

# SAFETY DATA SHEET

## 1 IDENTIFICATION

Product name :JP-R76  
 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 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 : Category 1  
 Effects on or via lactation : Not identified  
 Specific target organ systemic toxicity : (Single exposure)  
     Category 1 Sensory system  
     Category 1 Liver  
     Category 1 Systemic toxicity  
     Category 1 Central nervous system  
     Category 3 Respiratory tract irritation  
 :(Repeated exposure)  
     Category 1 Sensory system  
     Category 1 Central nervous system  
     Category 1 Peripheral nervous system  
     Category 2 Liver  
     Category 2 Blood  
     Category 2 Spleen  
 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:

**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
- May damage fertility or the unborn child
- Causes damage to sensory system, liver, systemic toxicity or central nervous system-single exposure
- May cause respiratory irritation-single exposure
- Causes damage to sensory system, central nervous system or peripheral nervous system through prolonged or repeated exposure
- May cause damage to liver, blood or spleen 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, 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.

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**Storage:**

- Store in cool/well-ventilated place. Store locked up.
- 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	60-100	78-93-3
Methanol	10-30	67-56-1
2-Propanol	1-5	67-63-0

### 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.

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**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 (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
Methanol	:200(skin)
2-Propanol	:200

ACGIH STEL(ppm)	
2-butanone	:300
Methanol	:250(skin)
2-Propanol	:400

**9 Physical and chemical properties**

Appearance	
Physical state	:Liquid
Color	:Red
Odor	:Solvent odor
Boiling point <sup>2)</sup>	:70 to80.0°C
Flash point	:-5.0°C (closed cup)
Upper/lower flammability or explosive limits <sup>2)</sup>	:Lower 1.8 vol%, Upper 20 vol%
Vapor pressure <sup>2)</sup>	:12.0kPa (20°C)
Vapor density (Air=1) <sup>2)</sup>	:None known
Relative density	:0.87(20°C)
Solubility (Water) <sup>2)</sup>	:None known
Partition coefficient: n-octanol/water <sup>2)</sup>	:None known
Auto-ignition temperature <sup>2)</sup>	:>475°C
Decomposition temperature	:No data

**10 Stability and reactivity**

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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

LD50(oral,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>(VCVGK\* -, 417, 1994)

LDLo(oral,human): 714.3mg/kg(VCVGK\* -, 417, 1994)

#### Methanol

LD50(oral,rat): 5628mg/kg(GTPZAB 19(11),27,1975)

LC50(ihl,rat): 64000ppm/4h(NPIRI\* 1,74,1974)

TDLo(oral,man): 9450µL/kg(AJEMEN 16,538,1998)

TCLo(ihl,human): 300ppm(NPIRI\* 1,74,1974)

#### 2-Propanol

LD50(oral,rat): 5000mg/kg(VCVGK\* -, 97, 1984)

LC50(ihl,rat): 72600mg/m<sup>3</sup>(VCVGK\* -, 97, 1984)

LC50(ihl,mouse): 53000mg/m<sup>3</sup>(VCVGK\* -, 97, 1984)

TDLo(oral,human): 286mg/kg(VCVGK\* -, 97, 1984)

### Skin corrosion/irritation:

#### 2-butanone

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

#### Methanol

Skin; rabbit; 20mg/24h; Moderate(85JCAE -,187,1986)

#### 2-Propanol

Skin; rabbit; 500mg; Mild(NTIS\*\* AD-A106-944)

### Serious eye damage/irritation:

#### 2-butanone

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

#### Methanol

Eye; rabbit; 100mg/24h; Moderate(85JCAE -,187,1986)

#### 2-Propanol

Eye; rabbit; 100mg/24h; Moderate(85JCAE -,191,1986)

### Respiratory or skin sensitization:

#### 2-butanone

Not available

#### Methanol

Allergic dermatitis; human, skin(PATTY 4th,1994)

No skin sensitization ;Magnusson-Kligman maximization test, guinea pig(EHC 196,1997: DFGOT vol. 16,2001)

#### 2-Propanol

Not available

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**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)

## Methanol

Mutation in microorganisms; mouse; lymphocyte; 7900mg/L(ENMUDM 7(Suppl 3),10,1985)

## 2-Propanol

TDLo(ori,rat): 8mg/kg(female 6-15 D preg)(RTOPDW 23,183,1996)

TCLo(ihl,rat): 3500ppm/7h(female 1-19 D preg)(FCTOD7 26,247,1988)

**Carcinogenicity:**

## 2-butanone

Not available

## Methanol

Not available

## 2-Propanol

Not available

**Reproductive toxicity:**

## 2-butanone

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

## Methanol

TCLo(ihl,rat): 10000ppm/7h(7-15 D preg)(FAATDF 5,727,1985)

TDLo(ori,rat): 5200µL/kg(10 D preg)(REPTED 11,503,1997)

## 2-Propanol

TDLo(ori,rat): 8mg/kg(female 6-15 D preg)(RTOPDW 23,183,1996)

TCLo(ihl,rat): 3500ppm/7h(female 1-19 D preg)(FCTOD7 26,247,1988)

**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)

## Methanol

The restraint of central nervous system and damage of the visual organ, human, oral or ihl(EHC 196,1997; ACGIH, 7th,2001; DFGOT vol.16, 2001),

The respiratory tract irritation, rat,(EHC 196,1997; PATTY 4th,1994),

Anesthesia, rat , mouse and rhesus monkey(EHC 196,1997;PATTY 4th,1994)

## 2-Propanol

Not available

**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)

## Methanol

The restraint of central nervous system and damage of the visual organ, human, oral or ihl(EHC 196,1997; ACGIH, 7th,2001; DFGOT vol.16, 2001),

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The respiratory tract irritation, rat,(EHC 196,1997; PATTY 4th,1994),  
Anesthesia, rat , mouse and rhesus monkey(EHC 196,1997;PATTY 4th,1994)  
2-Propanol  
Not available

**Aspiration hazard:**

2-butanone  
Not available  
Methanol  
Not available  
2-Propanol  
Not available

## 12 Ecological information

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

2-butanone  
mosquito fish(96h-LC50(mg/L)):5600  
daphnids(48h-LC50(g/L)):>1000  
Methanol  
Not available  
2-Propanol  
guppies(7days-LC50(mg/L)):7060  
fathead minnow(1h-LC50(mg/L)):11830

**Persistence and degradability:**

2-butanone  
Not available  
Methanol  
This material is biodegradable.  
2-Propanol  
This material is biodegradable.

**Bioaccumulative potential:**

2-butanone  
Not available  
Methanol  
Not available  
2-Propanol  
Not available

**Mobility in soil:**

2-butanone  
Not available  
Methanol  
Not available  
2-Propanol  
Not available

## 13 Disposal considerations

Scrap materials may be disposed by licensed contractor or burned 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	: 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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