

1. Product and Company Identification

Product Code: TH-TYPE C
Product Name: TH-TYPE C
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 5
Skin Corrosion/Irritation, Category 2
Serious Eye Damage/Eye Irritation, Category 2
Toxic To Reproduction, Category 1B
Specific Target Organ Toxicity (single exposure), Category 1
Specific Target Organ Toxicity (single exposure), Category 2
Specific Target Organ Toxicity (single exposure), Category 3
Specific Target Organ Toxicity (repeated exposure), Category 1
Aspiration Toxicity, Category 2



GHS Signal Word: **Danger**

GHS Hazard Phrases: Highly flammable liquid and vapor.
May be harmful if swallowed.
May be harmful if swallowed and enters airways.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
May damage fertility or the unborn child .
Causes damage to organs
May cause damage to organs .
Causes damage to organs through prolonged or repeated exposure.

GHS Precaution Phrases: Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
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.
Do not breathe 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.
Use personal protective equipment as required.
Keep cool.

GHS Response Phrases: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

IF ON SKIN: Wash with plenty of soap and water.
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.
IF exposed: Call a POISON CENTER or doctor/physician.
IF exposed or concerned: Get medical attention/advice.
Call a POISON CENTER or doctor/physician if exposed or you feel unwell.
Call a POISON CENTER or doctor/physician if you feel unwell.
Get medical attention/advice if you feel unwell.
Specific treatment see ... on this label.
Do NOT induce vomiting.
If skin irritation occurs, get medical advice/attention.
If eye irritation persists, get medical advice/attention.
Take off contaminated clothing and wash before re-use.

GHS Storage and Disposal Phrases:

Store container tightly closed in well-ventilated place - if product is as volatile as to generate hazardous atmosphere.
Store locked up.
Dispose of contents/container Store in cool/well-ventilated place.
Dispose of contents/container listed in 40 CFR Parts 261.

Potential Health Effects (Acute and Chronic):

Ingredient CAS# 78-93-3, Methyl ethyl ketone:
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.

Ingredient CAS# 67-56-1, Methanol:
Hazards not otherwise classified (HNOC) or not covered by GHS. None.

Inhalation:

Ingredient CAS# 78-93-3, Methyl ethyl ketone:
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:

Ingredient CAS# 78-93-3, Methyl ethyl ketone:
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:

Ingredient CAS# 78-93-3, Methyl ethyl ketone:
Causes eye irritation. Vapors may cause eye irritation. Animal evidence suggests that MEK is a moderate to severe eye irritant.

Ingestion:

Ingredient CAS# 78-93-3, Methyl ethyl ketone:
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	65.0 -75.0 %
67-56-1	Methanol	25.0 -35.0 %

4. First Aid Measures

Emergency and First Aid Procedures:

Ingredient CAS# 67-56-1, Methanol:
Consult a physician. Show this safety data sheet to the doctor in attendance.

In Case of Inhalation:

Ingredient CAS# 78-93-3, Methyl ethyl ketone:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Ingredient CAS# 67-56-1, Methanol:
If breathed in, move person into fresh air. Consult a physician.

In Case of Skin Contact:

Ingredient CAS# 78-93-3, Methyl ethyl ketone:
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.

Ingredient CAS# 67-56-1, Methanol:
Wash off with soap and plenty of water. Consult a physician.

In Case of Eye Contact:

Ingredient CAS# 78-93-3, Methyl ethyl ketone:
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Ingredient CAS# 67-56-1, Methanol:
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

In Case of Ingestion:

Ingredient CAS# 78-93-3, Methyl ethyl ketone:
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.

Ingredient CAS# 67-56-1, Methanol:
Do NOT induce vomiting. Rinse mouth with water. Consult a physician.

Signs and Symptoms Of Exposure:

Ingredient CAS# 67-56-1, Methanol:
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Note to Physician:

Ingredient CAS# 78-93-3, Methyl ethyl ketone:
Treat symptomatically and supportively.

5. Fire Fighting Measures

Flash Pt:	> -4.10 C (24.6 F) Method Used: Closed Cup
Explosive Limits:	LEL: UEL:
Autoignition Pt:	505.00 C (941.0 F)
Suitable Extinguishing Media:	Ingredient CAS# 78-93-3, Methyl ethyl ketone: 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. Ingredient CAS# 67-56-1, Methanol: Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam.
Fire Fighting Instructions:	Ingredient CAS# 78-93-3, Methyl ethyl ketone: 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. Ingredient CAS# 67-56-1, Methanol: Wear self contained breathing apparatus for fire fighting if necessary. Further information. Use water spray to cool unopened containers.
Flammable Properties and Hazards:	Ingredient CAS# 67-56-1, Methanol: No data available.

6. Accidental Release Measures

Protective Precautions, Protective Equipment and Emergency Procedures:	Ingredient CAS# 67-56-1, Methanol: 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:	Ingredient CAS# 67-56-1, Methanol: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Steps To Be Taken In Case Material Is Released Or Spilled:	Ingredient CAS# 78-93-3, Methyl ethyl ketone: 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. Ingredient CAS# 67-56-1, Methanol: 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:

Ingredient CAS# 78-93-3, Methyl ethyl ketone:
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.

Ingredient CAS# 67-56-1, Methanol:
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:

Ingredient CAS# 78-93-3, Methyl ethyl ketone:
Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area.

Ingredient CAS# 67-56-1, Methanol:
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 - 8 deg.C.

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	
67-56-1	Methanol	PEL: 200 ppm	TLV: 200 ppm STEL: 250 ppm	

Respiratory Equipment (Specify Type):

Ingredient CAS# 78-93-3, Methyl ethyl ketone:
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.

