXICOLOGICAL INFORMATION

Acute Toxicity:	This ink has not been tested for acute toxicological effects.
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COMPONENTS

Diethylene glycol ethyl ether	LD50 [oral, rat] >5 g/kg
Polyalkylene glycol alkyl ether	LD50 [oral, rat] >5g/kg
	LD50 [skin absorption, rat] >2g/kg

Non-hazardous ingredients (all) LD50 [oral, rat] > 5 g/kg
 No additional acute data available on components of this product.

Subchronic Effects: This ink has not been tested for subchronic effects.

Chronic effects/carcinogenicity: This ink has not been tested for chronic effects.

Components Listed As Carcinogens By Regulatory Agencies:
 OSHA: None Listed IARC: None Listed NTP: None Listed

Mutagenicity: This ink has not been tested for mutagenic effects.

Reproductive Effects: This ink has not been tested for reproductive effects.

SECTION XII - ECOLOGICAL INFORMATION

Ecotoxicological Information: No data available.

Chemical Fate Information: No data available.

SECTION XIII - DISPOSAL CONSIDERATIONS

Dispose of according to appropriate local, regional and national laws or regulations. Do not reuse "Empty containers".

SECTION XIV - TRANSPORT INFORMATION

Ground Transport: Not regulated

Air Transport: Not regulated

Ocean Transport: Not regulated

SECTION XV - REGULATORY INFORMATION

UNITED STATES

This product does not contain any ozone depleting substances (ODS) and no ODSs were used in the manufacture of this product.

Trident does not tested for heavy metals covered under the various CONEG laws. However, raw materials used to make this ink do not contain mercury, lead, cadmium or hexavalent chromium and none are added during manufacture.

TSCA [Toxic Substances Control Act]: All components are listed on TSCA.

EPA Hazard rating: Untested mixture with possible acute and chronic health hazards.

SARA [Superfund Amendments and Reauthorization Act] Title III 1986:

40CFR355 Chemicals requiring emergency planning - None

40CFR372 Chemicals present that may require submission of annual reports of toxic chemicals release : *Trivalent chromium compound* < 5 %
glycol ethers <10%

CAAA - Components in this product regulated under the Clean Air Act Amendment of 1990:

Trivalent chromium compound <5%
Glycol ether <10%

State Regulations:

California Proposition 65: Components present in this product known by the state of California to cause birth defects and other reproductive harm - None

California SCM/QAD: VOCs in this product estimated to be <90% as defined by the State of California.

Massachusetts Right to Know list [105CM670], Pennsylvania Right to Know list and New Jersey Right to Know list:

Chromium compound <5%
Glycol ethers <10%

CANADA

DSL [Domestic Substance List]/nDSL: All components are listed.

WHMI Classification: D2B

EUROPEAN UNION

EINECS Status: All components are in compliance with European Inventory requirements.

CLASSIFICATION: This product is considered an irritant based on criteria found in EU Directives 67/548 and 88/379 [Xi, R36/37/38, S23, S51]

SECTION XVI - OTHER INFORMATION

Revision Summary: This MSDS is written in compliance with Directive 93/112EC.

REV.B - Changes in Sections 1,2 and 9.

REV.C - Canadian WHMIS rating information added to Section 15.

REV.D - January 1999 – Changes in sections 1,2,3,4,5 & 15

The information and recommendations contained in this document are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to this information.