1. Product and Company Identification

Product Name: JP-K415ci, 2415Kci

Company Name: Hitachi Industrial Equipment & Solutions America, LLC
2730 Greenleaf Avenue
Elk Grove Village, IL 60007

Phone Number: (866)583-0048

Web site address: http://www.hitachi-america.us/ice/marking-and-coding

Emergency Contact: Chemtrec (800)424-9300

Information: Christian Krzykwa (980)500-7144

Intended Use: Printing ink

2. Hazards Identification

Flammable Liquids, Category 2
Serious Eye Damage/Eye Irritation, Category 2
Acute Toxicity: Oral, Category 5
Acute Toxicity: Inhalation, Category 5
Skin Corrosion/Irritation, Category 2
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:
H225 - Highly flammable liquid and vapor.
H303 - May be harmful if swallowed.
H305 - May be harmful if swallowed and enters airways.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H333 - May be harmful if inhaled.
H336 - May cause drowsiness or dizziness.
H370 - Causes damage to kidneys
H371 - May cause damage to organs .
H372 - Causes damage to central and peripheral nervous systems through prolonged or repeated exposure.

GHS Precaution Phrases:
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 - Keep container tightly closed.
P241 - Use explosion-proof electrical/ventilating/lighting equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

GHS Response Phrases:
P301+310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+352 - IF ON SKIN: Wash with plenty of soap and water.
P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated

	clothing. Rinse skin with water/shower. P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P307+311 - IF exposed: Call a POISON CENTER or doctor/physician. P309+311 - Call a POISON CENTER or doctor/physician if exposed or you feel unwell. P312 - Call a POISON CENTER or doctor/physician if you feel unwell. P314 - Get medical attention/advice if you feel unwell. P321 - Specific treatment see ... on this label. P331 - Do NOT induce vomiting. P332+313 - If skin irritation occurs, get medical advice/attention. P337+313 - If eye irritation persists, get medical advice/attention. P362 - Take off contaminated clothing and wash before re-use.
GHS Storage and Disposal Phrases:	P403+235 - Store in cool/well-ventilated place. P405 - Store locked up. P501 - Dispose of contents/container in accordance with local/regional/ national/international regulation.
Emergency Overview:	Flash Point: 18 deg C. Warning! Flammable liquid and vapor.
Potential Health Effects (Acute and Chronic):	Hazards not otherwise classified (HNOC) or not covered by GHS.
Inhalation:	May cause respiratory tract irritation. Vapors may cause dizziness or suffocation.
Skin Contact:	May cause mild skin irritation. Not expected to cause an allergic skin reaction. A single prolonged skin exposure is not likely to result in the material being absorbed in harmful amounts. On ECB site, it says not irritating to skin.
Eye Contact:	May cause mild eye irritation. On ECB site, says slightly irritating to eye.
Ingestion:	May cause irritation of the digestive tract.

3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration
67-64-1	Acetone	60.0 -80.0 %
616-38-6	Dimethyl carbonate	1.0 -10.0 %
NA	Proprietary chrome complex	1.0 -5.0 %
108-88-3	Toluene	< 0.1 %

4. First Aid Measures

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 breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen.
In Case of Skin Contact:	Wash off with soap and plenty of water. Consult a physician. Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
In Case of Eye Contact:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
In Case of Ingestion:	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately.
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
Note to Physician:	Treat symptomatically and supportively.

5. Fire Fighting Measures

Flash Pt:	-1.00 C (30.2 F) Method Used: TAG Closed Cup
Explosive Limits:	LEL: UEL:
Autoignition Pt:	
Suitable Extinguishing Media:	Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam.
Fire Fighting Instructions:	Wear self contained breathing apparatus for fire fighting if necessary. Further information. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Flammable liquid and vapor. 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.
Flammable Properties and Hazards:	Carbon oxides.
Hazardous Combustion Products:	

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.
Steps To Be Taken In Case Material Is Released Or Spilled:	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). 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.

7. Handling and Storage

Precautions To Be Taken in Handling: 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. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Take precautionary measures against static discharges. 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. Avoid breathing dust, mist, or vapor.

