

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

## Section 1. Identification of the Substance/Mixture and of the Company/Undertaking

- 1.1 Product Code:** JP-F80  
**Product Name:** JP-F80 Printing Ink  
**X Code:**
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
- 1.3 Details of the Supplier of the Safety Data Sheet:**  
**Company Name:** Hitachi America, Ltd.  
50 Prospect Avenue  
Tarrytown, NY 10591  
**Information:** Garan Myers (866)-583-0048
- 1.4 Emergency telephone number:**  
**Emergency Contact:** Chemtrec (800)424-9300

## Section 2. Hazards Identification

- 2.1 Classification of the Substance or Mixture:**  
**2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**  
Flammable Liquids, Category 2  
Serious Eye Damage/Eye Irritation, Category 2A  
Target Organ Systemic Toxicity (single exposure), Category 3
- 2.2 Label Elements:**  
**2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:**



**GHS Signal Word:** Danger

**GHS Hazard Phrases:**

H225 - Highly flammable liquid and vapor.  
H319 - Causes serious eye irritation.  
H335 - May cause respiratory irritation.

**GHS Precaution Phrases:**

P233 - Keep container tightly closed.  
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P240 - Ground/bond container and receiving equipment.  
P241 - Use explosion-proof electrical/ventilating/lighting/.../ equipment.  
P243 - Take precautionary measures against static discharge.  
P242 - Use only non-sparking tools.  
P264 - Wash hands thoroughly after handling.  
P271 - Use only outdoors or in a well-ventilated area.  
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.

**GHS Response Phrases:**

P370+378 - In case of fire, use ... to extinguish.  
P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+313 - If eye irritation persists, get medical advice/attention.  
P309+311 - Call a POISON CENTER or doctor/physician if exposed or you feel unwell.

P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

**GHS Storage and Disposal Phrases:**

P403+235 - Store in cool/well-ventilated place.

P501 - Dispose of contents/container to ....

P405 - Store locked up.

P403+233 - Store container tightly closed in well-ventilated place - if product is as volatile as to generate hazardous atmosphere.

- 2.3 Adverse Human Health** Chronic: Chronic inhalation may cause effects similar to those of acute inhalation.
- Effects and Symptoms:** Prolonged or repeated skin contact may cause defatting and dermatitis. Animal studies have reported that fetal effects/abnormalities may occur when maternal toxicity is seen. Chronic overexposure to vapors may cause lung damage.
- 2.3.1 Inhalation:** Causes respiratory tract irritation. Inhalation of vapors may cause drowsiness and dizziness. May cause central nervous system effects such as nausea and headache. Neurobehavioural effects of exposure to MEK (200 ppm for 4 hrs) were studied with 137 volunteers. There were no statistically significant effects observed in biochemical, psychomotor, sensorimotor and psychological tests. Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. May cause narcotic effects in high concentration. Causes upper respiratory tract irritation.
- 2.3.2 Skin Contact:** May be absorbed through the skin in harmful amounts. Repeated or prolonged exposure may cause drying and cracking of the skin. Only one human case of skin sensitization was located. Negative results were obtained in an animal test; MEK did not produce skin sensitization in the mouse ear thickness test. May cause irritation with pain and stinging, especially if the skin is abraded. Isopropanol has a low potential to cause allergic skin reactions; however, rare cases of allergic contact dermatitis have been reported. May be absorbed through intact skin. Dermal absorption has been considered toxicologically insignificant. The cases of deep coma associated with skin contact are thought to be a consequence of gross isopropanol vapor inhalation in rooms with inadequate ventilation, rather than being attributable to percutaneous absorption of isopropanol per se.
- 2.3.3 Eye Contact:** Causes eye irritation. Vapors may cause eye irritation. Animal evidence suggests that MEK is a moderate to severe eye irritant. Produces irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury. May cause transient corneal injury. In the eyes of a rabbit, 0.1 ml of a rabbit, 0.1 ml of 70% isopropyl alcohol caused conjunctivitis, isopropyl alcohol caused conjunctivitis, iritis, and corneal opacity.
- 2.3.4 Ingestion:** May cause irritation of the digestive tract. Possible aspiration hazard. May cause central nervous system depression. Animal evidence suggests that MEK can be aspirated (inhaled) into the lungs during ingestion or vomiting. Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause kidney damage. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal. The probable oral lethal dose in humans is 240 ml (2696 mg/kg), but ingestion of only 20 ml (224 mg/kg) has, but in gestion of only 20 ml (224 mg/kg) has caused poisoning.

### Section 3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
78-93-3	Methyl ethyl ketone	60.0 -90.0 %	201-159-0 606-002-00-3	Flam. Liq. 2: H225 Eye Damage 2A: H319 TOST (SE) 3: H335 H336
67-63-0	Isopropyl alcohol	1.0 -5.0 %	200-661-7 603-117-00-0	Flam. Liq. 2: H225 Eye Damage 2A: H319 TOST (SE) 3: H335 H336
85-68-7	Butyl benzyl phthalate	1.0 -5.0 %	201-622-7 607-430-00-3	Toxic Repro. 1B: H360 Aquatic (A) 1: H400 Aquatic (C) 1: H410

### Section 4. First Aid Measures

#### 4.1 Description of First Aid Measures:

- In Case of Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
- In Case of Skin Contact:** In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.
- In Case of Eye Contact:** In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes. Get medical aid.
- In Case of Ingestion:** Potential for aspiration if swallowed. Get medical aid immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward.
- Note for the Doctor:** Treat symptomatically and supportively. Urine acetone test may be helpful in diagnosis. Hemodialysis should be considered in severe intoxication.

