

1. Product and Company Identification

Product Code: JP-T88-FT
Product Name: JP-T88-FT
Trade Name: JP-T88-FT
Company Name: Hitachi America, Ltd
50 Prospect Ave
Tarrytown, NY
Web site address: www.hitachi-america.us/ice/inkjetprinters/
Emergency Contact: Chemtrec
(800)424-9300

2. Hazards Identification

Flammable Liquids, Category 2
Acute Toxicity: Oral, Category 4
Acute Toxicity: Inhalation, Category 4
Serious Eye Damage/Eye Irritation, Category 2



GHS Signal Word: **Danger**

GHS Hazard Phrases: Highly flammable liquid and vapor.
Harmful if swallowed.
Causes serious eye irritation.
Harmful if inhaled.

GHS Precaution Phrases: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.

GHS Response Phrases: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a POISON CENTER or doctor/physician if you feel unwell.
Rinse mouth.
If eye irritation persists, get medical advice/attention.

GHS Storage and Disposal Phrases: Store in cool/well-ventilated place.
Dispose of contents/container in accordance with local regulations.

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| Potential Health Effects (Acute and Chronic): | Chronic: Chronic inhalation may cause effects similar to those of acute inhalation. 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. Hazards not otherwise classified (HNOC) or not covered by GHS. |
| 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. |
| 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. |
| Eye Contact: | Causes eye irritation. Vapors may cause eye irritation. Animal evidence suggests that MEK is a moderate to severe eye irritant. |
| 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. |

3. Composition/Information on Ingredients

| CAS # | Hazardous Components (Chemical Name) | Concentration |
|-----------|---------------------------------------|---------------|
| 78-93-3 | Methyl ethyl ketone | 40.0 -50.0 % |
| 64-17-5 | Ethyl alcohol | 20.0 -30.0 % |
| 108-65-6 | Propylene glycol methyl ether acetate | 5.0 -10.0 % |
| 67-56-1 | Methanol | 1.0 -5.0 % |
| 1330-20-7 | Xylene (mixed isomers) | 1.0 -5.0 % |

4. First Aid Measures

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| Emergency and First Aid Procedures: | Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area. |
| 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. If breathed in, move person into fresh air. Consult a physician. |
| 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. Wash off with soap and plenty of water. Consult a physician. |
| In Case of Eye Contact: | In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Flush eyes with water as a precaution. |
| 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. Do NOT induce vomiting. Rinse mouth with water. Consult a physician. |
| Signs and Symptoms Of Exposure: | The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11 |
| Indication of any immediate medical attention and special treatment needed: | No data available. |

Note to Physician: Treat symptomatically and supportively.

5. Fire Fighting Measures

Flash Pt: > -7.00 C (19.4 F) Method Used: Estimate

Explosive Limits: LEL: UEL:

Autoignition Pt: 404.00 C (759.2 F)

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. Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam.

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. Wear self contained breathing apparatus for fire fighting if necessary.
Further information.

Flammable Properties and Hazards: Carbon oxides, No data available.

6. Accidental Release Measures

Protective Precautions, Protective Equipment and Emergency Procedures: Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. Methods and materials for containment and cleaning up: Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

Steps To Be Taken In Case Material Is Released Or Spilled: 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. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

7. Handling and Storage

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. Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 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 container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Recommended storage temperature: -20 - -10 deg.C. Handle

and store under inert gas.

8. Exposure Controls/Personal Protection

| 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 | |
| 64-17-5 | Ethyl alcohol | PEL: 1000 ppm | TLV: 1000 ppm STEL: 1000 ppm | |
| 108-65-6 | Propylene glycol methyl ether acetate | | | |
| 67-56-1 | Methanol | PEL: 200 ppm | TLV: 200 ppm STEL: 250 ppm | |
| 1330-20-7 | Xylene (mixed isomers) | PEL: 100 ppm | TLV: 100 ppm STEL: 150 ppm | |

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. Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Eye Protection: Wear chemical splash goggles. Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Protective Gloves: Wear appropriate protective gloves to prevent skin exposure. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Full contact:
Material: butyl-rubber. Minimum layer thickness: 0.3 mm Break through time: > 480 min.
Material: Nitrile rubber. Minimum layer thickness: 0.4 mm Break through time: 480 min.
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario. Material: Fluorinated rubber. Minimum layer thickness: 0.7 mm Break through time: 480 min.