Precautions To Be Taken in Storing: 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: 2 - 8 deg.C. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
67-64-1	Acetone	PEL: 1000 ppm	TLV: 250 ppm STEL: 500 ppm	
616-38-6	Dimethyl carbonate			
NA	Proprietary chrome complex			
108-88-3	Toluene	PEL: 200 ppm STEL: 500 ppm/(10min) CEIL: 300 ppm	TLV: 20 ppm	

Respiratory Equipment (Specify Type): 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). 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.

Eye Protection: 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). Wear chemical splash goggles.

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

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

Engineering Controls (Ventilation etc.): Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

Work/Hygienic/Maintenance Handle in accordance with good industrial hygiene and safety practice. Wash hands

Practices:	before breaks and at the end of workday.
Environmental Exposure Controls:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. Physical and Chemical Properties

Physical States:	[ ] Gas [X] Liquid [ ] Solid
Appearance and Odor:	Black. solvent odor.
pH:	
Melting Point:	
Boiling Point:	
Flash Pt:	-1.00 C (30.2 F) Method Used: TAG Closed Cup
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):	
Solubility in Water:	
Octanol/Water Partition Coefficient:	
Autoignition Pt:	
Decomposition Temperature:	
Viscosity:	

10. Stability and Reactivity

Stability:	Unstable [ ] Stable [X]
Conditions To Avoid - Instability:	Heat, flames and sparks. Extremes of temperature and direct sunlight. Ignition sources.
Incompatibility - Materials To Avoid:	Strong oxidizing agents, Strong reducing agents, Bases.
Hazardous Decomposition or Byproducts:	Other decomposition products: No data available. In the event of fire: see section 5. Carbon monoxide.
Possibility of Hazardous Reactions:	Will occur [ ] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	Vapors may form explosive mixture with air.

11. Toxicological Information

Toxicological Information: Germ cell mutagenicity: No data available.
Reproductive toxicity. Aspiration hazard: Epidemiology: Teratogenicity: No data available.
Reproductive Effects: Mutagenicity: Neurotoxicity: Other Studies:

Irritation or Corrosion: Skin corrosion/irritation. Provide adequate ventilation.
Result: Tumorigenic:Tumors at site or application. Mild eye irritation -24. Serious eye damage/eye irritation: Eyes - rabbit -

Sensitization: Guinea pig 88%, 4
Result: Tumorigenic:Tumors at site or application.

Chronic Toxicological Effects: Specific target organ toxicity - single exposure: May cause drowsiness or dizziness.
Specific target organ toxicity - repeated exposure:

Carcinogenicity/Other Information: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification. 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# 616-38-6: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
67-64-1	Acetone	n.a.	n.a.	A4	n.a.
616-38-6	Dimethyl carbonate	n.a.	n.a.	n.a.	n.a.
NA	Proprietary chrome complex	n.a.	n.a.	n.a.	n.a.
108-88-3	Toluene	n.a.	3	A4	n.a.

12. Ecological Information

General Ecological Information: Environmental: No information available.
Physical: No information available.
Other:

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

Persistence and Degradability: Biodegradability Result: 91 % -Readily biodegradable. - Readily biodegradable.

Bioaccumulative Potential: Does not bioaccumulate.

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

13. Disposal Considerations

Waste Disposal Method: 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.
Contaminated packaging: 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, [flammable or] Printing ink related material [(including printing ink thinning or reducing compound), flammable]

DOT Hazard Class: 3 FLAMMABLE LIQUID

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

LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: DIMETHYL CARBONATE.

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

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

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)
67-64-1	Acetone	No	Yes 5000 LB	No
616-38-6	Dimethyl carbonate	No	No	No
NA	Proprietary chrome complex	No	No	No
108-88-3	Toluene	No	Yes 1000 LB	Yes

