1. Product and Company Identification

Product Code: JP-K68 ENG
Product Name: JP-K68
Trade Name: JP-K68
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
Serious Eye Damage/Eye Irritation, Category 1
Toxic To Reproduction, Category 1B
Germ Cell Mutagenicity, Category 1B
Specific Target Organ Toxicity (single exposure), Category 1
Specific Target Organ Toxicity (repeated exposure), Category 1
Specific Target Organ Toxicity (repeated exposure), Category 2

GHS Signal Word: Danger
GHS Hazard Phrases:
- Highly flammable liquid and vapor.
- Causes serious eye damage.
- May damage fertility or the unborn child.
- May cause genetic defects state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard.
- Causes damage to organs
- Causes damage to organs through prolonged or repeated exposure.
- May cause damage to organs through prolonged or repeated exposure.

GHS Precaution Phrases:
- Keep container tightly closed.
- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting equipment.
- Take precautionary measures against static discharge.
- Use only non-sparking tools.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Use personal protective equipment as required.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.

GHS Response Phrases:
- In case of fire, use dry chemical, CO2, water splay, fog or form to extinguish.
- IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor
IF exposed or concerned: Get medical attention/advice.
Specific treatment see Section 4 on this label.
Get medical attention/advice if you feel unwell.

GHS Storage and Disposal
Store in cool/well-ventilated place.
Dispose of contents/container to listed in 40 CFR Parts 261.
Store locked up.

Hazard Rating System:

<table>
<thead>
<tr>
<th>Phrases:</th>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>PHYSICAL</th>
<th>PPE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>B</td>
</tr>
</tbody>
</table>

Potential Health Effects
(Acute and Chronic):
Chronic: May cause reproductive and fetal effects. Laboratory experiments have shown mutagenic effects. Animal studies have reported the development of tumors. Prolonged exposure may cause liver, kidney, and heart damage. Prolonged or repeated skin contact may cause defatting and dermatitis. Chronic exposure may cause liver damage.

Inhalation:
Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. May cause narcotic effects in high concentration. Vapors may cause dizziness or suffocation. Inhalation of vapor may cause respiratory tract irritation. May cause effects similar to those described for ingestion.

Skin Contact:
Causes moderate skin irritation. May cause cyanosis of the extremities. May cause moderate skin irritation. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis.

Eye Contact:
Causes severe eye irritation. May cause painful sensitization to light. May cause chemical conjunctivitis and corneal damage. May cause moderate eye irritation. May result in corneal injury.

Ingestion:
May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause systemic toxicity with acidosis. 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.

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>Ethyl alcohol</td>
<td>65.0 -75.0 %</td>
</tr>
<tr>
<td>71-23-8</td>
<td>1-Propanol</td>
<td>5.0 -15.0 %</td>
</tr>
<tr>
<td>NA</td>
<td>Proprietary chrome complex</td>
<td>5.0 -10.0 %</td>
</tr>
</tbody>
</table>
4. First Aid Measures

Emergency and First Aid Procedures:

In Case of Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

In Case of Skin Contact: Get medical aid. Wash clothing before reuse. Flush skin with plenty of soap and water. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

In Case of Eye Contact: Get medical aid. Gently lift eyelids and flush continuously with water. Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

In Case of Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

Note to Physician: Treat symptomatically and supportively. Persons with skin or eye disorders or liver, kidney, chronic respiratory diseases, or central and peripheral nervous sytem diseases may be at increased risk from exposure to this substance. Antidote: Replace fluid and electrolytes.

5. Fire Fighting Measures

Flash Pt: 14.00 C (57.2 F) Method Used: Closed Cup
Explosive Limits: LEL: UEL:
Autoignition Pt: > 390.00 C (734.0 F)

Suitable Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water. Use dry chemical, carbon dioxide, or alcohol-resistant foam.

Fire Fighting Instructions: Replace fluid and electrolytes. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Get medical aid. Combustion generates toxic fumes. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

6. Accidental Release Measures

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. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Use water spray to disperse the gas/vapor.
7. Handling and Storage

Precautions To Be Taken in Handling:
Wash thoroughly after handling. Use only in a well-ventilated area. 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. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not get on skin or in eyes. Do not ingest or inhale.

Precautions To Be Taken in Storing:
Keep away from heat, sparks and flame. Keep away from sources of ignition. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Do not store near perchlorates, peroxides, chromic acid or nitric acid. Do not store near combustible materials. Store in a cool, dry place.

8. Exposure Controls/Personal Protection

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Partial Chemical Name</th>
<th>OSHA TWA</th>
<th>ACGIH TWA</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>Ethyl alcohol</td>
<td>PEL: 1000 ppm</td>
<td>TLV: 1000 ppm</td>
<td></td>
</tr>
<tr>
<td>71-23-8</td>
<td>1-Propanol</td>
<td>PEL: 200 ppm</td>
<td>TLV: 200 ppm</td>
<td>STEL: (250 ppm)</td>
</tr>
<tr>
<td>NA</td>
<td>Proprietary chrome complex</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Respiratory Equipment (Specify Type):
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.

Eye Protection:
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA’s eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Wear chemical splash goggles.

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

Other Protective Clothing:
Wear appropriate protective clothing to prevent skin exposure. Wear appropriate protective clothing to minimize contact with skin.