Other Protective Clothing: Wear appropriate protective clothing to prevent skin exposure. Impervious clothing. Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Complete suit protecting against chemicals.

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.

Work/Hygienic/Maintenance Practices: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Environmental Exposure Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Controls: Discharge into the environment must be avoided.

9. Physical and Chemical Properties

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

Appearance and Odor: colored.
characteristic odor.

pH:

Melting Point: -87.00 C (-124.6 F)

Boiling Point: 64.00 C (147.2 F) - 146.00 C (294.8 F)

Flash Pt: > -7.00 C (19.4 F) Method Used: Estimate

Evaporation Rate:

Flammability (solid, gas):

Explosive Limits: LEL: UEL:

Vapor Pressure (vs. Air or mm Hg):

Vapor Density (vs. Air = 1):

Specific Gravity (Water = 1):

Density: ~ 0.8283 G/ML

Solubility in Water:

Octanol/Water Partition Coefficient:

Autoignition Pt: 404.00 C (759.2 F)

Decomposition Temperature:

Viscosity:

10. Stability and Reactivity

Reactivity: No data available.

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability: ignition sources, Excess heat, Heat, flames and sparks. Extremes of temperature and direct sunlight.

Incompatibility - Materials To Avoid: Strong oxidizing agents, Strong acids, 2-propanol, Oxidizing agents, Alkali metals, Ammonia, Peroxides, Strong oxidizing agents. acids, Bases.

Hazardous Decomposition or Byproducts: Carbon monoxide, Carbon dioxide, Other decomposition products: No data available. In the event of fire: see section 5.

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

Conditions To Avoid - Hazardous Reactions: No data available. Vapors may form explosive mixture with air.

11. Toxicological Information

Toxicological Information: Germ cell mutagenicity: No data available.
Reproductive toxicity. Aspiration hazard: Specific target organ toxicity - single exposure:
Specific target organ toxicity - repeated exposure:

Irritation or Corrosion: Skin corrosion/irritation. No data available.
Serious eye damage/eye irritation: Provide adequate ventilation.
Result: No skin irritation . Skin irritation -24.

Sensitization: No data available.
Maximisation Test. Species: Guinea pig.

Chronic Toxicological Effects: Specific target organ toxicity - single exposure: No data available.
Specific target organ toxicity - repeated exposure:

Carcinogenicity/Other Information: CAS# 78-93-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65. IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. IARC: 3 -Group 3: Not classifiable as to its carcinogenicity to humans.

| CAS # | Hazardous Components (Chemical Name) | NTP | IARC | ACGIH | OSHA |
|-----------|---------------------------------------|------|------|-------|------|
| 78-93-3 | Methyl ethyl ketone | n.a. | n.a. | n.a. | n.a. |
| 64-17-5 | Ethyl alcohol | n.a. | 1 | A4 | n.a. |
| 108-65-6 | Propylene glycol methyl ether acetate | n.a. | n.a. | n.a. | n.a. |
| 67-56-1 | Methanol | n.a. | n.a. | n.a. | n.a. |
| 1330-20-7 | Xylene (mixed isomers) | n.a. | 3 | A4 | n.a. |

12. Ecological Information

General Ecological Information: 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.

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

Persistence and Degradability: Biodegradability: Biotic/Aerobic - Exposure time 8, Result: 100 % - Readily biodegradable. Biochemical Oxygen Demand (BOD) 0.36 mg/l.

Chemical Oxygen Demand (COD):
No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

13. Disposal Considerations

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). Product.
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated packaging.