Ingredient CAS# 67-56-1, Methanol:
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:

Ingredient CAS# 78-93-3, Methyl ethyl ketone:
Wear chemical splash goggles.

Ingredient CAS# 67-56-1, Methanol:
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:

Ingredient CAS# 78-93-3, Methyl ethyl ketone:
Wear appropriate protective gloves to prevent skin exposure.

Ingredient CAS# 67-56-1, Methanol:
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.

Other Protective Clothing:

Ingredient CAS# 78-93-3, Methyl ethyl ketone:
Wear appropriate protective clothing to prevent skin exposure.

Ingredient CAS# 67-56-1, Methanol:
Complete suit protecting against chemicals. 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.

**Engineering Controls
(Ventilation etc.):**

Ingredient CAS# 78-93-3, Methyl ethyl ketone:
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:**

Ingredient CAS# 67-56-1, Methanol:
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Environmental Exposure
Controls:**

Ingredient CAS# 67-56-1, Methanol:
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. Physical and Chemical Properties

Physical States: [] Gas [X] Liquid [] Solid
Appearance and Odor: Clear.
 solvent odor.
Melting Point: -87.00 C (-124.6 F)
Boiling Point: 64.00 C (147.2 F) - 65.00 C (149.0 F)
Autoignition Pt: 505.00 C (941.0 F)
Flash Pt: > -4.10 C (24.6 F) Method Used: Closed Cup
Explosive Limits: LEL: UEL:
Specific Gravity (Water = 1):
Density: 0.8008 G/CM3
Vapor Pressure (vs. Air or mm Hg):
Vapor Density (vs. Air = 1):
Evaporation Rate:
Solubility in Water:

Percent Volatile:

10. Stability and Reactivity

Reactivity:	Ingredient CAS# 67-56-1, Methanol: No data available.
Stability:	Unstable [<input type="checkbox"/>] Stable [<input checked="" type="checkbox"/>]
Conditions To Avoid - Instability:	Ingredient CAS# 78-93-3, Methyl ethyl ketone: ignition sources, Excess heat, confined spaces, Ingredient CAS# 67-56-1, Methanol: Heat, flames and sparks. Extremes of temperature and direct sunlight.
Incompatibility - Materials To Avoid:	Ingredient CAS# 78-93-3, Methyl ethyl ketone: Strong oxidizing agents, Strong acids, 2-propanol, Ingredient CAS# 67-56-1, Methanol: acids, Bases, Oxidizing agents, Alkali metals.
Hazardous Decomposition Or Byproducts:	Ingredient CAS# 78-93-3, Methyl ethyl ketone: Carbon monoxide, Carbon dioxide, Peroxides, Ingredient CAS# 67-56-1, Methanol: Other decomposition products: No data available. In the event of fire: see section 5.
Possibility of Hazardous Reactions:	Will occur [<input type="checkbox"/>] Will not occur [<input checked="" type="checkbox"/>]
Conditions To Avoid - Hazardous Reactions:	Ingredient CAS# 67-56-1, Methanol: No data available.

11. Toxicological Information

Toxicological Information:	Ingredient CAS# 67-56-1, Methanol: Germ cell mutagenicity: No data available. Reproductive toxicity. Aspiration hazard:
Irritation or Corrosion:	Ingredient CAS# 67-56-1, Methanol: Skin corrosion/irritation. No data available. Serious eye damage/eye irritation:
Sensitization:	Ingredient CAS# 67-56-1, Methanol: No data available.
Chronic Toxicological Effects:	Ingredient CAS# 67-56-1, Methanol: Specific target organ toxicity - single exposure: No data available. Specific target organ toxicity - repeated exposure: No data available.
Carcinogenicity/Other Information:	Ingredient CAS# 78-93-3, Methyl ethyl ketone: CAS# 78-93-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65. Ingredient CAS# 67-56-1, Methanol: 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.

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
78-93-3	Methyl ethyl ketone	n.a.	n.a.	n.a.	n.a.
67-56-1	Methanol	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

General Ecological Information:	<p>Ingredient CAS# 78-93-3, Methyl ethyl ketone: 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. Other: No information available.</p>
Results of PBT and vPvB assessment:	<p>Ingredient CAS# 67-56-1, Methanol: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.</p>
Persistence and Degradability:	<p>Ingredient CAS# 67-56-1, Methanol: No data available.</p>
Bioaccumulative Potential:	<p>Ingredient CAS# 67-56-1, Methanol: No data available.</p>
Mobility in Soil:	<p>Ingredient CAS# 67-56-1, Methanol: No data available.</p>

13. Disposal Considerations

Waste Disposal Method:	<p>Ingredient CAS# 78-93-3, Methyl ethyl ketone: 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).</p> <p>Ingredient CAS# 67-56-1, Methanol: 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. Contaminated packaging. Dispose of as unused product.</p>
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14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Printing ink related material

DOT Hazard Class: 3 FLAMMABLE LIQUID

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
67-56-1	Methanol	No	Yes 5000 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
67-56-1	Methanol	TSCA: Yes - Inventory; CA PROP.65: Yes; 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 Gifftliste 1: Yes - G-2429; 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 Gifftliste 1: Yes - G-2063; Switzerland INNS: No; REACH: Yes - (R), (P)

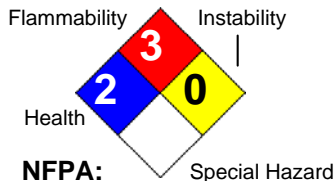
16. Other Information

Revision Date: 03/27/2015

Hazard Rating System:

HEALTH		2
FLAMMABILITY		3
PHYSICAL		0
PPE		B

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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