Section 1 - Chemical Product and Company Identification

Important information	*** This Materials Safety Data Sheet is only authorized for use by FLUX for FLUX Original products. Any unauthorized use of this Safety Data Sheet is strictly prohibited and may result in legal action being taken by FLUX. ***
Sample Name	Ador Cyan Solvent Ink
Model	PC1SVAC
Company Name	FLUX Inc.
Address	1F., No. 79-3, Ln. 209, Sec. 2, Xinnong St., Yangmei Dist., Taoyuan City 326015, Taiwan
Tel	+886 (2) 6605 7055
E-mail	support@flux3dp.com

Section 2 - Hazards identification

Classification of the substance or mixture

Flammable liquids, Category 2

Label elements

Pictogram:

Signal word: Danger
Hazard statement(s): H225 Highly flammable liquid and vapour
Precautionary statement(s):
Prevention:
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
Response:
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].
P370+P378 In case of fire: Use ... to extinguish.
Supplemental Hazard: none

Other hazards

no data available

Section 3 - Composition/Information on Ingredients

Chemical Composition	CAS No.	Weight(%)
dye	--	<9
ethyl alcohol	64-17-5	<63
propyl alcohol	71-23-8	<20
acetone	67-641	<2.5
butanol	71-36-3	<3.5
Propylene glycol methyl ether acetate	108-65-6	<2

Section 4 - First-aid Measures

Eyes First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Skin Remove contaminated clothes. Rinse and then wash skin with water and soap.

Inhalation Fresh air, rest.

Ingestion Rinse mouth. Refer for medical attention .

Section 5 - Fire Fighting Measures

Suitable extinguishing media If material on fire or involved in fire: Do not extinguish fire unless flow can be stopped. Use water in flooding quantities as fog. Solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water. Apply water from as far a distance as possible. Use "alcohol" foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture Excerpt from ERG Guide 127 [Flammable Liquids (Water-Miscible)]: HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Those substances designated with a (P) may polymerize explosively when heated or involved in a fire. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated. Many liquids are lighter than water. (ERG, 2016)
FLAMMABLE. Flashback along vapor trail may occur. Vapor may explode if ignited in an enclosed area. (USCG, 1999)
This chemical is probably combustible. (NTP, 1992)

Advice for firefighters Use water spray, powder, alcohol-resistant foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

Further information no data available

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Remove all ignition sources. Ventilation. Do NOT wash away into sewer. Collect leaking and spilled liquid in covered containers as far as possible. Absorb remaining liquid in inert absorbent. Wash away remainder with plenty of water. Store and dispose of according to local regulations.
Environmental precautions	Ventilation. Remove all ignition sources. Collect leaking and spilled liquid in sealable containers as far as possible. Wash away remainder with plenty of water.
Methods and materials for containment and cleaning up	Land spill: Apply appropriate foam to diminish vapor and fire hazard.

Section 7 - Handling And Storage

Precautions to be taken in handling and storing	NO open flames, NO sparks and NO smoking. Closed system, ventilation, explosion-proof electrical equipment and lighting. Do NOT use compressed air for filling, discharging, or handling. NO contact with incompatible materials: See Chemical Dangers Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.
Conditions for safe storage, including any incompatibilities	Fireproof. Separated from strong oxidants.Keep tightly closed, cool and away from flame.

Section 8 - Exposure Controls/Personal Protection

Appropriate engineering controls	Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.
Ventilation	Not necessary under conditions of normal use.
Other Protective Clothing or Equipment	Not necessary under conditions of normal use.
Personal Protection	**Eye/face protection:** Wear safety goggles. **Skin protection:** Protective clothing. Apron. Protective gloves. **Respiratory protection:** Use ventilation, local exhaust or breathing protection. **Thermal hazards:** no data available

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Section 9 - Physical and Chemical Properties

Appearance	Solvent-based ink
Colour	Cyan
Odor	Alcohol odor
Flammability	Class IB Flammable Liquid: Fl.P. below 73°F and BP at or above 100°F.
Solubility	Miscible with water
PH value	Not available.
Melting point/ freezing point	-114 °C. Atm. press.:1 atm.

