1. Product and Company Identification

Product Name: JP-K106, 1106K

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

Phone Number: (866)583-0048

Web site address: https://www.hitachi-iesa.com/industrial-marking-and-coding

Emergency Contact: Chemtrec (800)424-9300

Information: Christian Krzykwa (980)500-7144

2. Hazards Identification

Flammable Liquids, Category 2
Acute Toxicity: Inhalation, Category 4
Skin Corrosion/Irritation, Category 2
Serious Eye Damage/Eye Irritation, Category 2A
Carcinogenicity, Category 2
Specific Target Organ Toxicity (single exposure), Category 2
Specific Target Organ Toxicity (single exposure), Category 3
Specific Target Organ Toxicity (repeated exposure), Category 1
Specific Target Organ Toxicity (repeated exposure), Category 2

GHS Signal Word: **Danger**

GHS Hazard Phrases:
H225 - Highly flammable liquid and vapor.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H332 - Harmful if inhaled.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H351 - Suspected of causing cancer .
H371 - May cause damage to organs , kidneys.
H372 - Causes damage to organs nervous system through prolonged or repeated exposure.
H373 - May cause damage to respiratory apparatus, central nervous system through prolonged or repeated exposure.

GHS Precautionary Phrases:
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting/, equipment.
P242 - Use only non-sparking tools.
P243 - Take action to prevent static discharge.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 - Wash hand thoroughly after handling.
P264 - Wash eye 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:

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.
P308+311 - If exposed of concerned: Call a Doctor
P308 - IF exposed or concerned: P313 - Get medical advice/attention.
P312 - Call a doctor if you feel unwell.
P314 - Get medical attention/advice if you feel unwell.
P332+313 - If skin irritation occurs, get medical advice/attention.
P337+313 - If eye irritation persists, get medical advice/attention.
P362+364 - Take off contaminated clothing and wash it before reuse.
P370+378 - In case of fire, use appropriate media to extinguish.

GHS Storage and Disposal Phrases:

P403+233 - Store container tightly closed in a cool and well-ventilated place.
P405 - Store locked up.
P501 - Dispose of contents/container local, regional, and national regulations (to be specified).

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. Possible cancer hazard based on tests with laboratory animals.

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. Material is irritating to mucous membranes and upper respiratory tract. Harmful if inhaled. Dust is irritating to the respiratory tract. Exposure may impair lung function and cause mucostasis (reduced mucous clearance). Carbon black dust is extremely fine and light and can be breathed deeply into the lungs, where it can accumulate. Normally the dust is cleared gradually and has no harmful effects. However, high concentrations can overwhelm the clearance capacity of the lungs, and impair function.

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 skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

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. May be harmful if swallowed.

Will not occur. Ingestion of large amounts may cause gastrointestinal irritation.

3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration
78-93-3	Methyl ethyl ketone	75.0 -85.0 %
108-10-1	Methyl isobutyl ketone	3.0 -5.0 %
1333-86-4	Carbon black	3.0 -5.0 %

4. First Aid Measures

Emergency and First Aid Procedures:

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. Remove from exposure and move to fresh air immediately.

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 contact, immediately wash skin with soap and copious amounts of water. Get medical aid if irritation develops or persists. Flush skin with plenty of soap and water.

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 contact, immediately flush eyes with copious amounts of water for at least 15 minutes. Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

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. If swallowed, wash out mouth with water provided person is conscious. Call a physician. Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid.

Signs and Symptoms Of Exposure: Contact with eyes can cause redness, tearing, and blurred vision. Prolonged or repeated contact with skin can cause defatting and dermatitis. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Note to Physician: Treat symptomatically and supportively.

