

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 2020/878; US OSHA HCS 2015; and Canadian WHMIS 2015.

**Section 1. Identification of the Substance/Mixture and of the Company/Undertaking**

- 1.1 Product Code:** N310355  
**Product Name:** TH-77  
**X Code:** X(22,53)0355
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
- 1.3 Details of the Supplier of the Safety Data Sheet:**  
**Company Name:** Hitachi Industrial Equipment & Solutions America, LLC  
2730 Greenleaf Avenue **Phone Number:**  
Elk Grove Village, IL 60007 (866)583-0048  
**Information:** Christian Krzykwa (980)500-7144
- 1.4 Emergency telephone number:**  
**Emergency Contact:** Chemtrec (800)424-9300

**Section 2. Hazards Identification**

- 2.1 Classification of the Substance or Mixture:**  
Flammable Liquids, Category 1  
Acute Toxicity: Oral, Category 4  
Specific Target Organ Toxicity (single exposure), Category 3  
Aquatic Toxicity (Acute), Category 3  
Aquatic Toxicity (Chronic), Category 3
- 2.2 Label Elements:**

**GHS Signal Word:** **Danger****Hazard-determining components of labelling:**

Acetone

Propyl acetate

**GHS Hazard Phrases:**

H224 - Extremely flammable liquid and vapor.

H302 - Harmful if swallowed.

H336 - May cause drowsiness or dizziness.

H402 - Harmful to aquatic life.

H412 - Harmful to aquatic life with long lasting effects.

**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.

P261 - Avoid breathing 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.

P273 - Avoid release to the environment.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P235 - Keep cool.

**GHS Response Phrases:**

P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
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.  
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.  
P330 - Rinse mouth.  
P370+378 - In case of fire, use ... to extinguish.

**GHS Storage and Disposal Phrases:**

P403+233 - Store container tightly closed in well-ventilated place.  
P405 - Store locked up.  
P501 - Dispose of contents/container to ...

**UFI:**

**2.3 Adverse Human Health Hazards** not otherwise classified (HNOC) or not covered by GHS. Reacts violently with **Effects and Symptoms:** water. May form explosive peroxides. Repeated exposure may cause skin dryness or cracking. Hazards not otherwise classified (HNOC) or not covered by GHS -none.

**Section 3. Composition/Information on Ingredients**

CAS #	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
67-64-1	Acetone 01-2119471330-49	90.0 -99.0 %	200-662-2 606-001-00-8	Flam. Liq. 2: H225 Eye Damage 2: H319 STOT (SE) 3: H336 EUH066
64-17-5	Ethyl alcohol 01-2119457610-43	0.953 -4.765 %	200-578-6 603-002-00-5	Flam. Liq. 2: H225
109-60-4	Propyl acetate 01-2119484620-39	0.1 -1.0 %	203-686-1 607-024-00-6	Flam. Liq. 2: H225 Eye Damage 2A: H319 STOT (SE) 3: H336 EUH066

**Section 4. First Aid Measures**

- 4.1 Description of First Aid Measures:** 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:** Take off contaminated clothing and shoes immediately. 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. Continue rinsing eyes during transport to hospital.
- In Case of Ingestion:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
- 4.2 Important Symptoms and Effects, Both Acute and Delayed:** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11 The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11 and/or in section 11
- 4.3 Indication of any** No data available.

immediate medical attention and special treatment needed:

## Section 5. Fire Fighting Measures

- 5.1 Suitable Extinguishing Media:** Dry powder. Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam.
- 5.2 Flammable Properties and Hazards:** Carbon oxides, Carbon oxides.
- No data available.
- Flash Pt:** > -40.00 C Method Used: Estimate
- Explosive Limits:** LEL: No data. UEL: No data.
- Autoignition Pt:** > 165.00 C
- 5.3 Fire Fighting Instructions:** Wear self contained breathing apparatus for fire fighting if necessary. Further information.

## Section 6. Accidental Release Measures

- 6.1 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.
- 6.2 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.
- 6.3 Methods and Material 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). Do not flush with water.

## Section 7. Handling and Storage

- 7.1 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.
- 7.2 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. Never allow product to get in contact with water during storage. Light sensitive. Air sensitive. Heat sensitive. Test for peroxide formation periodically and before distillation. Handle and store under inert gas. Dry residue is explosive. Recommended storage temperature: 2 - 8 deg.C. Storage class 510) Hygroscopic.
- Other Precautions:** Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

## Section 8. Exposure Controls/Personal Protection

**8.1 Exposure Parameters:**

CAS #	Chemical Name	Jurisdiction	Recommended Exposure Limits	Notations
67-64-1	Acetone	ACGIH TLV	TLV: 250 ppm STEL: 500 ppm	
		Europe	TWA: 1210 mg/m3 (500 ppm)	
		France VL	TWA: 1210 mg/m3 (500 ppm) STEL: 2420 mg/m3 (1000 ppm)	
		OSHA PELs	PEL: 1000 ppm	
		Britain EH40	TWA: 1210 mg/m3 (500 ppm)	

