



EMPOWERING CUSTOMIZATION

MATERIAL SAFETY DATA SHEET

SECTION 1 · IDENTIFICATION OF SUBSTANCE/COMPANY					
PRODUCT IDENTIFIER		PRODUCT ID NO.		Eco Solvent – Cleaning Solution	
Relevant identified uses of the substance or mixture and uses advised against:					
MATERIAL OF USE:		Industrial applications: Inkjet ink for drop-on-demand digital printing process.			
SUPPLIER NAME:		STS REFILL TECHNOLOGY			
ADDRESS:		1140 HOLLAND DRIVE, STE 6,		BOCA RATON, FL 33487	
TELEPHONE:		561-999-8818		WWW.STSREFILL.COM according to 1907/2006/EC, Article 31	
SECTION 2 · HAZARDOUS IDENTIFICATION					
Classification of substance or mixture		(EC) No 1272/2008 Danger			
Acute Tox. 4		H302 Harmful if swallowed.			
Eye Irritation 2		H318 Causes serious eye irritation.			
STOT SE 3		H336 May cause drowsiness or dizziness.			
HMIS III Ratings:		Health: 2 Fire: 2 Physical Hazard: 1 Pers. Prot.: H			
Hazard Scale:		0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard			
Classification according to Directive		67/548/EEC or Directive 1999/45/EC Harmful Xn: R22; R41;R67			
R phrases:		22: Harmful if swallowed.			
41: Risk of serious damage to eyes		67: Vapours may cause drowsiness and dizziness.			
Information concerning particular hazards for human and environment: N/A					
Label elements		Labeling according to Regulation (EC) No 1272/2008			
The substance is classified and labeled according to the CLP regulation.					
Hazard statements:		Hazard pictograms , Signal word: Danger			
H302 Harmful if swallowed. H318 Causes serious eye irritation. H336 May cause drowsiness or dizziness.					
Precautionary statements:					
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.					
P280 Wear protective gloves/ eye protection/ face protection.					
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.					
Other hazards: Results of PBT and vPvB assessment PBT: N/A vPvB: N/A					
SECTION 3 · PHYSICAL DATA					
Chemical characterization: Mixture			Ink Jet printing ink in organic solvents.		
Ingredients	CAS-No.	EINECS	Percent	Classification	
				67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]
Diethylene Glycol Derivative	1002-67-1	213-690-5	10%–30%	–	–
Gamma-Butyrolactone	96-48-0	202-509-5	60%–80%	Xi; R22, R41; R67	Acute Tox. 4 H302 Eye Irrit. 2 H318 STOT.SE 3 H336
Additive	Trade Secret	Trade Secret	5%–10%	–	–
Surfactant	Trade Secret	Trade Secret	0.1%–1%	–	–
SECTION 4 · EMERGENCY FIRST AID MEASURES					
Eye contact:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.				
Inhalation:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.				
Skin contact:	Wash off with soap and plenty of water. Consult a physician.				
Ingestion:	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.				
Most important symptoms and effects, both acute and delayed					
<u>Potential acute health effects</u>	Eye contact, Inhalation, Skin contact, Ingestion: No known significant effects or critical hazards.				
<u>Over-exposure signs/symptoms</u>	Eye contact, Inhalation, Skin contact, Ingestion: No specific data				
Indication of any immediate medical attention and special treatment needed Treat symptomatically.					



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SECTION 5 · FIRE-FIGHTING MEASURES

Extinguishing media Suitable extinguishing media Alcohol-resistant foam, dry chemical, carbon dioxide (CO₂), water-spray.
 Special hazards arising from the substance or mixture Carbon oxides
 Advice for firefighters Use breathing apparatus with independent air supply. Protective suit.
 Further information Use water spray to cool unopened containers
 NFPA Ratings: Hazard Scale: 0= Minimal 1= Slight 2= Moderate 3= Serious 4= Severe
 Health: 2 Flammability: 2 Reactivity: 0

SECTION 6 · ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
 Use personal protective equipment. Avoid breathing Vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Beware of Vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
 Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
 Methods and materials for containment and cleaning up:
 Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.
 Reference to other sections: For disposal see section 13.

