MATERIAL SAFETY DATA SHEET (MSDS)

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME INKJET INK 5157
APPLICATION PRINTING INK

MANUFACTURER Wuhan Viojet Technology Co., Ltd

ADDRESS 14-602, F Institutions, Panlong Economic Development Zone, Wuhan, China.

TEL. +86 18771084966 FAX. +86 27 61909438

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	EC No.	CAS-No.	Content(%)	Classification
Butanone	201-159-0	78-93-3	60-80%	F, R11 Xi; R36 R66 R67
Ethanol	200-578-6	64-17-5	5-8%	F;R11
Ethyl Acetate	-	141-78-6	5-8%	F; R11
Acrylic Resin	-	9003-01-4	5-15%	F;R11
Colorant	-	-	5-8%	N; R51/53

3. HAZARDOUS SUMMARIZING

Highly flammable. Irritating to eyes, Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Repeatered exposure my cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

CLASSIFICATION Xi;R36. F;R11. R52/53, R66, R67

4. FIRST-AID MEASURES

GENERAL INFORMATION

NOTE! Keep affected person away from heat, sparks and flames! Keep the affected person warm and at rest. Get prompt medical attention.

INHALATION

Move the exposed person to fresh air at once. Perform artificial respiration if breathing has stopped. Keep the affected person warm and at rest. Get promote medical attention.

INGESTION

NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Promptly get affected person to drink large volumes of water to dilute the swallowed chemical. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit does not enter the lungs. Get medical attention.

SKIN CONTACT

Remove affected person from source of contamination. Wash the skin immediately with soap and water. Get medical attention if any hospital or eye specialist.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Use: Alcohol resistant foam. Powder. Dry chemcials, sand, dolomite etc.

SPECIAL FIRE FIGHTING PROCEDURES

Keep run-off water out of sewers and water sources. Dike for water control. If risk of water pollution occurs, notify appropriate authorities.

MATERIAL SAFETY DATA SHEET (MSDS)

Use water to keep fire exposed containers cool and disperse vapours. Move container from fire area if it can be done without risk.

UNUSUAL FIRE & EXPLOSION HAZARDS

Vapours are heavier than air and may spread near ground to sources of ignition. May explode when heated or when exposed to flames of aparks. May from explosive or toxic mixtures with air.

SPECIFIC HAZARDS

Fire creates: Toxic gases/vapours/fumes/of Carbon monoxide(CO). Carbon dioxide(CO2).

6. ACCIDENTAL RELEASE MEASURES

SPILL CLEAN UP METHODS

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Clean-up personnel should use respiratory and/or liquid contact pretection. Runoff or release to sewer, waterway or ground is forbidden. Small Spillages Collect with absorbent, non-combustible material into suitable containers. Large Spillages Absorb in vermiculite, dry sand or earth and place into containers. Inform Authorities if large amounts are involved.

7. HANDLING AND STORAGE

USAGE PRECAUTIONS

Keep away from heat, sparks, and open flame. Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above acceptable level. Risk of vapour concentration on the floor and in low-lying areas. Static electricity and formation of sparks must be prevented.

STORAGE PRECAUTIONS

Flammale/combustible – keep away from oxidisers, heat and flames. Store in tightly closed original container in a cool, dry well – ventilated place. Keep in original container.

STORAGE CLASS

Flammable liquid storage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	CAS No.	STD	LT EXP(8hours)	ST EXP (15minutes)
Butanone	78-93-3	WEL	200 ppm(Sk)	300 ppm(Sk)
Ethanol	64-17-5	WEL	1000 ppm	-

INGREDIENT COMMENTS

WEL = Workplace Exposure Limits

PROTECTIVE EQUIPMENT

MATERIAL SAFETY DATA SHEET (MSDS)





PROCESS CONDITIONS

Provide eyewash station.

ENGINEERING MEASURES

Well-ventilated area.

RESPIRATORY EQUIPMENT

No speicific recommendation made, but respiratory protection must be used if the general level exceeds the Recommended Workplace Exposure Limit.

HAND PROTECTION

Use protective gloves. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

EYE PROTECTION

Wear splash-proof eye goggles to prevent any possibility of eye contact.

OTHER PROTECTION

Wear appropriate clothing to prevent any possibility of skin contact.

HYGIENE MEASURES

DO NOT SMOKE IN WORK AREA! Promptly remove any clothing that becomes wet or contaminated. Wash promptly if skin becomes wet or contaminated. Use approriate hand lotion to prevent defatting and cracking of skin. When using do not eat, drink or smoke. Wash at the end of each work shift and before eating, smoking and using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE Liquid
COLOUR Black
ODOUR Ketonic.

