

SAFETY DATA SHEET

1 IDENTIFICATION

Product name :JP-K90
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 : 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 : Category 2
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 Lungs
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
- Suspected of causing cancer
- Causes damage to central nervous system-single exposure
- May cause damage to kidney-single exposure
- Causes damage to liver, central nervous system or 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, 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:

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- 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	75-85	78-93-3
Carbon black	1-5	1333-86-4

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 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.

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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
Carbon black	:3.5mg/cm ³
ACGIH STEL(ppm)	
2-butanone	:300
Carbon black	:None known

9 Physical and chemical properties

Appearance	
Physical state	:Liquid
Color	:Black
Odor	:Solvent odor
Boiling point ²⁾	:80°C (2-butanone)
Flash point	:-5.6°C (closed cup)
Upper/lower flammability or explosive limits ²⁾	:Lower 1.8 vol%、Upper 11.5 vol%
Vapor pressure ²⁾	:10.5kPa (20°C) (2-butanone)
Vapor density (Air=1) ²⁾	:2.41 (2-butanone)
Relative density	:0.86(20°C)
Solubility (Water) ²⁾	:29g/100mL (20°C) (2-butanone)
Partition coefficient: n-octanol/water ²⁾	:0.29 (2-butanone)
Auto-ignition temperature ²⁾	: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

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11 Toxicological information

Acute toxicity:

2-butanone
LD50(oral,rat): 2737mg/kg(TXAPA9 19, 699, 1971)
LCLo(ihl,rat): 23500mg/m³/8h(AIHAAP 20, 364, 1959)
LD50(skin,rabbit): 6480mg/kg(SHELL* MSDS-5390-4)
TCLo(ihl,human): 1000mg/m³(VCVGK* -, 417, 1994)
LDLo(oral,human): 714.3mg/kg(VCVGK* -, 417, 1994)
Carbon black
None known

Skin corrosion/irritation:

2-butanone
Skin; rabbit; 402mg/24h; Mild(TXAPA9 19, 276, 1971)
Carbon black
None known

Serious eye damage/irritation:

2-butanone
Eye; rabbit; 80mg(TXAPA9 19, 276, 1971)
Carbon black
None known

Respiratory or skin sensitization:

2-butanone
Not available
Carbon black
None known

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)
Carbon black
None known

Carcinogenicity:

2-butanone
Not available
Carbon black
None known

Reproductive toxicity:

2-butanone
TCLo(ihl,rat): 2900mg/m³(female 6-10 D preg); Specific Developmental Abnormalities -
craniofacial(VCVGK* -, 418, 1994)
Carbon black
None known

STOST-single exposure:

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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)

Carbon black

None known

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)

Carbon black

None known

Aspiration hazard:**2-butanone**

Not available

Carbon black

None known

12 Ecological information

Ecotoxicity¹⁾:**2-butanone**

mosquito fish(96h-LC50(mg/L)):5600

daphnids(48h-LC50(g/L)):>1000

Carbon black

None known

Persistence and degradability:**2-butanone**

Not available

Carbon black

None known

Bioaccumulative potential:**2-butanone**

Not available

Carbon black

None known

Mobility in soil:**2-butanone**

Not available

Carbon black

None known

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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