### Section 5. Fire Fighting Measures

- 5.1 Suitable Extinguishing Media:** In case of fire, use carbon dioxide, dry chemical powder or appropriate foam. Water may be ineffective because it will not cool material below its flash point. Water may be ineffective. Do NOT use straight streams of water. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray. For small fires, use carbon dioxide, dry chemical, dry sand, or alcohol-resistant foam. Cool containers with flooding quantities of water until well after fire is out.
- 5.2 Flammable Properties and Hazards:**
- Flash Pt:** > -7.00 C Method Used: Estimate
- Explosive Limits:** LEL: UEL:
- Autoignition Pt:** 350.00 C
- 5.3 Fire Fighting Instructions:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Extremely flammable liquid and vapor. Vapor may cause flash fire. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. Vapors may form explosive mixtures with air. Use water spray to keep fire-exposed containers cool. Flammable liquid and vapor. May form explosive peroxides.

## Section 6. Accidental Release Measures

- 6.3 Methods and Material For Containment and Cleaning Up:** Use proper personal protective equipment as indicated in Section 8.  
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. Use water spray to dilute spill to a non-flammable mixture. A vapor suppressing foam may be used to reduce vapors.

## Section 7. Handling and Storage

- 7.1 Precautions To Be Taken in Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Avoid breathing vapor. Take precautionary measures against static discharges. Avoid breathing dust, mist, or vapor. Do not allow to evaporate to near dryness.
- 7.2 Precautions To Be Taken in Storing:** Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Keep away from heat, sparks and flame. Do not store in direct sunlight. Store in a tightly closed container. Keep from contact with oxidizing materials. After opening, purge container with nitrogen before reclosing. Periodically test for peroxide formation on long-term storage. Addition of water or appropriate reducing materials will lessen peroxide formation. Store protected from moisture. Containers should be dated when opened and tested periodically for the presence of peroxides. Should crystals form in a peroxidizable liquid, peroxidation may have occurred and the product should be considered extremely dangerous. In this instance, the container should only be opened remotely by professionals. All peroxidizable substances should be stored away from heat and light and be protected from ignition sources.

## Section 8. Exposure Controls/Personal Protection

### 8.1 Exposure Parameters:

CAS #	Partial Chemical Name	Britain EH40	France VL	Europe
78-93-3	Methyl ethyl ketone	TWA: 600 mg/m3 (200 ppm) STEL: 899 mg/m3 (300 ppm)	TWA: 600 mg/m3 (200 ppm) STEL: 900 mg/m3 (300 ppm)	TWA: 600 mg/m3 STEL: 900 mg/m3
67-63-0	Isopropyl alcohol	TWA: 999 mg/m3 (400 ppm) STEL: 1250 mg/m3 (500 ppm)	STEL: 980 mg/m3 (400 ppm)	
85-68-7	Butyl benzyl phthalate	TWA: 5 mg/m3 () STEL: ()		
CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
78-93-3	Methyl ethyl ketone	PEL: 200 ppm	TLV: 200 ppm STEL: 300 ppm	
67-63-0	Isopropyl alcohol	PEL: 400 ppm	TLV: 200 ppm STEL: 400 ppm	
85-68-7	Butyl benzyl phthalate			

**8.2 Exposure Controls:**

**8.2.1 Engineering Controls (Ventilation etc.):** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Ventilation fans and other electrical service must be non-sparking and have an explosion-proof design. Use explosion-proof ventilation equipment.

**8.2.2 Personal protection equipment:**

**Eye Protection:** Wear chemical splash goggles.

**Protective Gloves:** Wear appropriate protective gloves to prevent skin exposure. Wear appropriate gloves to prevent skin exposure.

**Other Protective Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respiratory Equipment (Specify Type):** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

**Section 9. Physical and Chemical Properties**

**9.1 Information on Basic Physical and Chemical Properties**

**Physical States:** [ ] Gas [X] Liquid [ ] Solid

**Appearance and Odor:** Slightly. yellow. solvent odor.

**Melting Point:** -88.00 C

**Boiling Point:** 80.00 C - 82.00 C

**Flash Pt:** > -7.00 C Method Used: Estimate

**Evaporation Rate:** ~ 4.4 (BuAC=1)

**Explosive Limits:** LEL: UEL:

**Vapor Pressure (vs. Air or mm Hg):** ~ 80 MM\_HG at 20.0 C

**Vapor Density (vs. Air = 1):** > Air

**Specific Gravity (Water = 1):** .836

**Density:** ~ 6.98 LB/GA

**Solubility in Water:** Miscible

**Autoignition Pt:** 350.00 C

**9.2 Other Information**

**Percent Volatile:** 87.25 % by volume.

**Section 10. Stability and Reactivity**

**10.1 Reactivity:**

**10.2 Stability:** Unstable [ ] Stable [X]

**10.3 Conditions To Avoid - Hazardous Reactions:**

**Possibility of Hazardous Reactions:** Will occur [ ] Will not occur [X]

**10.4 Conditions To Avoid - Instability:** ignition sources, Excess heat, Light.

**10.5 Incompatibility - Materials To Avoid:** Strong oxidizing agents, Strong acids, 2-propanol, Strong bases, Amines, Ammonia, ethylene oxide, isocyanates, acetaldehyde, chlorine, phosgene, Attacks some forms of plastics, rubbers, and coatings. aluminum at high temperatures.