Section 10 - Stability and Reactivity

Chemical Stability	No data available.
Conditions to avoid	No data available.
Incompatible materials	Many explosions have been experienced during the gravimetric determination of either perchlorates or potassium as potassium perchlorate by a standard method involving ethanol extraction. During subsequent heating, formation and explosion of ethyl perchlorate is very probable.
Possibility of hazardous reactions	Flammable liquid when exposed to heat or flame .The vapour mixes well with air, explosive mixtures are easily formed.Acetyl chloride reacts violently with ethanol or water, [Rose, (1961)]. Acetyl bromide reacts violently with alcohols or water, [Merck 11th ed., 1989]. Mixtures of alcohols with concentrated sulfuric acid and strong hydrogen peroxide can cause explosions. Example: An explosion will occur if dimethyl benzyl carbinol is added to 90% hydrogen peroxide then acidified with concentrated sulfuric acid. Mixtures of ethyl alcohol with concentrated hydrogen peroxide form powerful explosives. Mixtures of hydrogen peroxide and 1-phenyl-2-methyl propyl alcohol tend to explode if acidified with 70% sulfuric acid, [Chem. Eng. News 45(43):73(1967); J, Org. Chem. 28:1893(1963)]. Alkyl hypochlorites are violently explosive. They are readily obtained by reacting hypochlorous acid and alcohols either in aqueous solution or mixed aqueous-carbon tetrachloride solutions. Chlorine plus alcohols would similarly yield alkyl hypochlorites. They decompose in the cold and explode on exposure to sunlight or heat. Tertiary hypochlorites are less unstable than secondary or primary hypochlorites, [NFPA 491 M, 1991]. Base-catalysed reactions of isocyanates with alcohols should be carried out in inert solvents. Such reactions in the absence of solvents often occur with explosive violence, [Wischmeyer(1969)].
Hazardous Polymerization	No data available

Section 11 - Toxicological Information

Signs & symptoms	No data available
Inhalation	No data available
Skin contact	No data available
Ingestion	No data available

Section 12 - Ecological Information

Eco-toxicity	Toxicity to fish: LC50 - Pimephales promelas - 14.2 g/L - 96 h. Toxicity to daphnia and other aquatic invertebrates: LC50 - Ceriodaphnia dubia - 5 012 mg/L - 48 h. Toxicity to algae: EC10 - Chlorella vulgaris - 86 mg/L - 4 d. Toxicity to microorganisms: IC50 - activated sludge from domestic and industrial sewage treatment plants - > 1 000 mg/L - 3 h.
Bioaccumulation potential	An estimated BCF of 3 was calculated for ethanol(SRC), using a log Kow of -0.31(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).
Environmental fate	No data available

Section 13 - Disposal considerations

Product	The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.
Contaminated packaging	Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

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 :no IATA: no
Special precautions for user	No data available

Section 15 - Regulatory Information

Special requirement be according to the local regulations.
《Dangerous Goods Regulations》
《Recommendations on the Transport of Dangerous Goods Model Regulations》《International Maritime Dangerous Goods》
《Technical Instructions for the Safe Transport of Dangerous Goods》
《Classification and code of dangerous goods 》
《Occupational Safety and Health Act 》(OSHA)
《Toxic Substance Control Act》(TSCA)
《Consumer Product Safety Act 》(CPSA)
《Federal Environmental Pollution Control Act》(FEPCA)
《The Oil Pollution Act》(OPA)
《Superfund Amendments and Reauthorization Act TitleIII(302/311/312/313) 》(SARA) 《Resource Conservation and Recovery Act》(RCRA)
《Safety Drinking Water Act》(CWA)
《California Proposition 65》
《Code of Federal Regulations》(CFR)

Section 16 - Other Information

Note	This Sheet is provided as technical information only. The information and recommendations set forth are made in good faith and believed to be accurate as of the date of preparation. Precise Testing & Certification (Guangdong) Co., Ltd.(PTC). makes no warranty, expressed or implied, with respect to this information and disclaims all liabilities from reliance on it.

End of MSDS