



MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/ MIXTURE AND OF THE COMPANY/ UNDERTAKING

Product Name : STS Ink for Epson K2 Compatible Cyan
Material Uses : Inkjet Printing Ink
Manufacturer : STS Refill Technology, LLC
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 Boca Raton, FL 33487
 United States of America
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2. HAZARD IDENTIFICATION

This product is a blue liquid with a mild odor.

Hazards Overview

: May cause eye and skin irritation. May cause sensitization by skin contact. Inhalation of vapors may cause mucous membrane and respiratory irritation.

EU Preparation Classification (1999/45/EC)

: Not classified as dangerous
 See Section 16 for full text of EU Classification and Risk Phrases.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical Name	CAS# / EINECS#	% By Weight	EU Classification (67/548/EEC)
Water and Non-Hazardous Ingredients	Mixture	75 – 92 %	Not Applicable
Amine Salt of Polyurethane	Proprietary	1 – 5 %	Xi R36/37/38
Glycols	Proprietary	1 – 5 %	Not Applicable
2-Pyrrolidone	616-45-5/210-483-1	1 – 5 %	Xi R36/38
Glycerin	56-81-5/200-289-5	5 – 10 %	None

See Section 16 for full text of EU Classification and Risk Phrases.

4. FIRST AID MEASURES

Eye : Flush eyes with water for 15 minutes while lifting the upper and lower lids. Get medical attention if irritation persists.

- Skin** : Remove contaminated clothing. Wash contact area thoroughly with soap and water. Get medical attention if irritation develops or persists. Launder contaminated clothing before reuse.
- Inhalation** : Remove to fresh air. If breathing is difficult have qualified personnel administer oxygen. Get medical attention.
- Ingestion** : Call poison control center or doctor immediately for treatment advice. If conscious, give one 8 ounce glass of water to dilute. DO NOT induce vomiting unless directed by medical personnel. Do not give anything by mouth to or induce vomiting in a person who is unconscious or convulsing.

5. FIRE-FIGHTING MEASURES

- Extinguishing Media** : Use alcohol foam, carbon dioxide or dry chemical.
- Special Fire Fighting Procedures** : Wear approved, positive pressure, self-contained breathing apparatus and full protective clothing. Cool fire exposed containers and structures with water.
- Unusual Fire Hazards** : None known.
- Hazardous Decomposition Products** : Carbon dioxide, carbon monoxide, and nitrogen oxides.

6. ACCIDENTAL RELEASE MEASURES

- Spill** : Wear appropriate personal protective equipment. Dike spill and absorb with an inert material. Collect into closable containers for proper disposal. Report spill as required by local and federal regulations.

7. HANDLING AND STORAGE

- Handling** : Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation. Remove and launder contaminated clothing before re-use. Wash thoroughly after handling and before eating, drinking, smoking or using toilet facilities.

Empty containers retain product residues and are hazardous. Follow all MSDS precautions in handling empty containers.

- Storage** : Protect containers from physical damage. Store in a cool, dry area away from oxidizers and other incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	Exposure Limits
Glycols	None Established
Amine Salt of Polyurethane	None Established
Glycerin	5 mg/m ³ TWA (respirable) US OSHA PEL 15 mg/m ³ TWA (total) US OSHA PEL 10 mg/m ³ TWA (as mist) ACGIH TLV

	10 mg/m ³ TWA UK WEL (as mist)
	50 mg/m ³ TWA (inhalable) DFG MAK
2-Pyrrolidone	None Established

Ventilation	: Provide adequate general or local exhaust ventilation to maintain vapor concentrations below the exposure limits.
Respiratory Protection	: For operations where the occupational exposure limit may be exceeded, a local authority approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.
Skin Protection	: Impervious gloves are recommended if contact is likely. Impervious apron, boots and other clothing are recommended if needed to prevent contact or if splashing is possible.
Eye Protection	: Wear chemical safety glasses or goggles to prevent eye contact.
Other Protective Equipment	: For operations where contact can occur, an eye wash facility should be immediately available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	: Liquid
Color	: Blue
Odor	: Mild Characteristic Odor
Boiling Point	: Not determined
Melting Point	: Not determined
Specific Gravity	: Not determined
Vapor Density	: Not determined
Vapor Pressure	: Not determined
Evaporation Rate (Butyl Acetate = 1)	: Not determined
Solubility (Water)	: Complete
pH	: Not determined
Flash Point	: None
Flammable Limits	: Not determined