64-17-5 Ethyl alcohol	ACGIH TLV	STEL: 3620 mg/m3 (1500 ppm) TLV: 1000 ppm STEL: 1000 ppm
	France VL	TWA: 1900 mg/m3 (1000 ppm) STEL: 9500 mg/m3 (5000 ppm)
	OSHA PELs	PEL: 1000 ppm
	Britain EH40	TWA: 1920 mg/m3 (1000 ppm) STEL: ()
109-60-4 Propyl acetate	ACGIH TLV	TLV: 200 ppm STEL: 250 ppm
	France VL	TWA: 840 mg/m3 (200 ppm)
	OSHA PELs	PEL: 200 ppm
	Britain EH40	TWA: 849 mg/m3 (200 ppm) STEL: 1060 mg/m3 (250 ppm)

**8.2 Exposure Controls:**

**8.2.1 Engineering Controls (Ventilation etc.):** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**8.2.2 Personal protection equipment:**

**Eye Protection:** Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Face shield and safety glasses.

**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. Full contact.  
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. Splash contact:  
Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 110 min.

**Other Protective Clothing:** Complete suit protecting against chemicals. Flame retardant antistatic protective clothing. Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**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).

**Work/Hygienic/Maintenance Practices:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**8.2.3 Environmental Exposure Controls:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Exposure Scenarios:** Discharge into the environment must be avoided.

**Exposure Scenarios:** No data available.

## Section 9. Physical and Chemical Properties

### 9.1 Information on Basic Physical and Chemical Properties

<b>Physical States:</b>	[ ] Gas [ X ] Liquid [ ] Solid	
<b>Appearance and Odor:</b>	Color: Clear. liquid. solvent odor.	
<b>pH:</b>	No data.	
<b>Melting Point:</b>	-82.4 C (-116.28 F) - 137.00 C	
<b>Boiling Point:</b>	1.5 C (34.61 F) - 102.00 C	
<b>Flash Pt:</b>	> -40.00 C Method Used: Estimate	
<b>Evaporation Rate:</b>	No data.	
<b>Saturated Vapor Concentration:</b>	No data.	
<b>Flammability (solid, gas):</b>	No data available.	
<b>Explosive Limits:</b>	LEL: No data.	UEL: No data.
<b>Vapor Pressure (vs. Air or mm Hg):</b>	No data.	
<b>Vapor Density (vs. Air = 1):</b>	No data.	
<b>Specific Gravity (Water = 1):</b>	No data.	
<b>Density:</b>	0.7885 G/ML (6.58 - LB/GA)	
<b>Solubility in Water:</b>	miscible	
<b>Octanol/Water Partition Coefficient:</b>	No data.	
<b>Autoignition Pt:</b>	> 165.00 C	
<b>Decomposition Temperature:</b>	No data.	
<b>Viscosity:</b>	No data.	
<b>Explosive Properties:</b>	No data available.	
<b>Oxidizing Properties:</b>	No data available.	

### 9.2 Other Information

#### 9.2.1 Information with regard to physical hazard classes

Information with regard to primary physical hazard:

#### 9.2.2 Other safety characteristics

## Section 10. Stability and Reactivity

<b>10.1 Reactivity:</b>	No data available.
<b>10.2 Stability:</b>	Unstable [ ] Stable [ X ]
<b>10.3 Conditions To Avoid - Hazardous Reactions:</b>	Vapors may form explosive mixture with air. Reacts violently with water. No data available.
<b>Possibility of Hazardous Reactions:</b>	Will occur [ ] Will not occur [ X ]
<b>10.4 Conditions To Avoid - Instability:</b>	Heat, flames and sparks. Extremes of temperature and direct sunlight. Exposure to moisture.
<b>10.5 Incompatibility - Materials To Avoid:</b>	Oxidizing agents, Strong acids, Alcohols, acids, Reacts violently with water. Strong oxidizing agents, Strong reducing agents, Bases, Strong oxidizing agents. Acid anhydrides, Aluminum, Halogenated compounds, Acids. Oxidizing agents.
<b>10.6 Hazardous Decomposition or</b>	Other decomposition products: No data available. In the event of fire: see section 5.

**Byproducts:**

**Section 11. Toxicological Information**

- 11.1 Information on Toxicological Effects:** Germ cell mutagenicity. No data available.  
Reproductive toxicity. Aspiration hazard: Acute toxicity.  
Inhalation: Dermal. Skin and Appendages: Other: Hair.
- Irritation or Corrosion:** Skin corrosion/irritation. No data available.  
Serious eye damage/eye irritation: Provide adequate ventilation.  
Result: Tumorigenic:Tumors at site or application. Mild eye irritation -24. Eyes - rabbit -  
Serious eye damage/eye irritation no data available.
- Sensitization:** Guinea pig 88%, 4  
Result: Tumorigenic:Tumors at site or application. No data available.
- Chronic Toxicological Effects:** Specific target organ toxicity - single exposure: No data available.  
Specific target organ toxicity - repeated exposure: May cause drowsiness or dizziness.  
Specific target organ toxicity -single exposure (Globally Harmonized System) Specific target organ toxicity -repeated exposure: no data available. Inhalation. Oral.
- 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. IARC: 3 -Group 3: Not classifiable as to its carcinogenicity to humans.