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

[ ] Yes [X] No	Explosive	[X] Yes [ ] No	Acute toxicity (any route of exposure)
[ ] Yes [X] No	Flammable (gases, aerosols, liquid, or solid)	[X] Yes [ ] No	Skin Corrosion or Irritation
[ ] Yes [X] No	Oxidizer (liquid, solid or gas)	[X] Yes [ ] No	Serious eye damage or eye irritation
[ ] Yes [X] No	Self-reactive	[ ] Yes [X] No	Respiratory or Skin Sensitization
[ ] Yes [X] No	Pyrophoric (liquid or solid)	[ ] Yes [X] No	Germ cell mutagenicity
[ ] Yes [X] No	Pyrophoric gas	[ ] Yes [X] No	Carcinogenicity
[ ] Yes [X] No	Self-heating	[ ] Yes [X] No	Reproductive toxicity
[ ] Yes [X] No	Organic peroxide	[X] Yes [ ] No	Specific target organ toxicity (single or repeated exposure)
[ ] Yes [X] No	Corrosive to metal	[X] Yes [ ] No	Aspiration Hazard
[ ] Yes [X] No	Gas under pressure (compressed gas)	[ ] Yes [X] No	Simple Asphyxiant
[ ] Yes [X] No	In contact with water emits flammable gas	[ ] Yes [X] No	(Health) Hazard Not Otherwise Classified (HNOC)
[ ] Yes [X] No	Combustible Dust		
[ ] Yes [X] No	(Physical) Hazard Not Otherwise Classified (HNOC)		

CAS #	Hazardous Components (Chemical Name)	Canadian NPRI	Canadian Toxic	Canadian DSL
67-64-1	Acetone	No	No	Yes
616-38-6	Dimethyl carbonate	No	No	Yes
NA	Proprietary chrome complex	No	No	No
108-88-3	Toluene	Yes: Part 5	No	Yes

California Proposition 65

WARNING This product can expose you to chemicals including Toluene, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
67-64-1	Acetone	TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: Title 8; NC TAP: No

616-38-6	Dimethyl carbonate	TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: No; NC TAP: No
NA	Proprietary chrome complex	TSCA: No; CA PROP.65: No; CA TAC, Title 8: No; NC TAP: No
108-88-3	Toluene	TSCA: Yes - Inventory, 8A CAIR; CA PROP.65: Yes: RDTox(F); CA TAC, Title 8: TAC: Cat. IIa, Title 8; NC TAP: Yes: NC TAP

CAS #	Hazardous Components (Chemical Name)	International Regulatory Lists
67-64-1	Acetone	Mexico INSQ: Yes; Australia ICS: Yes; New Zealand IOC: Yes; Japan ENCS: Yes - 2-542; Japan ISHL: No; Israel HSL: No; Germany WHCS: Yes - 6: WGK 1; Switzerland Giftliste 1: Yes - G-1031; Switzerland INNS: No; REACH: Yes - 01-2119471330-49: Full, (P); Rotterdam: No
616-38-6	Dimethyl carbonate	Mexico INSQ: Yes - 1161; Australia ICS: Yes; New Zealand IOC: Yes; Japan ENCS: Yes - 2-2853; Japan ISHL: No; Israel HSL: No; Germany WHCS: Yes - 4077: WGK 1; Switzerland Giftliste 1: Yes - G-5966; Switzerland INNS: No; REACH: Yes - 01-2119548399-23: Full, (P); Rotterdam: No
NA	Proprietary chrome complex	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); Rotterdam: No
108-88-3	Toluene	Mexico INSQ: Yes - 1294; Australia ICS: Yes; New Zealand IOC: Yes; Japan ENCS: Yes - 3-60; Japan ISHL: Yes - 2-(8)-869; Israel HSL: No; Germany WHCS: Yes - 194: WGK 2; Switzerland Giftliste 1: Yes - G-2063; Switzerland INNS: No; REACH: Yes - 01-2119471310-51: Full, (P); Rotterdam: No

Canadian WHMIS Classification:

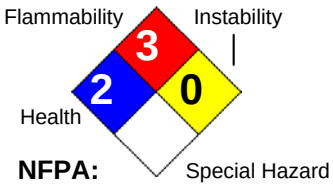
16. Other Information

Revision Date: 08/09/2018

Hazard Rating System:

HMIS:

NFPA:



Additional Information About This Product:

Company Policy or Disclaimer:

To the best of our knowledge, the information contained herein 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 presented in this document. Final determination of suitability of any material is the sole responsibility of the user to follow local, state and federal laws and regulations in regards to handling of hazardous materials. Although certain hazards are described herein, unknown hazards may exist and caution should always be exercised.

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