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Printing ink
DOT Hazard Class: 3 Printing ink
UN/NA Number: UN1210 **Packing Group:** II



15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

| CAS # | Hazardous Components (Chemical Name) | S. 302 (EHS) | S. 304 RQ | S. 313 (TRI) |
|-----------|---------------------------------------|--------------|-------------|--------------|
| 78-93-3 | Methyl ethyl ketone | No | Yes 5000 LB | No |
| 64-17-5 | Ethyl alcohol | No | No | No |
| 108-65-6 | Propylene glycol methyl ether acetate | No | No | No |
| 67-56-1 | Methanol | No | Yes 5000 LB | Yes |
| 1330-20-7 | Xylene (mixed isomers) | No | Yes 100 LB | Yes |

This material meets the EPA Yes No Acute (immediate) Health Hazard
'Hazard Categories' defined Yes No Chronic (delayed) Health Hazard
for SARA Title III Sections Yes No Fire Hazard
311/312 as indicated: Yes No Sudden Release of Pressure Hazard
 Yes No Reactive Hazard

| CAS # | Hazardous Components (Chemical Name) | Other US EPA or State Lists |
|----------|---------------------------------------|--|
| 78-93-3 | Methyl ethyl ketone | TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: TAC, Title 8; NC TAP: Yes |
| 64-17-5 | Ethyl alcohol | TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: Title 8; NC TAP: No |
| 108-65-6 | Propylene glycol methyl ether acetate | TSCA: Yes - Inventory, 8A PAIR, 8D TERM; CA PROP.65: No; CA TAC, Title 8: No; NC TAP: No |

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|--------------|---|--|
| 67-56-1 | Methanol | TSCA: Yes - Inventory; CA PROP.65: Yes; CA TAC, Title 8: TAC, Title 8; NC TAP: Yes |
| 1330-20-7 | Xylene (mixed isomers) | TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: TAC, Title 8; NC TAP: Yes |
| CAS # | Hazardous Components (Chemical Name) | International Regulatory Lists |
| 78-93-3 | Methyl ethyl ketone | Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes - 1193; Australia ICS: Yes; New Zealand IOC: Yes; Japan ENCS: Yes - (2)-542; Japan ISHL: No; Israel HSL: No; Germany WHCS: Yes - 150; Switzerland Giftliste 1: Yes - G-2429; Switzerland INNS: No; REACH: Yes - (R), (P) |
| 64-17-5 | Ethyl alcohol | Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes; Australia ICS: Yes; New Zealand IOC: Yes; Japan ENCS: Yes - (2)-202; Japan ISHL: No; Israel HSL: Yes - Cat.; Germany WHCS: Yes - 96; Switzerland Giftliste 1: Yes - G-1158; Switzerland INNS: No; REACH: Yes - (R), (P) |
| 108-65-6 | Propylene glycol methyl ether acetate | Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes; Australia ICS: Yes; New Zealand IOC: Yes; Japan ENCS: Yes - (2)-3144; Japan ISHL: No; Israel HSL: No; Germany WHCS: Yes - 5033; Switzerland Giftliste 1: Yes - G-54973; Switzerland INNS: No; REACH: Yes - (R), (P) |
| 67-56-1 | Methanol | Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes; Australia ICS: Yes; New Zealand IOC: Yes; Japan ENCS: Yes - (2)-201; Japan ISHL: No; Israel HSL: Yes - Cat.; Germany WHCS: Yes - 145; Switzerland Giftliste 1: Yes - G-2063; Switzerland INNS: No; REACH: Yes - (R), (P) |
| 1330-20-7 | Xylene (mixed isomers) | Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes; Australia ICS: Yes; New Zealand IOC: Yes; Japan ENCS: Yes - (3)-3; Japan ISHL: No; Israel HSL: No; Germany WHCS: Yes - 206; Switzerland Giftliste 1: Yes - G-2020; Switzerland INNS: No; REACH: Yes - (R), (P) |

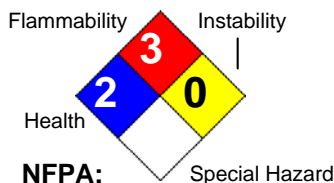
16. Other Information

Revision Date: 07/01/2015

Hazard Rating System:

| | | |
|---------------------|--|----------|
| HEALTH | | 2 |
| FLAMMABILITY | | 3 |
| PHYSICAL | | 0 |
| PPE | | |

HMIS:



Additional Information About This Product: To the best of our knowledge, the information contained here in is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. 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.

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Company Policy or Disclaimer: