1. Product and Company Identification

Product Name: 1312Y

Company Name: Hitachi Industrial Equipment & Solutions America, LLC
75 NW Point Blvd Suite D,
Elk Grove Village, IL 60007

Phone Number: (800)627-5464

Web site address: https://mc.hitachi-iesa.com

Emergency Contact: Chemtrec (800)424-9300

Intended Use: Printing ink for industrial inkjet printers.

2. Hazards Identification

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

GHS Signal Word: **Danger**

GHS Hazard Phrases:
H225 - Highly flammable liquid and vapor.
H302+332 - Harmful if swallowed or if inhaled.
Causes respiratory irritation.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H336 - May cause drowsiness or dizziness.
H370 - Causes damage to organs

GHS Precautionary Phrases:
P201 - Obtain special instructions before use.
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/printing 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.
P235 - Keep cool.

GHS Response Phrases:
P301+310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
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+313 - IF exposed or concerned: Get medical attention/advice.
P321 - Specific treatment see supplementary first aid measures 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.
P370+378 - In case of fire, use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam to extinguish.

GHS Storage and Disposal Phrases: P403+235 - Store in cool/well-ventilated place. P401 - Store tightly closed. P501 - Dispose of contents/container in accordance with local regulations.

Potential Health Effects (Acute and Chronic): Hazards not otherwise classified (HNOC) or not covered by GHS.

Inhalation: Inhalation of vapors may cause drowsiness and dizziness. May cause central nervous system effects such as nausea and headache. Causes respiratory tract irritation. 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: Repeated exposure may cause skin dryness or cracking. May be absorbed through the skin in harmful amounts. 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: Vapors may cause eye irritation. Causes 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 %
25359-84-6	Phenol-. alpha.-pinene resin	< 5.0 %
64-17-5	Ethyl alcohol	< 1.0 %
3109-63-5	Tetrabutylammonium hexafluorophosphate	< 5.0 %
108-65-6	Propylene glycol methyl ether acetate	1.0 -10.0 %
763-69-9	Ethyl 3-ethoxypropionate	< 5.0 %
2530-83-8	3-Glycidoxypropyltrimethoxysilane	< 5.0 %

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 INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Consult a physician. If breathing is difficult, give oxygen. Get medical aid. If experiencing respiratory symptoms call a POISON CENTER or doctor/physician. If not breathing give artificial respiration.

In Case of Skin Contact: In case of contact, flush skin with plenty of water. Wash off with soap and plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

In Case of Eye Contact: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid. Flush eyes with water as a precaution. If eye irritation persists, get medical advice/attention.

In Case of Ingestion: Do not induce vomiting unless directed to do so by medical personnel. Potential for aspiration if swallowed. Get medical aid immediately. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician. If vomiting occurs naturally, have victim lean forward.

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 Point: -5.70 C (21.7 F) Method Used: TAG Closed Cup

Explosive Limits: LEL: No data. UEL: No data.

Autoignition Pt: ~ 404.00 C (759.2 F)

Suitable Extinguishing Media: In case of fire, use carbon dioxide, dry chemical powder or appropriate foam. Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam. Water may be ineffective.

Unsuitable Extinguishing Media: Do not use water jet.

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.

Flammable Properties and Hazards: Carbon oxides,
nitrogen oxides (NOx) Flash back possible over considerable distance. Container explosion may occur under fire conditions.

Hazardous Combustion Products: 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.

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 inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

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. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Other Precautions: Apart from the uses mentioned in section 1 no other specific uses are stipulated.

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
78-93-3	Methyl ethyl ketone	PEL: 200 ppm	No data.	No data.
25359-84-6	Phenol-. alpha.-pinene resin	No data.	No data.	No data.
64-17-5	Ethyl alcohol	PEL: 1000 ppm	No data.	No data.
3109-63-5	Tetrabutylammonium hexafluorophosphate	No data.	No data.	No data.
108-65-6	Propylene glycol methyl ether acetate	No data.	No data.	No data.
763-69-9	Ethyl 3-ethoxypropionate	No data.	No data.	No data.
2530-83-8	3-Glycidoxypropyltrimethoxysilane	No data.	No data.	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. 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. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses with side-shields conforming to EN166.

