

MATERIAL SAFETY DATA SHEET

1 IDENTIFICATION

Product name	:JP-Y37
Name of company	:Hitachi Industrial Equipment Systems Co., Ltd
Address	:1-1,Higashitaga-cho 1-chome, Hitachi-shi, Ibaraki-ken, Japan
Tel	:+81-294-36-8682
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Recommended use of the chemical and restrictions on use	:Printing Ink for industrial Marking

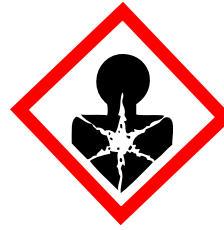
2 HAZARDS IDENTIFICATION

Classification of the substance or mixture	:mixture
Physico-chemical endpoints	:Flammable liquid category 2
Acute toxicity - oral	:Category 5
Acute toxicity - dermal	:Not available
Acute toxicity - inhalation (vapors)	:Not available
Acute toxicity - inhalation (dust, mist)	:Not identified
Skin corrosion/irritation	:Category 2
Eye damage/irritation	:Category 2
Sensitization - respiratory	:Not identified
Sensitization - skin	:Not identified
Germ cell mutagenicity	:Not available
Carcinogenicity	:Not available
Toxic to reproduction	:Not available
Effects on or via lactation	:Not identified
Specific target organ systemic toxicity (Single exposure)	:Category 1 Central nervous system :Category 2 Kidney :Category 3 Respiratory system
(Repeated exposure)	:Category 1 Central nervous system :Category 1 Peripheral nervous system
Aspiration toxicity	:Category 2
Hazardous to the aquatic environment	
-Acute hazard	:Not available
-Chronic hazard	:Not available

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GHS label elements

Hazard symbols: Flame, Exclamation mark, Health hazard



Signal word: Danger

Hazard statement and precautionary statement:

- Highly flammable liquid and vapour
- May be harmful if swallowed
- Causes skin irritation
- Causes eye irritation
- Cause damage to Central nervous system-single exposure
- May cause damage to kidney-single exposure
- May cause respiratory irritation-single exposure
- Causes damage to Central nervous system and Peripheral nervous system through prolonged or repeated exposure
- May be harmful if swallowed and enters airways

Precautionary statements:

- Keep out of reach of children. Read label before use. If medical advice is needed: Have product container or label at hand.

Prevention

- Keep away from ignition sources such as heat/sparks/open flame— No smoking.
- Take precautionary measures against static discharge.
- Wear protective gloves and eye/face protection as specified by the competent authority.
- Do not breathe dust/mist/vapors.
- Use only in a well-ventilated area. Call a doctor/physician if you feel unwell.
- Do not eat, drink or smoke when using this product.
- Avoid contact during pregnancy/while nursing.
- Wash hands thoroughly after handling.

Response

- In case of fire, use dry chemical, CO₂, water splay (fog) or foam for extinction.
- IF SWALLOWED: Call a doctor/physician if you feel unwell. Rinse mouth.
- IF ON SKIN: Gently wash with plenty of soap and water.
- Wash/Decontaminate removed clothing before reuse.
- If skin irritation occurs, seek medical advice/attention.
- IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor/physician.
- Collect spillage.

Storage

- Store in cool/well-ventilated place. Store locked up.

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- Call a doctor/physician if exposed or you feel unwell.

Disposal

- Waste must be disposed of according to applicable regulations.

3 Composition/information on ingredients

Substance or mixture; mixture

Composition;

Chemical name	concentration (%)	CAS number
2-butanone	80-90	78-93-3

4 First-aid measures

Inhalation;

Remove the victim from the contamination immediately to fresh air. Keep the victim warm and quiet and arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.

Skin contact;

Remove all contaminated clothing, shoes and socks from the affected areas as quickly as possible. Wash the affected area under running water using a mild soap. If irritation persists, arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.

Eye contact;

Gently rinse the affected eyes with clean water for at least 15 minutes. Remove contact lenses if easily possible. and refer for medical attention.

Ingestion;

Never give anything by mouth to someone who is unconscious or convulsing. If the victim is responsive, give him one or two glasses of water. And refer for medical attention.

5 Fire-fighting measures

Suitable extinguishing media;

Use dry chemical, CO₂, water spray (fog) or foam.

Fire fighting procedures;

Use water spray to cool fire-exposed surfaces and to protect personnel. Shut off "fuel" to fire. If a leak or spill has not ignited, use water spray to disperse the vapors.