SECTION 7 · HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. Avoid inhalation of Vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge.
 Conditions for safe storage, including any incompatibilities: Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
 Specific end uses No data available

SECTION 8 · EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters: Components with workplace control parameters
 Exposure controls: Appropriate engineering controls. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
 Personal protective equipment
 Eye/face protection, Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
 Skin protection
 Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
 Body Protection: Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
 Respiratory protection Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

SECTION 9 · PHYSICAL AND CHEMICAL PROPERTIES

1	Color	Colorless
2	Odor	Slight odor
3	Boiling point/boiling range of ink	Approx. 178 °C or higher
4	Melting Point/Melting Range	No data available
5	Flash point of ink	Approx. 72 °C
6	Auto-Ignition Temperature	Not below 220 °C
7	Flammability(solid, gas)	Not Applicable
8	Explosive Properties	Lower limits: 2.7 vol% Upper limits: 15.6 vol% (gamma-Butyrolactone)
9	Vapour Pressure	2.0 hPa (20°C, gamma-Butyrolactone)
10	Specific Gravity	1.075 ± 0.01(25°C)
11	Solubility	No data available
12	Water solubility	Easily soluble (Diethylene glycol diethyl ether)
13	Viscosity	2.4 ± 0.5 cps

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14	pH	Not Applicable	
15	Oxidizing properties	No data available	
16	Vapour Density	Not Applicable	
The Physical and chemical data given in Section 9 are typical values for this product and are not intended to be product specifications.			
SECTION 10 · STABILITY AND REACTIVITY			
Reactivity		No data available	Chemical stability
Possibility of hazardous reactions		No data available	Conditions to avoid
Incompatible materials		Strong oxidizing agents, Strong bases	
Hazardous decomposition products		Other decomposition products - no data available	
SECTION 11 · TOXICOLOGICAL INFORMATION			
Information on toxicological effects: Routes of Overexposure: Eye, skin, inhalation, and oral ingestion			
Acute Health Hazards: Overexposure of the eye surface to ink may be mildly irritating. Overexposure of ink contact with the skin may cause irritation and in some people, swelling and redness. Intentional inhalation to ink Vapours may result in respiratory tract irritation. Intentional or accidental oral ingestion may cause an upset stomach.			
Chronic Health Hazards: No information available			
Mugtagenicity: No information available			
Carcinogenicity: No information available			
Acute Toxicity Data:			
Diethylene Glycol Derivative:		Oral LD50 >6,500mg/kg (Rats), Dermal LD50 >7,070mg/kg (Rabbit)	
Gamma-Butyrolactone:		LD50/LC50: Dermal, guinea pig: LD50 = >5 gm/kg; Draize test, rabbit, skin: 500 uL Severe; Inhalation, rat: LC50 = >5100 mg/m3/4H; Oral, mouse: LD50 = 1460 mg/kg; Oral, rat: LD50 = 1540 mg/kg.	
Inhalation:		Not available	
Irritating:		Diethylene Glycol Derivative: Eye irritating: moderate irritatant(P.I.I=2.5 Draize) Gamma-Butyrolactone: Irritating to eyes. (rabbit eyes, OECD Guideline 405)	
Sensitization:		Not available	Mutagenicity: Not available
The information shown in SECTION 3, Hazards identification, is based on toxicity profiles of similar materials or on the components present in this material.			
SECTION 12 · ECOLOGICAL INFORMATION			
Toxicity		Acquatic toxicity: No further relevant information available.	
Persistence and degradability:		No further relevant information available.	
Bioaccumulative potential:		No further relevant information available.	
Mobility in soil:		No further relevant information available.	
Results of PBT and vPvB assessment		PBT: Not applicable. vPvB: Not applicable.	
Other adverse effects: No further relevant information available.			
SECTION 13 · DISPOSAL CONSIDERATIONS			
Waste treatment methods Product			
This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Contaminated packaging Dispose of as unused product.			
SECTION 14 · TRANSPORT INFORMATION			
UN number	ADR/RID: —	IMDG: —	IATA: —
UN proper shipping name	ADR/RID: Not dangerous goods, IMDG: Not dangerous goods, IATA: Not dangerous goods		
Transport hazard class (es)	ADR/RID: —	IMDG: —	IATA: —
Packaging group	ADR/RID: —	IMDG: —	IATA: —
Environmental hazards	ADR/RID: no	IMDG: Marine pollutant: no	IATA: no
Special precautions for user	No data available		



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SECTION 15 · REGULATORY INFORMATION	
Safety, health and environmental regulations/legislation specific for the substance or mixture	
EU Regulation (EC) No. 1907/2006 (REACH)	REACH Status: In compliance.
Pre-registration status: All components are listed or exempted.	
Annex XIV - List of substances subject to authorization, Substances of very high concern, None of the components are listed.	
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles. Not applicable.	
Chemical Safety Assessment No data available	
US Regulation: California Proposition 65: Not Regulated	
TSCA Section 4(a)	Final Test Rules Regulated: Not regulated.
TSCA Section 8(a)	Preliminary Assessment Information Rule (PAIR): Not regulated.
TSCA Section 8(a)	Inventory Update Rule: All components on TSCA INVENTORY
TSCA Section 8(d)	Health and Safety Study Reporting: Not regulated.
TSCA Section 12(b)	One-Time Export Notification Regulated: Not regulated.
SECTION 16 · OTHER INFORMATION	
The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.	
This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.	