5. Fire Fighting Measures

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

Explosive Limits: LEL: 1.8% UEL: 11.5%

Autoignition Pt: 505.00 C (941.0 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. Suitable: For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water. Use water spray to cool fire-exposed containers. Use water spray, dry chemical, carbon dioxide, or appropriate 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. Protective Equipment: Wear self-contained breathing apparatus

and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Flammable Liquid. Emits toxic fumes under fire conditions. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Carbon black can be ignited in the presence of open flames. Once ignited it burns slowly with the production of Carbon monoxide.

Flammable Properties and Hazards: EXPLOSION HAZARDS.
Vapor may travel considerable distance to source of ignition and flash back. Container explosion may occur under fire conditions. Forms explosive mixtures in air.

Hazardous Combustion Products: No data available.

6. Accidental Release Measures

Environmental Precautions: Do not let product enter drains.

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. PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL. Evacuate area. Shut off all sources of ignition.
PROCEDURE(S) OF PERSONAL PRECAUTION(S)
Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.
Methods for cleaning up.
Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete. Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions.

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. User Exposure: Avoid prolonged or repeated exposure. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid ingestion and inhalation.

Precautions To Be Taken in Storing: Keep away from sources of ignition. Store tightly closed in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Store in a cool, dry place. Store in a tightly closed container. Store locked up.

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	No data.
108-10-1	Methyl isobutyl ketone	PEL: 100 ppm	TLV: 50 ppm STEL: 75 ppm	No data.
1333-86-4	Carbon black	PEL: 3.5 mg/m3	TLV: 3.5 mg/m3	No data.

Personal Protective Equipment Symbols:

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. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). 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. Hand: Compatible chemical-resistant gloves.

Eye Protection: Wear chemical splash goggles. Chemical safety goggles. 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.

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. Wear appropriate protective clothing to minimize contact with skin.

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. Safety shower and eye bath. Use nonsparking tools. Mechanical exhaust required.

Work/Hygienic/Maintenance Practices: Wash thoroughly after handling. Wash contaminated clothing before reuse.

EXPOSURE LIMITS, RTECS.
Country Source Type Value.
USA ACGIH STEL 75 PPM
USA ACGIH TWA 50 PPM
USA MSHA Standard-air TWA 100 PPM (410 MG/M3)
USA OSHA. PEL 8H TWA 100 PPM (410 MG/M3)
USA NIOSH TWA 50 PPM
STEL 75 PPM
EXPOSURE LIMITS.
Poland NDS 83
Poland NDSCh 200
Poland NDSP -

9. Physical and Chemical Properties

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

Appearance and Odor: Black.
solvent odor.

pH: No data.

Melting Point: -86.40 C (-123.5 F)

Boiling Point: 79.60 C (175.3 F) - 0.00 C (32.0 F)

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

Evaporation Rate: No data.

Flammability (solid, gas): No data available.

Explosive Limits: LEL: 1.8% UEL: 11.5%

Vapor Pressure (vs. Air or No data.

mm Hg):	
Vapor Density (vs. Air = 1):	~ 2.41
Specific Gravity (Water = 1):	No data.
Density:	~ 0.86
Solubility in Water:	No data.
Solubility Notes:	SOLUBLE IN ALCOHOL, ETHER. ACETONE, BENZENE CHLOR.
Saturated Vapor Concentration:	No data.
Octanol/Water Partition Coefficient:	No data.
Autoignition Pt:	505.00 C (941.0 F)
Decomposition Temperature:	No data.
Viscosity:	No data.

Information with regard to primary physical hazard:

10. Stability and Reactivity

Stability:	Unstable [ ] Stable [X]
Conditions To Avoid - Instability:	Ignition sources. Excess heat. May form peroxides on contact with air. Materials to Avoid: Oxidizing agents, Strong bases, Incompatible materials, Moisture.
Incompatibility - Materials To Avoid:	Strong oxidizing agents, Strong acids, 2-propanol, May react vigorously or violently when mixed with strong oxidizing agents such as chlorates, bromates and nitrates, expecially when heated. Incompatible with chlorinated paraffins, lead oxide, manganese oxide, iron oxide, liquid oxygen, oils, and moisture.
Hazardous Decomposition or Byproducts:	Carbon monoxide, Carbon dioxide.
Possibility of Hazardous Reactions:	Will occur [ ] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	No data available.