Protective Gloves: Wear appropriate 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.

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.

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 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: Orange.
solvent odor.

pH: > 6

Melting Point: ~ -86.99 C (-124.6 F)

Boiling Point: ~ 80.00 C (176.0 F)

Flash Point: -5.70 C (21.7 F) TAG Closed Cup

Evaporation Rate:	Not determined
Flammability (solid, gas):	No data available.
Explosive Limits:	LEL: No data. UEL: No data.
Vapor Pressure:	~ 10.5 kPa at 20.0 C (68.0 F) Not determined
Vapor Density (vs. Air=1):	~ 2.41 at 25.0 C (77.0 F)
Specific Gravity (Water=1):	~ 0.91 at 25.0 C (77.0 F) - Average of several values
Density:	~ 0.805 G/CC at 25.0 C (77.0 F) - Average of several values
Solubility in Water:	~ 0.29 g/mL
Saturated Vapor Concentration:	Not determined
Octanol/Water Partition Coefficient:	No data.
Autoignition Pt:	~ 404.00 C (759.2 F)
Decomposition Temperature:	ND
Viscosity:	Not required
Particle Size:	Not applicable
Explosive Properties:	No data available.
Information on other hazards:	No data available.

10. Stability and Reactivity

Reactivity:	No data available.
Stability:	Unstable [ ] Stable [X]
Conditions To Avoid - Instability:	Heat, flames and sparks. Excess heat. Ignition sources.
Incompatibility - Materials To Avoid:	Oxidizing agents, Strong acids.
Hazardous Decomposition or Byproducts:	Carbon monoxide, Carbon dioxide, In the event of fire: see section 5. Other decomposition products:
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: Acute toxicity.

Germ cell mutagenicity: No data available.
Reproductive toxicity. Aspiration hazard:
CAS# 64-17-5:
1. Acute toxicity, TDLo, Oral, Human, 3371. UL/KG.
Result:
Behavioral: Altered sleep time (including change in righting reflex).
Behavioral: Excitement.
Behavioral: Coma.
- Veterinary and Human Toxicology., American College of Veterinary and Comparative Toxicology, Publication Office, Comparative Toxicology, Manhattan, KS 66506, Vol/p/yr: 21,272, 1979

2. Acute toxicity, TDLo, Oral, Human, 700.0 MG/KG.
Result:
Behavioral: Changes in psychophysiological tests.
- Neurobehavioral Toxicology and Teratology., For publisher information, see NETEEC, Fayetteville, NY, Vol/p/yr: 8,77, 1986

Irritation or Corrosion: Skin corrosion/irritation.
Result: Tumorigenic:Tumors at site or application. No skin irritation . (OECD Test Guideline 404) Serious eye damage/eye irritation Eyes -Rabbit
Irritating to eyes .

Sensitization: No data available.

Chronic Toxicological Effects: Specific target organ toxicity - single exposure: May cause drowsiness or dizziness.
Specific target organ toxicity -repeated exposure: no data available.

Carcinogenicity/Other Information: 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.
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.
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.
25359-84-6	Phenol-. alpha.-pinene resin	n.a.	n.a.	n.a.	n.a.
64-17-5	Ethyl alcohol	n.a.	1	Unknown	n.a.
3109-63-5	Tetrabutylammonium hexafluorophosphate	n.a.	n.a.	n.a.	n.a.
108-65-6	Propylene glycol methyl ether acetate	n.a.	n.a.	n.a.	n.a.
763-69-9	Ethyl 3-ethoxypropionate	n.a.	n.a.	n.a.	n.a.
2530-83-8	3-Glycidoxypropyltrimethoxysilane	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

No data available.

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

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

Other adverse effects: No data available.

