

MATERIAL SAFETY DATA SHEET

1 IDENTIFICATION

Product name :JP-K81
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

Physico-chemical endpoints :Flammable liquid Category 2
Acute toxicity - oral :Not available
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 :Not available
Eye damage/irritation : Category 2
Sensitization - respiratory : Not identified
Sensitization - skin : Not available
Germ cell mutagenicity : Category 1
Carcinogenicity : Not available
Toxic to reproduction : Category 1
Effects on or via lactation : Not identified
Specific target organ systemic toxicity : (Single exposure)
Category 3 Respiratory system, anesthetizing action
:(Repeated exposure)
Category 1 Liver
Category 2 Blood
Category 2 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:

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

- Highly flammable liquid and vapour
- May cause respiratory irritation-single exposure
- Causes damage to liver through prolonged or repeated exposure
- May cause damage to organs blood and 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, 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.
- 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

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Substance or mixture; mixture**Composition;**

Chemical name	concentration (%)	CAS number
Acetone	60-70	67-64-1
Ethanol	1-10	64-17-5

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 (area) with copious amounts of water.

7 Handling and storage

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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)

Acetone	:0
Ethanol	:1000

ACGIH STEL(ppm)

Acetone	:750(skin)
Ethanol	:No data

9 Physical and chemical properties

Appearance	
Physical state	:Liquid
Color	:Black
Odor	:Solvent odor
Boiling point	:60
Flash point	:-4.0 (closed cup)
Upper/lower flammability or explosive limits	:Lower 2.6 vol%, Upper 12.8 vol% (2-butanone)
Vapor pressure	:24.0kPa (20)
Vapor density (Air = 1)	:None known
Relative density	:0.86(20)
Solubility (Water)	:None known
Partition coefficient: n-octanol/water	:None known
Auto-ignition temperature	:465
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;**

Acetone
TDLo(ori,man): 2857mg/kg (RTECS)
LD50(ori,rat): 5800mg/kg (RTECS)
TCLo(ihl,man): 10mg/m3/6H (RTECS)
LC50(ihl,mouse): 44gm/m3/4H (RTECS)

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Ethanol

TDLo(ori,man): 700mg/kg(NTOTDY 8,77,1986)
LD50(ori, rat): 9000mg/kg(VCVGK* -, 93, 1984)
LC50(ihl, rat): 20000ppm/10H(NPIRI* 1,44,1974)
TCLo(ihl, human): 2500mg/m3/20M(VCVGK* -, 93,1984)

Skin corrosion/irritation;**Acetone**

Skin; rabbit; 500mg/24H; Mild(85JCAE -,280,1986)

Ethanol

Skin; rabbit; 20mg/24H; Moderate(85JCAE -, 189, 1986)

Serious eye damage/irritation;**Acetone**

Eye; rabbit; 20mg; Severe(AJOPAA 29,1363,1946) Eye; rabbit; 20mg/24H; Severe(85JCAE -,280,1986)

Ethanol

rabbit; 100mg/4S; Moderate(FCTOD7 20,573,1982)

Respiratory or skin sensitization;**Acetone****Ethanol**

Not available

Germ cell mutagenicity;**Acetone**

Cytogenetic analysis; hamster; fibroblast; 40gm/l(FCTOD7 22,623,1984)

Ethanol

DNA damage; S.cerevisiae; 850mmol/L(MUREAV 326,165,1995)
Mutation in microorganisms; S.typhimurium; 11pph(ENVRAL 52, 225, 1990)
Cytogenetic analysis; human; lymphocyte; 2.5pph/24H(MUREAV 537, 117, 2003)

Carcinogenicity;**Acetone**

Not listed as carcinogen on NTP, IARC, OSHA, ACGIH. Negative results on EHC, SIDS.

Ethanol

TDLo(ori,mouse): 320mg/kg/50W-I(CALEDQ 13,345,1981)

Reproductive toxicity;**Acetone**

TDLo(ori, rat): 273gm/kg(13 W male)(NTIS** PB91-185975)
TCLo(ihl, mammal): 31500µg/m3/24H(1-13D preg); (GTPZAB 26(6),24,1982)

Ethanol

TDLo(ori, woman): 250mg/kg(37 W preg); Effects on Embryo or Fetus - other effects to embryo(AJOGAH 145,251,1983)
TDLo(ori, rat): 22.5gm/kg(female 11-20 D preg); Specific Developmental Abnormalities - Central Nervous Systems(NETEEC 24, 719, 2002)

STOST-single exposure;**Acetone**

Human, irritation of throat 12000ppm(ACGIH, 2001) ; Human irritation of throat, nose and trachea

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1190mg/m³/6h(EHC 207, 1998); Human, irritation of throat 1000ppm/4h(EHC 207, 1998)
Ethanol
Human ihl, 5000ppm(9,4mg/L), respiratory tract irritation and confusion(ACGIH 2001)

STOST-repeated exposure;

Acetone
The increase of white blood cell and eosinophile leukocyte(ACGIH, 2001)
Ethanol
Not available

Aspiration hazard.

Acetone
Classified into Category 2 due to be the ketone of under C13.
Ethanol
Not available

12 Ecological information**Toxicity :**

Acetone
TDLo(ori,man): 2857mg/kg (RTECS)
LD50(ori,rat): 5800mg/kg (RTECS)
TCLo(ihl,man): 10mg/m³/6H (RTECS)
LC50(ihl,mouse): 44gm/m³/4H (RTECS)
Ethanol
TDLo(ori,man): 700mg/kg(NTOTDY 8,77,1986)
LD50(ori,rat): 9000mg/kg(VCVGK* -, 93, 1984)
LC50(ihl,rat): 20000ppm/10H(NPIRI* 1,44,1974)
TCLo(ihl,human): 2500mg/m³/20M(VCVGK* -, 93,1984)

Persistence and degradability:

Acetone
This material is biodegradable
Ethanol
This material is biodegradable.

Bioaccumulative potential:

Acetone
Not available
Ethanol
Not available

Mobility in soil:

Acetone
Not available
Ethanol
Not available

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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