11. Toxicological Information

Toxicological Information: Epidemiology: No data available.
Teratogenicity: No information available. Reproductive Effects: No information found.
Mutagenicity: See actual entry in RTECS for complete information.
Neurotoxicity:

Carcinogenicity/Other Information: CAS# 78-93-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65. CAS# 1333-86-4: ACGIH: Not listed.
California: carcinogen, initial date 2/21/03 (airborne, unbound particles of respirable size.
NTP: Not listed.

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
78-93-3	Methyl ethyl ketone	n.a.	n.a.	n.a.	n.a.
108-10-1	Methyl isobutyl ketone	n.a.	2B	n.a.	n.a.
1333-86-4	Carbon black	n.a.	2B	Unknown	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.

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). APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION. Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. 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: UN1210 **Packing Group:** II
Hazard Class: 3 - FLAMMABLE LIQUID **TDG Classification:**

LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name:	Printing ink.		
UN Number:	UN1210	**Packing Group:**	II
Hazard Class:	3 - FLAMMABLE LIQUID		

MARINE TRANSPORT (IMDG/IMO):

IMDG/IMO Shipping Name:	Printing ink.		
UN Number:	UN1210	**Packing Group:**	II
Hazard Class:	3 - FLAMMABLE LIQUID		

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name:	Printing ink.		
UN Number:	UN1210	**Packing Group:**	II
Hazard Class:	3 - FLAMMABLE LIQUID		

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 NA	No
108-10-1	Methyl isobutyl ketone	No	Yes NA	Yes
1333-86-4	Carbon black	No	No	No

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)
[X] Yes [ ] 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	[X] Yes [ ] 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	[ ] Yes [X] 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)		

California Proposition 65

WARNING

This product can expose you to chemicals including Methyl isobutyl ketone, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov. This product can expose you to chemicals including Carbon black, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
78-93-3	Methyl ethyl ketone	TSCA: Inventory CA TAC, Title 8: TAC: Cat. IIa, Title 8 NC TAP: Yes: NC TAP
108-10-1	Methyl isobutyl ketone	TSCA: Inventory CA PROP.65: Yes: Canc+RDTox. CA TAC, Title 8: TAC: Cat. IVa, Title 8 NC TAP: Yes: NC TAP
1333-86-4	Carbon black	TSCA: Inventory CA PROP.65: Yes: Canc. CA TAC, Title 8: TAC: Cat. IVb, Title 8

CAS #	Hazardous Components (Chemical Name)	International Regulatory Lists
78-93-3	Methyl ethyl ketone	Mexico INSQ: 1193 Japan ENCS: 2-542 Germany WHCS: 150: WGK 1 Switzerland Giftliste 1: G-2429 REACH: 01-2119457290-43: Full, (P)
108-10-1	Methyl isobutyl ketone	Mexico INSQ: 1245 Japan ENCS: 2-542 Germany WHCS: 137: WGK 1 Switzerland Giftliste 1: G-2468 REACH: 01-2119473980-30: Full, (P)
1333-86-4	Carbon black	Japan ENCS: 5-5222 Germany WHCS: 1742: WGK 0/nwg Switzerland Giftliste 1: G-8938 REACH: 01-2119384822-32: Full, (P)

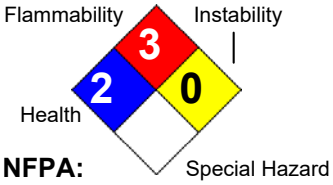
16. Other Information

Revision Date: 08/22/2023 **Previous revision:** 02/17/2015

Hazard Rating System:

HMIS:

NFPA:



Additional Information About This Product: 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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