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:

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
25359-84-6	Phenol-. alpha.-pinene resin	No	No	No
64-17-5	Ethyl alcohol	No	No	No
3109-63-5	Tetrabutylammonium hexafluorophosphate	No	No	No
108-65-6	Propylene glycol methyl ether acetate	No	No	No
763-69-9	Ethyl 3-ethoxypropionate	No	No	No
2530-83-8	3-Glycidoxypropyltrimethoxysilane	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 Flammable (gases, aerosols, liquid, or solid)
[ ] Yes [X] No Oxidizer (liquid, solid or gas)
[ ] Yes [X] No Self-reactive
[ ] Yes [X] No Pyrophoric (liquid or solid)
[ ] Yes [X] No Pyrophoric gas
[ ] Yes [X] No Self-heating
[ ] Yes [X] No Organic peroxide
[ ] Yes [X] No Corrosive to metal
[ ] Yes [X] No Gas under pressure (compressed gas)
[ ] Yes [X] No In contact with water emits flammable gas
[ ] Yes [X] No Combustible Dust
[ ] Yes [X] No (Physical) Hazard Not Otherwise Classified (HNOC)
[X] Yes [ ] No Acute toxicity (any route of exposure)
[X] Yes [ ] No Skin Corrosion or Irritation
[X] Yes [ ] No Serious eye damage or eye irritation
[ ] Yes [X] No Respiratory or Skin Sensitization
[ ] Yes [X] No Germ cell mutagenicity
[ ] Yes [X] No Carcinogenicity
[ ] Yes [X] No Reproductive toxicity
[X] Yes [ ] No Specific target organ toxicity (single or repeated exposure)
[X] Yes [ ] No Aspiration Hazard
[ ] Yes [X] No Simple Asphyxiant
[ ] Yes [X] No (Health) Hazard Not Otherwise Classified (HNOC)

California Proposition 65

WARNING

This product can expose you to chemicals including Vinyl chloride, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov. This product can expose you to chemicals including Methanol, 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
78-93-3	Methyl ethyl ketone	TSCA: Inventory CA TAC, Title 8: TAC: Cat. IIa, Title 8 NC TAP: Yes: NC TAP
25359-84-6	Phenol-. alpha.-pinene resin	TSCA: Inventory
64-17-5	Ethyl alcohol	TSCA: Inventory CA TAC, Title 8: Title 8
3109-63-5	Tetrabutylammonium hexafluorophosphate	TSCA: Inventory
108-65-6	Propylene glycol methyl ether acetate	TSCA: Inventory, 8A PAIR, 8D TERM
763-69-9	Ethyl 3-ethoxypropionate	TSCA: Inventory
2530-83-8	3-Glycidoxypropyltrimethoxysilane	TSCA: Inventory, 8A

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: (P), 01-2119457290-43: Full
25359-84-6	Phenol-. alpha.-pinene resin	Japan ENCS: 7-667 REACH: (P)
64-17-5	Ethyl alcohol	Japan ENCS: 5-153 Israel HSL: Cat.

		Germany WHCS: 96: WGK 1 Switzerland Giftliste 1: G-1158 REACH: (P), 01-2119457610-43: Full
3109-63-5	Tetrabutylammonium hexafluorophosphate	Japan ENCS: 2-186 REACH: (P)
108-65-6	Propylene glycol methyl ether acetate	Japan ENCS: 5-1508 Japan ISHL: 5-1518 Germany WHCS: 5033: WGK 1 Switzerland Giftliste 1: G-54973 REACH: (P), 01-2119475791-29: Full
763-69-9	Ethyl 3-ethoxypropionate	Japan ENCS: 2-1379 Japan ISHL: 2-(6)-147 Germany WHCS: 5257: WGK 1 Switzerland Giftliste 1: G-1163 REACH: (P), 01-2119463267-34: Full
2530-83-8	3-Glycidoxypropyltrimethoxysilane	Japan ENCS: 2-2962 Germany WHCS: 2622: WGK 2 REACH: (P), 01-2119513212-58: Full

16. Other Information

Revision Date: 05/14/2024

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.