SOLUBILITY Soluble in Organic solvents Slightly soluble in water.

BOILING POINT(°C) \sim 75 – 85 760 mm Hg RELATIVE DENSITY 0.90@20°C

VAPOUR DENSITY(air=1) >1 VOLATILE BY VOL.(%) 70

VISCOSITY 6.35 cps @ 25° FLASH POINT($^{\circ}$) - 4.0 CC(Closed cup).

10. STABILITY AND REACTIVITY

STABILITY

Stable under normal temperature conditions.

CONDITIONS TO AVOID

Avoid contact with strong oxidisers.

HAZARDOUS DECOMPOSITION PRODUCTS

Fire creates: Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO2).

MATERIAL SAFETY DATA SHEET (MSDS)

11.TOXICOLOGICAL INFORMATION

HEALTH WARNINGS

EYE CONTACT. Irritant of eyes and mucous membranes. INGESTION. Narcotic effect. INHALATION.

CNS depressant. Prolonged inhalation of high concentrations may damage respiratory system. SKIN

CONTACT. Acts as a defatting agent on skin. May cause cracking of skin, and eczema.

ROUTE OF ENTRY

Ingestion. Skin absorption. Inhalation.

MEDICAL SYAMPTOMS

NERVOUS SYSTEM. Drowsiness, disziness, disoriness, disorientation, vertigo, Mild intoxication(incl.fatigue, lassituder, irritability, headache, nausea).

12. ECOLOGICAL INFORMATION

ECOTOXICITY

Little danger to the environment.

DEGRADABILITY

The product is biodegradable.

ACUTE FISH TOXICITY

The product contains a substance which may cause long term adverse effects in the aquatic environment.

13.DISPOSAL

DISPOSAL METHODS

Contact specialist disposal companies. Do not allow runoff to sewer, waterway or ground. Empty containers must not be burned because of explosion hazard. Absorb in vermiculite or dry sand, dispose in licensed special waste. Dispose of waste and residues in acordance with local authority requirements.

14. Transport information



PROPER SHIPPING NAME	PRINTING INK RELATED MATERIAL		
UN NO. ROAD	1210	ADR CLASS NO.	3
ADR CLASS	Class 3: Flammable liquids.	ADR PACK GROUP	II
HAZARD NO.(ADR)	33	ADR LABEL NO.	3
HAZCHEM CODE	3[Y]E	CEFIC TEC(R)NO.	30G30
RID CLASS NO.	3	UN NO.SEA	1210
IMDG CLASS	3	IMDG PACK GR;	II
EMS	F-E, S-D	MFAG	See Guide

MATERIAL SAFETY DATA SHEET (MSDS)

MARINE POLLUTANT No. UN NO. AIR 1210 ICAO CLASS 3 AIR PACK GR. II

15.REGULATORY INFORMATION

LABELLING





Irritant

Highly Flammable

RISK PHRASES

R11 Highly flammable. R36 Irritating to eyes.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the

aquatic environment.

R66 Repeated exposure may cause skin dryness or cracking.

R67 Vapours may cause drowsiness and dizziness.

SAFETY PHRASES

S9 Keep container in a well-ventilated place

S16 Keep away from sources of ignition- No smoking.

S25 Avoid contact with eyes.

S26 In case of contact with eyes, rinse immediately ith plenty of water and

seek medical advice.

S37 Wear suitable gloves.

S51 Use only in well-ventilated areas.

S60 This material and its container must be disposed of as hazardous waste.

STATUTORY INSTRUMENTS

Chemicals (Hazard Information and Packaging) Regulations.

Control of Substances Hazardous to Health.

APPROVED CODE OF PRACTICE

Safety Data Sheets for Substances and Preparations.\

Classification and Labelling of Substances and Preparations.

Chemical Industries Association – Guidance on the compilation of safety data sheets.

GUIDANCE NOTES

Workplace Exposure Limits EH40

16. OTHER INFORMATION

INFORMATION SOURCES

MATERIAL SAFETY DATA SHEET (MSDS)

Croner's: Dangerous Substances. Croner's: Emergency Spillage Guide. Croner's: Emergency First

Aid Guide. Croner's: Substances Hazardous to Health. REVISION DATE 11/09/2009

REV. NO./REPL. SDS GENERATED 8

RISK PHRASES IN FULL

R11 Highly flammable.

R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R36 Irritating to eyes.

R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in

contact with skind and if swallowed

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the

aquatic environment.

R66 Repeated exposure may cause skin dryness or cracking

R97 Vapours may cause drowsiness and dizziness.