Avoid spraying water directly into storage containers due to danger of boil over.

Unusual fire/explosion hazard;

Flammable liquid, can release vapors that form flammable mixtures at temperatures at or above the flashpoint.

Special protective equipment and precautions for fire fighters;

Fire fighters should wear boots, overalls, gloves, eye and face protection and breathing apparatus.

6 Accidental release measures

Shut off all sources of ignition; No smoking or flames in area. Absorb spill with inert material (e.g., dry sand or earth), then place in closed containers using non-sparking tools. Flush residual spill

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(area) with copious amounts of water.

7 Handling and storage

Handling;

Use only in the well-ventilated areas.

Make available in the work area emergency shower and eyes wash.

Avoid contact with skin or eyes.

Storage;

Close up the container and keep it in dark cool(0~20) place.

Keep away from combustible materials and sources of ignition.

8 Exposure controls/personal protection

Exposure guidelines;

ACGIH TLV-TWA (ppm)

2-butanone :200

ACGIH STEL(ppm)

2-butanone :300

9 Physical and chemical properties

Appearance

Physical state

:Liquid

Color

:Yellow

Odor

:Solvent odor

Boiling point

:80 (2-butanone)

Flash point

:-5.1 (closed cup)

Upper/lower flammability or explosive limits

:Lower 1.8 vol%, Upper 11.5 vol% (2-butanone)

Vapor pressure

:10.5kPa (20) (2-butanone)

Relative density (Air = 1)

:2.41 (2-butanone)

Relative density

:0.860(20)

Solubility (Water)

:29g/100mL (20) (2-butanone)

Partition coefficient: n-octanol/water

:0.29 (2-butanone)

Auto-ignition temperature

:505 (2-butanone)

Decomposition temperature

:No measurement

10 Stability and reactivity

Stability: The product is stable.

Conditions and materials to avoid: Not available

Hazardous decomposition products: These products are carbon oxides

11 Toxicological information

Acute toxicity;

2-butanone

Category 5:Oral 5520(Rat LD50 (mg/kg))

Not available:Dermal > 8000(Rabbit LD50 (mg/kg))

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Category 5:Inhalation 11700 (Vaper) (Rat LC50(ppm/4h))

Skin corrosion/irritation;

2-butanone

Category 2:Frequent/prolonged contact may irritate and cause dermatitis. Low order of toxicity.

Serious eye damage/irritation;

2-butanone

Category 2B:Eye contact:severely irritating. If not removed promptly, will injure eye tissue, which may result in permanent damage.

Respiratory or skin sensitization;

2-butanone

Not identified

Germ cell mutagenicity;

2-butanone

Not available

Carcinogenicity;

2-butanone

Not available

Reproductive toxicity;

2-butanone

Not available

STOST-single exposure;

2-butanone

Category 1(Central nervous system),Category 2(Kidney),Category 3(Respiratory)

STOST-repeated exposure;

2-butanone

Category 1(Central nervous system,Peripheral nervous system)

Aspiration hazard.

2-butanone

Category 1 (Vapor concentrations above exposure)

LD50 (50% Lethal Dose), LC50 (50% Lethal Concentration)

12 Ecological information

Toxicity:

2-butanone

killifish 96h-LC50(mg/L):>100

killifish 14d-LC50 (mg/L):100

killifish 14d-NOEC (mg/L):100

Persistence and degradability:

2-butanone

None known

Bioaccumulative potential:

2-butanone

None known

Mobility in soil:

2-butanone

None known

13 Disposal considerations

Scrap materials may be disposed by licensed contractor or burn in an approved incinerator.

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Do not dump into sewer, on the ground or into any body of water.
Follow national and local regulations.

14 Transport information

Follow all regulations in your country.

UN Number	:1210
UN Proper Shipping Name	:Printing ink, flammable
Transport hazard class	:Class 3(Flammable liquid)
Packing Group	:
Environmental hazards	:No

15 Regulatory information

Follow all regulations in your country.

Content of RoHS Directive material Cd<100ppm Pb, Hg, Hexavalent Cr, PBB, PBDE<1000ppm

16 References

- 1) Solvent, dye MSDS
- 2) Results of Eco-toxicity tests of chemicals conducted by Ministry of the Environment in Japan (-2006)
- 3) International Chemical Safety Cards

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