**10.6 Hazardous Decomposition Or Byproducts:** Carbon monoxide, Carbon dioxide.

## Section 11. Toxicological Information

**11.1 Information on Toxicological Effects:**

**Carcinogenicity/Other Information:** CAS# 78-93-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65. CAS# 67-63-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Carcinogenicity:** NTP? No IARC Monographs? No OSHA Regulated? No

## Section 12. Ecological Information

**12.1 Toxicity:** Environmental: Substance evaporates in water with T1/2= 3D (rivers) to 12D (lakes). Substance is not expected to bioconcentrate in marine life. Physical: Substance photodegrades in air with T1/2 = 2.3 days. Oxidizes rapidly by photo-chemical reactions in air. Readily biodegradable meeting the 10 day window criterion. Not expected to bioaccumulate significantly.  
Ecotoxicity: Fish: Fathead Minnow: 1000 ppm; 96h; LC50Daphnia: 1000 ppm; 96h; LC50Fish: Gold orfe: 8970-9280 ppm; 48h; LC50 IPA has a high biochemical oxygen demand and a potential to cause oxygen depletion in aqueous systems, a low potential to affect aquatic organisms, a low potential to affect secondary waste treatment microbial metabolism, a low potential to affect the germination of some plants, a high potential to biodegrade (low persistence) with unacclimated microorganisms from activated sludge. No information available.  
Physical: THOD: 2.40 g oxygen/gCOD: 2.23 g oxygen/gBOD-5: 1.19-1.72 g oxygen/g.  
Other: No information available.

## Section 13. Disposal Considerations

**13.1 Waste Disposal Method:** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.  
RCRA P-Series: None listed.  
RCRA U-Series:  
CAS# 78-93-3: waste number U159 (Ignitable waste, Toxic waste). RCRA U-Series: None listed.

## Section 14. Transport Information

**GHS Classification:** Flammable Liquids, Category 2 - Danger! Highly flammable liquid and vapor  
Serious Eye Damage/Eye Irritation, Category 2A - Warning! Causes serious eye irritation  
Target Organ Systemic Toxicity (single exposure), Category 3 - Warning! May cause respiratory irritation, or may cause drowsiness and dizziness

**14.1 LAND TRANSPORT (US DOT):**

**DOT Proper Shipping Name:** Printing ink

**DOT Hazard Class:** 3 FLAMMABLE LIQUID

**UN/NA Number:** UN1210 **Packing Group:** II

**14.1 LAND TRANSPORT (Canadian TDG):**

**TDG Shipping Name:** Printing ink

**UN Number:** 1210 **Packing Group:** II

**Hazard Class:** 3 - FLAMMABLE LIQUID **TDG Classification:**



**14.1 LAND TRANSPORT (European ADR/RID):**

**ADR/RID Shipping Name:**

**UN Number:** 1210

**Packing Group:** II

**Hazard Class:** 3 - FLAMMABLE LIQUID

**14.3 AIR TRANSPORT (ICAO/IATA):**

**ICAO/IATA Shipping Name:** Printing ink



**Canadian WHMIS Classification:**

CLASS B, DIVISION 2: Flammable Liquids

CLASS D, DIVISION 2, SUBDIVISION B: Toxic Materials (Mutagenicity, skin sensitization, irritation, etc.)

**Section 16. Other Information**

**Revision Date:** 02/13/2014

**Additional Information About This Product:**

**Company Policy or**

**Disclaimer:**

The information and recommendations contained herein are, to the best of Hitachi's knowledge and belief, accurate and reliable as of the date issued. Because many factors may affect processing or application/use, HITACHI recommend that you make tests to determine the suitability of a product for your particular purpose prior to use. It is the user's responsibility to satisfy itself that the product is suitable for the intended use. If buyer repackages this product, it is the user's responsibility to insure proper health, safety and other necessary information is included with and/or on the container. Appropriate warnings and safe-handling procedures should be provided to handlers and users. Alteration of this document is strictly prohibited. Except to the extent required by law, re-publication or retransmission of this document, in whole or in part, is not permitted. In no case shall the descriptions, information, data or designs provided be considered a part of our terms and conditions of sale. Further, you expressly understand and agree that the descriptions, designs, data and information furnished by Hitachi hereunder are given gratis and Hitachi assumes no obligation or liability for the description, designs, data and information given or results obtained. All such being given and accepted at your risk.