10. STABILITY AND REACTIVITY

Stability	: Stable under normal storage and use conditions
Conditions to Avoid	: Strong oxidizing agents, strong acids and strong bases.
Hazardous Decomposition Products	: Thermal decomposition may yield carbon monoxide, carbon dioxide, and nitrogen oxides.
Hazardous Polymerization	: Will not occur

11. TOXICOLOGICAL INFORMATION

Potential Health Effects :

Eye	: May cause irritation with redness and pain.
Skin	: May cause skin irritation with redness, swelling and cracking.

Inhalation	: Vapors or mists may cause respiratory irritation with sore throat, cough and shortness of breath.
Ingestion	: Swallowing may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.
Chronic Hazards	: Prolonged exposure may cause dermatitis. 2-Pyrrolidone was found to cause birth defects in studies with laboratory animals at doses that were toxic to the mother.
Medical Conditions Aggravated by Exposure	: Persons with chronic skin, and respiratory disorders may be at increased risk from exposure to this material.
Acute Toxicity Values	: 2-Pyrrolidone – Oral Rat LD ₅₀ : 6,500 mg/kg Glycerin – Oral Rat LD ₅₀ 12,600 mg/kg; Skin Rabbit LD ₅₀ >10,000 mg/kg; Inhalation Rat LC ₅₀ >570 mg/m ³ /1 hr Amine salt of polyurethane – Oral Rat LD ₅₀ >5000 mg/kg

12. ECOLOGICAL INFORMATION

2-Pyrrolidone:	: EC ₅₀ /48 hour daphnia magna >500 mg/l; LC ₅₀ /48 hr golden orfe >500 mg/l, readily biodegradable
Glycerin	: No data available

13. DISPOSAL CONSIDERATIONS

Waste Disposal	: Dispose of in accordance with all local, regional and national regulations.
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14. TRANSPORTATION INFORMATION

DOT Proper Shipping Name	: Not regulated
DOT Technical Name	: None
DOT Hazard Class	: Not regulated
UN Number	: None
DOT Labels Required (49CFR172.101)	: None
Hazardous Substance (49CFR172.101)	: None
Reportable Quantity	: N/A
IMDG Shipping Description	: Not regulated
ID Number	: Not regulated
Hazard Class	: Not regulated
Packing Group	: None
Labels Required	: None
Marking Required	: None required
Placards Required	: None required
ADR Shipping Description	: Not regulated
ID Number	: None
Class	: None
Classification Code	: None
Packing Group	: None
Labels Required	: None

Marking Required : None

15. REGULATORY INFORMATION

OSHA Hazard Classification : Irritant
EPA SARA 311 Hazard Classification : Acute health
SARA TITLE 111 Section 313 Information : This product contains the following chemicals that are regulated under SARA 313: None
CERCLA Hazardous Substance (40CFR 116) : This product is not subject to CERCLA reporting requirements, however, many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
Reportable Quantity : Not applicable
California Proposition 65 Information
WHMIS Classification : Class D - Division 2 - Subdivision A (Very toxic material causing other chronic effects)
European Community Labeling : None required

16. OTHER INFORMATION

Revision Summary : EU Format
EU Classes and Risk Phrases for Reference (See Sections 2 and 3) : Xi Irritant
R36/38 Irritating to eye and skin.
R36/37/38 Irritating to eye, respiratory system, and skin.
Date of Issue : October 29, 2013
Version : 2.01 English

Notice to the Reader:

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. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. While the information set forth herein is believed to be accurate as of the date hereof, the Company makes no warranty or guarantee, express or implied, and disclaims all liability arising out of the use of this information.