



Innovative Solutions, Inc.

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identification

Product Name: Head Cleaning Solvent for ISIJet HR Inks
Commonly used in the following printer(s):
ISIJet 1840

Product Number: 40-00010 Ink - ISIJet HR, Solvent series part number
Chemical Name: Ethylene glycol butyl ether acetate
Chemical Family: Glycol Ether Solvent
CAS Number: 112-07-2

Company Identification

Innovative Solutions, Inc.
111 Eastwood Circle
Owens Cross Roads, AL 35763 USA

In case of exposure, please contact local Poison Control Center
Emergency phone for spills, leaks, fire, exposure or accident call
CHEMTREC: 1-800-424-9300 or 1-703-527-3887
Product information: (256) 725-7750
Revision Date: 10/14/04

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENTS	CAS No.	CONTENTS	EINECS	SYMBOL	RISK No.
2-BUTOXYETHYL ACETATE	112-07-2	60-100 %	203-933-3	Xn	20/21

3. HAZARDS IDENTIFICATION

Harmful by inhalation and in contact with skin. Irritating to eyes and skin.

Hazardous Materials Identification System (HMIS) Codes:

Health Hazard (Blue): 1
Flammability Hazard (RED): 2
Physical Hazard (Yellow): 0
Personal Protection Equipment: B - eye protection and gloves

4. FIRST AID MEASURES

EYES: Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eyelids. Continue to rinse for at least 15 minutes and get prompt medical attention.
SKIN CONTACT: Remove affected person from source of contamination. Promptly wash contaminated skin with soap or mild detergent and water. Promptly remove clothing if soaked through and wash as above. Get prompt medical attention.

INGESTION: DO NOT induce vomiting. Rinse mouth thoroughly. Drink plenty of water. Get medical attention immediately.

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 prompt medical attention.

GENERALITIES: Give nothing by mouth to an unconscious person. If breathing is irregular or has stopped, give artificial respiration. In all cases of doubt or if symptoms persist, seek medical attention and show this sheet to the doctor.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Water spray, fog or mist.
Carbon dioxide (CO₂). Dry chemicals, sand, dolomite etc. Foam.

SPECIAL FIRE FIGHTING PROCEDURES: Cool containers exposed to flames with water until well after the fire is out. Keep run-off water out of sewers and water sources. Dike for water control.

UNUSUAL FIRE & EXPLOSION HAZARDS: Not available.

CONDITIONS OF FLAMMABILITY: Heat, sparks, or flame. Liquid is a Class III-A combustible.

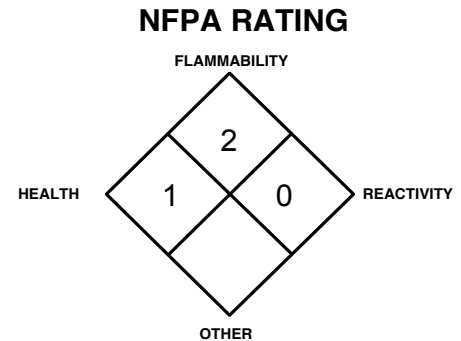
UPPER FLAMMABLE LIMIT: 8.54%

LOWER FLAMMABLE LIMIT: 0.88%

AUTO-IGNITION TEMPERATURE: 280° C

EXPLOSION DATA - SENSITIVITY TO MECHANICAL IMPACT: Not available.

EXPLOSION DATA - SENSITIVITY TO STATIC DISCHARGE: Not available.



6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS DURING SPILL: Avoid contact with skin or eyes. Avoid breathing vapors.

ENVIRONMENTAL PRECAUTIONS: Do not allow to enter drains or effluent systems.

SPILL CLEANUP METHODS: Clean-up personnel should use respiratory and/or liquid contact protection. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Collect and contain spilled material in a chemical absorbent (clay-based material, universal binder, etc.).

7. HANDLING AND STORAGE

HANDLING: Keep away from heat, sparks, ignition sources and open flame. Avoid any contact with skin and eyes. Avoid breathing vapors, ventilate well. Use approved respirator if air contamination is above accepted level. Wear splash goggles and latex or rubber gloves and also a rubber apron when handling large quantities.

STORAGE: Keep containers tightly closed. Prolonged contact with air may cause formation of explosive peroxides. Store away from traffic and out of reach of children. Store isolated from oxidizing materials.

Storage temperature: Standard room temperature (68 degrees Fahrenheit).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

INGREDIENT NAME	CAS No.	STD LT EXP(8 hrs)	ST EXP(15 min)
2-BUTOXYETHYL ACETATE	112-07-2	OES	Not Available

OES = Occupational Exposure Standard

PROCESS CONTROL MEASURES: Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station.

VENTILATION: Provide adequate general and local exhaust ventilation.

