

# SAFETY DATA SHEET

## 1 IDENTIFICATION

Product name :JP-Y94  
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  
Fax :+81-294-36-8975  
Recommended use of the chemical  
and restrictions on use :Printing Ink for industrial Marking

## 2 HAZARDS IDENTIFICATION

Physico-chemical endpoints : Flammable liquid Category 2  
Acute toxicity - oral : Category 5  
Acute toxicity - dermal : Not available  
Acute toxicity - inhalation (air) : Not identified  
Acute toxicity - inhalation (vapors) : Not identified  
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 identified  
Carcinogenicity : Not identified  
Toxic to reproduction : Not identified  
Effects on or via lactation : Not identified  
Specific target organ systemic toxicity : (Single exposure)  
Category 1 Central nervous system  
Category 2 Kidney  
:(Repeated exposure)  
Category 1 Central nervous system  
Category 1 Peripheral nervous system  
Aspiration toxicity : Not identified  
Hazardous to the aquatic environment  
-Acute hazard : Not identified  
-Chronic hazard : Not identified

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**GHS label elements**

Hazard symbols:

**Signal word:** Danger**Hazard statement and precautionary statement:**

- Highly flammable liquid and vapor
- May be harmful if swallowed
- Causes skin irritation
- Causes serious eye irritation
- Causes damage to central nervous system-single exposure
- May cause damage to kidney-single exposure
- Causes damage to central nervous system and peripheral nervous system through prolonged or repeated exposure

**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, CO<sub>2</sub>, 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	70-80	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, CO<sub>2</sub>, water splay (fog) or form.

**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.,

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dry sand or earth), then place in closed containers using non-sparking tools. Flush residual spill (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°C) 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 <sup>2)</sup>	:80°C (2-butanone)
Flash point	:-5.6°C (closed cup)
Upper/lower flammability or explosive limits <sup>2)</sup>	:Lower 1.8 vol%、Upper 11.5 vol%
Vapor pressure <sup>2)</sup>	:10.5kPa (20°C) (2-butanone)
Vapor density (Air=1) <sup>2)</sup>	:2.41 (2-butanone)
Relative density	:0.86(20°C)
Solubility (Water) <sup>2)</sup>	:29g/100mL (20°C) (2-butanone)
Partition coefficient: n-octanol/water <sup>2)</sup>	:0.26
Auto-ignition temperature <sup>2)</sup>	:470°C
Decomposition temperature	:No data

## 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

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LD50(ori,rat): 2737mg/kg(TXAPA9 19, 699, 1971)  
LCLo(ihl,rat): 23500mg/m<sup>3</sup>/8h(AIHAAP 20, 364, 1959)  
LD50(skin,rabbit): 6480mg/kg(SHELL\* MSDS-5390-4)  
TCLo(ihl,human): 1000mg/m<sup>3</sup>(VCGVK\* -, 417, 1994)  
LDLo(ori,human): 714.3mg/kg(VCGVK\* -, 417, 1994)

**Skin corrosion/irritation:**

2-butanone  
Skin; rabbit; 402mg/24h; Mild(TXAPA9 19, 276, 1971)

**Serious eye damage/irritation:**

2-butanone  
Eye; rabbit; 80mg(TXAPA9 19, 276, 1971)

**Respiratory or skin sensitization:**

2-butanone  
Not available

**Germ cell mutagenicity:**

2-butanone  
Reverse mutation assay in *S.typhimuriun* and *E.coli*; Negative  
Sex chromosome loss and nondisjunction; *S.cerevisiae*; 33800ppm(MUREAV 149, 339, 1985)

**Carcinogenicity:**

2-butanone  
Not available

**Reproductive toxicity:**

2-butanone  
TCLo(ihl,rat): 2900mg/m<sup>3</sup>(female 6-10 D preg); Specific Developmental Abnormalities -  
craniofacial(VCGVK\* -, 418, 1994)

**STOST-single exposure:**

2-butanone  
The influence of the central nervous system, rat/mouse(EHC 143, 1992; PATTY 4th, 1994;  
IRIS 2003)  
The influence of kidney, oral, rat(DFGOT vol 12,1999; IRIS 2003; ATSDR 1992)  
The respiratory tract irritation, human (ACGIH 7th, 2001; DFGOT vol 12,1999; PATTY 4th,  
1994; ATSDR 1992)

**STOST-repeated exposure:**

2-butanone  
The sensory paralysis of hand and arm, human(EHC 143, 1992; DFGOT vol 12, 1999; IRIS 2003)  
The damage of central nervous system, human(DFGOT vol 12, 1999; IRIS 2003)

**Aspiration hazard:**

2-butanone  
Not available

## 12 Ecological information

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**Ecotoxicity<sup>1)</sup>:**

2-butanone  
mosquito fish(96h-LC50(mg/L)):5600  
daphnids(48h-LC50(g/L)):>1000

**Persistence and degradability:**

2-butanone  
Not available

**Bioaccumulative potential:**

2-butanone  
Not available

**Mobility in soil:**

2-butanone  
Not available

**13 Disposal considerations**

Scrap materials may be disposed by licensed contractor or burned in an approved incinerator.  
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	: II
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) Results of Eco-toxicity tests of chemicals conducted by Ministry of the Environment in Japan
- 2) International Chemical Safety Cards

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