Engineering Controls (Ventilation etc.):
Use explosion-proof ventilation equipment. 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.
9. Physical and Chemical Properties

Physical States: [ ] Gas   [ X ] Liquid   [ ] Solid
Appearance and Odor: Black.  
alcohol-like.
Melting Point: -127.00 °C (-196.6 °F)
Boiling Point: 78.00 °C (172.4 °F) - 97.00 °C (206.6 °F)
Autoignition Pt: > 390.00 °C (734.0 °F)
Flash Pt: 14.00 °C (57.2 °F)   Method Used: Closed Cup
Explosive Limits:
Specific Gravity (Water = 1): 0.833
Density: ~ 0.8040 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

Stability: Unstable [ ]   Stable [ X ]
Conditions To Avoid - Instability:
Incompatible materials, ignition sources, Excess heat.

Incompatibility - Materials To Avoid:
Strong oxidizing agents, acids, Alkali metals, Ammonia, hydrazine, Peroxides, Sodium, Acid anhydrides, calcium hypochlorite, chromyl chloride, nitrosyl perchlorate, bromine pentafluoride, Perchloric acid, silver nitrate, mercuric nitrate, potassium tert-butoxide, magnesium perchlorate, Acid chlorides, platinum, uranium hexafluoride, silver oxide, iodine heptafluoride, acetyl bromide, disulfuryl difluoride, tetrachlorosilane + water, acetyl chloride, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate, Oxidizing agents.

Hazardous Decomposition Or Byproducts:
Carbon monoxide, irritating and toxic fumes and gases.
Possibility of Hazardous Reactions:
Will occur [ ]   Will not occur [ X ]
Conditions To Avoid - Hazardous Reactions:
11. Toxicological Information

Toxicological Information:

Carcinogenicity/Other Information: CAS# 64-17-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65. CAS# 71-23-8: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Hazardous Components (Chemical Name)</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
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<tbody>
<tr>
<td>64-17-5</td>
<td>Ethyl alcohol</td>
<td>n.a.</td>
<td>1</td>
<td>A4</td>
<td>n.a.</td>
</tr>
<tr>
<td>71-23-8</td>
<td>1-Propanol</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>NA</td>
<td>Proprietary chrome complex</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

12. Ecological Information

General Ecological Information:

Environmental: When released to the atmosphere it will photodegrade in hours (polluted urban atmosphere) to an estimated range of 4 to 6 days in less polluted areas. Rainout should be significant.

Physical: No information available.

Expected to rapidly volatilize.

Other: No information 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: None listed.

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Printing ink

DOT Hazard Class: 3 - FLAMMABLE LIQUID

UN/NA Number: UN1210

Packing Group: II

LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: Printing ink

UN Number: 1210

Packing Group: II

Hazard Class: 3 - FLAMMABLE LIQUID

TDG Classification:

LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name:

UN Number: 1210

Packing Group: II

Hazard Class: 3 - FLAMMABLE LIQUID
15. Regulatory Information

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

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>S. 302 (EHS)</th>
<th>S. 304 RQ</th>
<th>S. 313 (TRI)</th>
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</thead>
<tbody>
<tr>
<td>64-17-5</td>
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<td>No</td>
<td>No</td>
<td>No</td>
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<tr>
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<td>1-Propanol</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>NA</td>
<td>Proprietary chrome complex</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

- [X] Yes  [  ] No   Acute (immediate) Health Hazard
- [X] Yes  [  ] No   Chronic (delayed) Health Hazard
- [X] Yes  [  ] No   Fire Hazard
- [  ] Yes  [X] No   Sudden Release of Pressure Hazard
- [  ] Yes  [X] No   Reactive Hazard

Other US EPA or State Lists

<table>
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<th>CAS #</th>
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<tbody>
<tr>
<td>64-17-5</td>
<td>Ethyl alcohol</td>
<td>TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: Title 8; NC TAP: No</td>
</tr>
<tr>
<td>71-23-8</td>
<td>1-Propanol</td>
<td>TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: Title 8; NC TAP: No</td>
</tr>
<tr>
<td>NA</td>
<td>Proprietary chrome complex</td>
<td>TSCA: No; CA PROP.65: No; CA TAC, Title 8: No; NC TAP: No</td>
</tr>
</tbody>
</table>

International Regulatory Lists

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>International Regulatory Lists</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>Ethyl alcohol</td>
<td>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)</td>
</tr>
<tr>
<td>71-23-8</td>
<td>1-Propanol</td>
<td>Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes - 1274; Australia ICS: Yes; New Zealand IOC: Yes; Japan ENCS: Yes - (2)-207; Japan ISHL: No; Israel HSL: No; Germany WHCS: Yes - 176; Switzerland Giftliste 1: Yes - G-2043; Switzerland INNS: No; REACH: Yes - (R), (P)</td>
</tr>
<tr>
<td>NA</td>
<td>Proprietary chrome complex</td>
<td>Canadian DSL: No; Canadian NDSL: No; Mexico INSQ: No; Australia ICS: No; New Zealand IOC: No; Japan ENCS: No; Japan ISHL: No; Israel HSL: No; Germany WHCS: No; Switzerland Giftliste 1: No; Switzerland INNS: No; REACH: Yes - (P)</td>
</tr>
</tbody>
</table>

16. Other Information

Revision Date: 11/26/2014

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.

Hitachi Contact Information:
Garan Myers