PROTECTIVE GLOVES: Appropriate protective gloves must be used if there is a risk of direct contact or splash. Use protective gloves made of: Polyvinyl alcohol (PVA). Multi-layer material (eg 4H, Saranex). Unsuitable materials: Rubber (natural, latex). Polyvinyl chloride (PVC).

EYE PROTECTION: Wear splash-proof eye goggles to prevent any possibility of eye contact. Available emergency eyewash station is recommended.

OTHER PROTECTION: Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapor contact.
WORK/HYGIENIC PRACTICES: Avoid contamination of food, drink, etc. No smoking when handling. Wash at the end of each work shift and before eating. Promptly remove any clothing that becomes wet. Isolate contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid
COLORS: Colorless
ODOR: Characteristic, Ester, Solvent
ODOR THRESHOLD: Not available.
pH VALUE: Not applicable. Product does not dissociate in water
SOLUBILITY: Soluble in most organic solvents. Slightly soluble in water.
SOLUBILITY VALUE (g/100g H₂O/20°C): Not available.
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available.
SPECIFIC GRAVITY (Water=1): 0.935 - 0.942 @ 20 °C
VAPOR DENSITY (air=1): Not available.
VAPOR PRESSURE: 0.31 mbar @ 20 °C
EVAPORATION RATE: Not available.
VISCOSITY: Not available.
FREEZING POINT (°C): -64
BOILING POINT (°C): 184 - 195 @ 760mmHg
FLASH POINT (°C): 78 FLASH POINT METHOD: Closed cup
AUTO IGNITION TEMPERATURE (°C): 280

10. STABILITY AND REACTIVITY

STABILITY: Avoid contact with strong oxidizing agents. Upon exposure to air, product may slowly degrade, forming peroxides, which can be unstable.
HAZARDOUS DECOMPOSITION PRODUCTS: Peroxides.

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA:

Unless otherwise specified:
SENSITIZATION TO PRODUCT: Not available.
CARCINOGENICITY: Not available.
REPRODUCTIVE TOXICITY: Not available.
TERATOGENICITY: Not available.
MUTAGENICITY: Not available.
NAME OF TOXICOLOGICALLY SYNERGISTIC PRODUCTS: Not available.

2-BUTOXYETHYL ACETATE 112-07-2
LD50(Rat)Oral 2400 mg/kg LD50(Rabbit)Skin 1500 mg/kg

INHALATION: Difficulty in breathing
SKIN: Irritating to skin.
EYES: Irritation of eyes and mucous membranes.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL DATA:

Acute toxicity LC50 24 hours Daphnia 150 mg/l

ENVIRONMENTAL HAZARDS: Little danger for inhibition of biosludge in sewage plants.
DEGRADABILITY: Readily biodegradable.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS: The advice in this paragraph is of a general nature only. This product must be disposed of via a licensed contractor and shall be disposed of in accordance with federal, provincial, state, and local environmental control regulations. This product, if unaltered by use, may be disposed of by treatment at a

permitted facility or as advised by your local hazardous waste regulatory authority. Do not allow this strongly colored product to enter an effluent system. Dispose of containers as special waste.

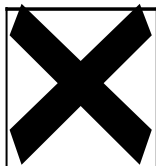
GENERAL/CLEANING: Refer to Section 7 before handling the product or containers. European Waste Catalogue Number (EWC) 08 03 12

14. TRANSPORTATION INFORMATION

GENERAL: Not regulated.

15. REGULATORY INFORMATION

LABEL FOR SUPPLY:



HARMFUL

RISK PHRASES:

R-20/21 Harmful by inhalation and in contact with skin.

SAFETY PHRASES:

S-36/37 Wear suitable protective clothing and gloves.

S-60 This material and its container must be disposed of as hazardous waste.

EC DIRECTIVES: Dangerous Preparations Directive 1999/45 and its amendments.

Dangerous Substance Directive 67/548.

16. OTHER INFORMATION

INFORMATION SOURCES: Dangerous Properties of Industrial Materials Report, N.Sax et.al.

R-PHRASES (Full Text): R-20/21 Harmful by inhalation and in contact with skin.

The data in this Material Safety Data Sheet relates only to the specific material designated herein. It does not relate to use in combination with any other material or in any process. The information contained herein is based upon data obtained from the manufacturer and/or recognized technical sources. This information is believed to be correct, but does not purport to be all-inclusive and shall be used only as a guide. Since the condition of handling and use are beyond our control, Innovative Solutions, Inc. assumes no liability for loss or injury resulting from the use of this product or the information herein. All chemicals may present unknown health hazards and should be used with caution. No representation or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or any other nature are made hereunto with respect to the information contained herein or the product to which the information refers. It is the user's responsibility to determine the suitability of this information for the adoption of necessary safety precautions and/or compliance with federal, provincial, state, and local laws and regulations.