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
67-64-1	Acetone	n.a.	n.a.	A4	n.a.
64-17-5	Ethyl alcohol	n.a.	1	A4	n.a.
109-60-4	Propyl acetate	n.a.	n.a.	n.a.	n.a.

**Section 12. Ecological Information**

- 12.1 Toxicity:** No data available.
- 12.2 Persistence and Degradability:** Biodegradability Result: 91 % -Readily biodegradable. - Readily biodegradable. No data available.
- 12.3 Bioaccumulative Potential:** Does not bioaccumulate. No data available.
- 12.4 Mobility in Soil:** No data available.
- 12.5 Results of PBT and vPvB assessment:** PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.
- 12.6 Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life. No data available.

## Section 13. Disposal Considerations

- 13.1 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.

## Section 14. Transport Information

- GHS Classification:** Flammable Liquids, Category 1 - Danger! Extremely flammable liquid and vapor  
Acute Toxicity: Oral, Category 4 - Warning! Harmful if swallowed  
Specific Target Organ Toxicity (single exposure), Category 3 - Warning! May cause respiratory irritation, or may cause drowsiness and dizziness  
Aquatic Toxicity (Acute), Category 3 - Harmful to aquatic life  
Aquatic Toxicity (Chronic), Category 3 - Harmful to aquatic life with long lasting effects

### 14.1 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 II



### 14.1 LAND TRANSPORT (Canadian TDG):

- TDG Shipping Name:** Printing ink, [flammable or] Printing ink related material [(including printing ink thinning or reducing compound), flammable]  
**UN Number:** 1210 **Packing Group:** II  
**Hazard Class:** 3 - FLAMMABLE LIQUID **TDG Classification:**

### 14.1 LAND TRANSPORT (European ADR/RID):

- ADR/RID Shipping Name:** Printing ink, [flammable or] Printing ink related material [(including printing ink thinning or reducing compound), flammable]  
**UN Number:** 1210 II  
**Hazard Class:** 3 - FLAMMABLE LIQUID

### 14.3 AIR TRANSPORT (ICAO/IATA):

- ICAO/IATA Shipping Name:** Printing ink, [flammable or] Printing ink related material [(including printing ink thinning or reducing compound), flammable]  
**UN Number:** 1210 **Packing Group:** II  
**Hazard Class:** 3 - FLAMMABLE LIQUID

## Section 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 NA	No
64-17-5	Ethyl alcohol	No	No	No
109-60-4	Propyl acetate	No	No	No

CAS #	Hazardous Components (Chemical Name)	Canadian NPRI	Canadian Toxic	Canadian DSL
67-64-1	Acetone	No	No	Yes
64-17-5	Ethyl alcohol	Yes: Part 5		Yes
109-60-4	Propyl acetate	No	No	Yes
CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists		
67-64-1	Acetone	TSCA: Yes - Inventory; CA PROP.65: No		
64-17-5	Ethyl alcohol	TSCA: Yes - Inventory; CA PROP.65: No		
109-60-4	Propyl acetate	TSCA: Yes - Inventory; CA PROP.65: No		
CAS #	Hazardous Components (Chemical Name)	International Regulatory Lists		
67-64-1	Acetone	Mexico INSQ: Yes; Australia ICS: Yes; New Zealand IOC: Yes; China IECSC: Yes; Japan ENCS: Yes - 2-542; Japan ISHL: No; Korea ECL: Yes - KE-29367; Philippines ICCS: Yes; Taiwan TCSCA: Yes; Singapore HSL: 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)		
64-17-5	Ethyl alcohol	Mexico INSQ: Yes; Australia ICS: Yes; New Zealand IOC: Yes; China IECSC: Yes; Japan ENCS: Yes - 5-153; Japan ISHL: No; Korea ECL: Yes - KE-13217; Philippines ICCS: Yes; Taiwan TCSCA: Yes; Singapore HSL: No; Israel HSL: Yes - Cat.; Germany WHCS: Yes - 96: WGK 1; Switzerland Giftliste 1: Yes - G-1158; Switzerland INNS: No; REACH: Yes - 01-2119457610-43: Full, (P)		
109-60-4	Propyl acetate	Mexico INSQ: Yes - 1276; Australia ICS: Yes; New Zealand IOC: Yes; China IECSC: Yes; Japan ENCS: Yes - 2-727; Japan ISHL: No; Korea ECL: Yes - KE-29778; Philippines ICCS: Yes; Taiwan TCSCA: Yes; Singapore HSL: No; Israel HSL: No; Germany WHCS: Yes - 178: WGK 1; Switzerland Giftliste 1: Yes - G-2793; Switzerland INNS: No; REACH: Yes - 01-2119484620-39: Full, (P)		

**Section 16. Other Information**

**Revision Date:** 03/03/2022

**Additional Information About** No data available.

**This Product:**

**Company Policy or**

**Disclaimer:**

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