1. Product and Company Identification

Product Name: TH-18u, S1018

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

Intended Use: Printing Ink Related Material

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 organs organs
H372 - Causes damage to organs through prolonged or repeated exposure.
Causes respiratory irritation.

GHS Precautionary Phrases:
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 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.

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.

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.
P308+311 - If exposed of concerned: Call a POISON CENTER/Doctor/...
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+364 - Take off contaminated clothing and wash it before reuse.

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 in accordance with all local/regional/national/international regulations.

Emergency Overview:

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

3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration
78-93-3	Methyl ethyl ketone	90.0 -95.0 %
67-64-1	Acetone	5.0 -10.0 %

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 breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In Case of Skin Contact: Wash off with soap and plenty of water. Consult a physician.

In Case of Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

In Case of Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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.

5. Fire Fighting Measures

Flash Pt: -9.00 C (15.8 F) Method Used: Closed Cup

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

Autoignition Pt: 505.00 C (941.0 F)

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.

Flammable Properties and Hazards: Carbon oxides,
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.

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).

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.

Precautions To Be Taken in Storing: Store under inert gas. Keep container tightly closed in a cool, dry, and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Hygroscopic.
Storage class 510) Recommended storage temperature: 5 - 20 deg.C.

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	TLV: 200 ppm STEL: 300 ppm	No data.
67-64-1	Acetone	PEL: 1000 ppm	TLV: 250 ppm STEL: 500 ppm	No data.

Personal Protective Equipment Symbols:	
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).
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).
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. Splash contact: Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 292 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:	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.):	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
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:	colorless. solvent odor.
pH:	No data.
Melting Point:	-87.00 C (-124.6 F)
Boiling Point:	80.00 C (176.0 F)
Flash Pt:	-9.00 C (15.8 F) Method Used: Closed Cup
Evaporation Rate:	No data.
Flammability (solid, gas):	No data available.
Explosive Limits:	LEL: No data. UEL: No data.
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Specific Gravity (Water = 1):	~ 0.8050
Density:	~ 0.8050 g/mL
Solubility in Water:	No data.

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.
Explosive Properties:	No data available.
Oxidizing Properties:	No data available.
Information with regard to primary physical hazard:	

10. Stability and Reactivity

Reactivity:	No data available.
Stability:	Unstable [ ] Stable [X]
Conditions To Avoid - Instability:	Exposure to moisture. Heat, flames and sparks. Extremes of temperature and direct sunlight.
Incompatibility - Materials To Avoid:	Oxidizing agents, Strong reducing agents, Strong oxidizing agents, Bases.
Hazardous Decomposition or Byproducts:	No data available. 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# 78-93-3:
1. Acute toxicity, TCLo, Inhalation, Human, 100.0 PPM, 5 M.
Result:
Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Olfaction:Other changes.
Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Conjunctive irritation.
Lungs, Thorax, or Respiration:Other changes.
- Journal of Industrial Hygiene and Toxicology, Vol/p/yr: 25,282, 1943

2. Acute toxicity, LD50, Oral, Mouse, 4050. MG/KG.
Result:
Behavioral: Sleep.
Behavioral: Headache.
Gastrointestinal:Nausea or vomiting.
- Toxicology Letters., Elsevier Science Pub. B.V., POB 211, 1000 AE, Amsterdam 1000 AE Netherlands, Vol/p/yr: 30,13, 1986

3. Acute toxicity, LC50, Inhalation, Mouse, 32.00 GM/M3, 4 H.
Result:
Gastrointestinal: Alteration in gastric secretion.
Gastrointestinal:Other changes.
- Current Toxicology, Nova Science Publishers, Inc., 6080 Jericho Turnpike, Suite 207, Commack, NY 11725, Vol/p/yr: 1,47, 1993

4. Acute toxicity, LD50, Intraperitoneal, Mouse, 616.0 MG/KG.
Result:
Behavioral: Change in motor activity (specific assay).
Behavioral: Ataxia.
Behavioral: Antipsychotic.
- Shell Chemical Company. Unpublished Report., Vol/p/yr: -,6, 1961

5. Acute toxicity, LD50, Skin, Species: Rabbit, 6480. MG/KG.
Result:
Behavioral: Hallucinations, distorted perceptions.
Endocrine:Effect on menstrual cycle.
- Shell Chemical Company., Vol/p/yr: MSDS-5390-,

6. Acute toxicity, TCLo, Inhalation, Human, 10.00 ppm.
Result:
Cardiac: Pulse rate decreased with fall in BP.
Lungs, Thorax, or Respiration:Other changes.
- Neurotoxicology., Intox Press, Inc., POB 34075, Little Rock, AR 72203, Vol/p/yr: 24,179, 2003

7. Acute toxicity, LC50, Inhalation, Mouse, 32.00 mg/m3.
Result:
Liver: Fatty liver degeneration.

8. Standard Draize Test, Eyes, Human, 350.0 PPM.
Result:
Tumorigenic: Equivocal tumorigenic agent by RTECS criteria.
Gastrointestinal:Tumors.
Liver: Tumors.
- Journal of Industrial Hygiene and Toxicology, Vol/p/yr: 25,282, 1943

9. Standard Draize Test, Skin, Species: Rabbit, 500.0 MG, 24 H.
Result:
Behavioral: Ataxia.
Lungs, Thorax, or Respiration:Dyspnea.
Gastrointestinal:Hypermotility, diarrhea.
- Journal of Industrial Hygiene and Toxicology, Vol/p/yr: 25,282, 1943

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 . Provide adequate ventilation.
Mild eye irritation -24. Serious eye damage/eye irritation: Eyes - rabbit -

Sensitization: No data available. Guinea pig 88%, 4
Result: Tumorigenic:Tumors at site or application.

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

Effects: Specific target organ toxicity -repeated exposure: no data available. Specific target organ toxicity - repeated exposure:

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. This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
78-93-3	Methyl ethyl ketone	n.a.	n.a.	n.a.	n.a.
67-64-1	Acetone	n.a.	n.a.	Unknown	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. Biodegradability Result: 91 % -Readily biodegradable. - Readily biodegradable.

Bioaccumulative Potential: No data available. Does not bioaccumulate.

Mobility in Soil: No data available.

Other adverse effects: No data available. 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:

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

LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: Printing ink related material.
UN Number: UN1210 **Packing Group:** II
Hazard Class: 3 - FLAMMABLE LIQUID **TDG Classification:**

LAND TRANSPORT (European ADR/RID):

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

MARINE TRANSPORT (IMDG/IMO):

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

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name:	Printing ink related material.		
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
67-64-1	Acetone	No	Yes NA	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	[ ] 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)	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
67-64-1	Acetone	TSCA: Inventory CA TAC, Title 8: 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)
67-64-1	Acetone	Japan ENCS: 2-542 Germany WHCS: 6: WGK 1 Switzerland Giftliste 1: G-1031 REACH: 01-2119471330-49: Full, (P)

16. Other Information

Revision Date: 12/07/2022

Previous revision: 08/10/2018

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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Company Policy or Disclaimer: