

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

1119K

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### Use of the substance/mixture

Printing Ink

### 1.3. Details of the supplier of the safety data sheet

Company name: Hitachi Europe GmbH  
Street: Am Seestern 18  
Place: D-40547 Duesseldorf  
Telephone: +49 (0) 211 52 83-0  
Telefax: +49 (0) 211 52 83-649  
Responsible Department: Responsible for the safety data sheet: sds@gbk-ingelheim.de

### 1.4. Emergency telephone number:

INTERNATIONAL: +49 - (0) 6132 - 84463, GBK GmbH (24h - 7d/w - 365d/a)  
England and Wales: NHS Direct - 0845 4647; Scotland: NHS 24 - 08454 24 24  
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## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture according to 1272/2008/EC

Hazard categories:

Flammable liquid: Flam. Liq. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Specific target organ toxicity - single exposure: STOT SE 3

Hazard Statements:

Highly flammable liquid and vapour.

Causes serious eye irritation.

May cause drowsiness or dizziness.

### 2.2. Label elements

#### Hazard components for labelling

Butanone

Signal word:

Danger

Pictograms:



#### Hazard statements

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

#### Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P261 Avoid breathing vapour.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

#### Special labelling of certain mixtures

EUH066 Repeated exposure may cause skin dryness or cracking.

### **2.3. Other hazards**

Vapours may form explosive mixture with air.

## **SECTION 3: Composition/information on ingredients**

### **3.2. Mixtures**

#### **Chemical characterization**

Makeup for printing ink

#### **Hazardous components**

| CAS No  | Chemical name   |              |                  | Quantity  |
|---------|---|--------------|------------------|-----------|
|         | EC No   | Index No     | REACH No         |           |
|         | Classification according to Regulation (EC) No. 1272/2008 [CLP] |              |                  |           |
| 78-93-3 | Butanone  |              |                  | 80 - 90 % |
|         | 201-159-0   | 606-002-00-3 | 01-2119457290-43 |           |
|         | Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066    |              |                  |           |

Full text of H and EUH statements: see section 16.

## **SECTION 4: First aid measures**

### **4.1. Description of first aid measures**

#### **General information**

Remove contaminated soaked clothing immediately.

Keep warm and calm injured person.

Take away from danger area and lay down affected person.

#### **After inhalation**

Move to fresh air in case of accidental inhalation of vapours or decomposition products.

Refer for medical treatment.

#### **After contact with skin**

Wash off with soap and plenty of water.

Consult a doctor if skin irritation persists.

#### **After contact with eyes**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Seek medical treatment by eye specialist.

#### **After ingestion**

Induce vomiting only upon the advice of a physician.

Immediately give plenty of water (if possible charcoal slurry).

Do not induce vomiting.

Summon a doctor immediately.

### **4.2. Most important symptoms and effects, both acute and delayed**

Causes serious eye irritation.

May cause drowsiness or dizziness.

Repeated exposure may cause skin dryness or cracking.

### **4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptoms.

## **SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

#### **Suitable extinguishing media**

Alcohol-resistant foam, dry chemical, carbon dioxide (CO<sub>2</sub>), water-spray.

#### **Unsuitable extinguishing media**

Full water jet.

### **5.2. Special hazards arising from the substance or mixture**

Fire may produce:

Carbon monoxide and carbon dioxide

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### **5.3. Advice for firefighters**

Use breathing apparatus with independent air supply.  
Protective suit.

#### **Additional information**

Vapours are heavier than air and spread along ground.  
The vapour/air mixture is explosive, even in empty, uncleaned receptacles.  
Risk of bursting of the receptacle.  
Cool containers at risk with water spray jet.  
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

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## **SECTION 6: Accidental release measures**

### **6.1. Personal precautions, protective equipment and emergency procedures**

In case of vapour formation use respirator.  
Ensure adequate ventilation.  
Use personal protective clothing.  
Keep away sources of ignition.

### **6.2. Environmental precautions**

Do not discharge into the drains/surface waters/ground water.

### **6.3. Methods and material for containment and cleaning up**

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).  
Shovel into suitable container for disposal.  
Clean contaminated surface thoroughly.

### **6.4. Reference to other sections**

Observe protective instructions (see Sections 7 and 8).  
Information for disposal see section 13.

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## **SECTION 7: Handling and storage**

### **7.1. Precautions for safe handling**

#### **Advice on safe handling**

Keep container tightly closed.  
Do not breathe vapours.  
Use only in thoroughly ventilated areas.  
Avoid contact with skin, eyes and clothing.

#### **Advice on protection against fire and explosion**

Do not smoke - volatile.  
Keep away from heat and sources of ignition.  
Take precautionary measures against static discharges.  
Use only explosion-proof equipment.

### **7.2. Conditions for safe storage, including any incompatibilities**

#### **Requirements for storage rooms and vessels**

Keep container tightly closed in a dry, cool and well-ventilated place.  
Pay attention to anti-explosion rules.

#### **Advice on storage compatibility**

Incompatible with strong acids and oxidizing agents.

#### **Further information on storage conditions**

Keep away from food, drink and animal feeding stuffs.

### **7.3. Specific end use(s)**

Printing Ink

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## **SECTION 8: Exposure controls/personal protection**

### **8.1. Control parameters**

**Exposure limits (EH40)**

| CAS No  | Substance                         | ppm | mg/m <sup>3</sup> | fibres/ml | Category      | Origin |
|---------|-----------------------------------|-----|-------------------|-----------|---------------|--------|
| 78-93-3 | Butan-2-one (methyl ethyl ketone) | 200 | 600               |           | TWA (8 h)     | WEL    |
|         |                                   | 300 | 899               |           | STEL (15 min) | WEL    |

**Biological Monitoring Guidance Values (EH40)**

| CAS No  | Substance   | Parameter   | Value     | Test material | Sampling time |
|---------|-------------|-------------|-----------|---------------|---------------|
| 78-93-3 | Butan-2-one | butan-2-one | 70 µmol/L | urine         | Post shift    |

**8.2. Exposure controls**
**Appropriate engineering controls**

Ensure adequate ventilation, especially in confined areas.

**Protective and hygiene measures**

Do not inhale vapours.

Avoid contact with eyes and skin.

Wash hands before breaks and immediately after handling the product.

When using do not eat, drink or smoke.

Take off immediately all contaminated clothing.

**Eye/face protection**

Tightly fitting goggles (EN 166).

Eye wash bottle with pure water (EN 15154).

**Hand protection**

Protective gloves resistant to chemicals made off viton, minimum coat thickness 0,7 mm, permeation resistance (wear duration) approx. 10 minutes, i.e. protective glove < Vitoject 890 > made by www.kcl.de.

This recommendation refers exclusively to the chemical compatibility and the lab test conforming to EN 374 carried out under lab conditions.

Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves.

**Skin protection**

Long sleeved clothing (EN 368).

**Respiratory protection**

In case of insufficient ventilation wear suitable respiratory equipment (gas filter type A) (EN 14387).

**SECTION 9: Physical and chemical properties**
**9.1. Information on basic physical and chemical properties**

|                 |              |
|-----------------|--------------|
| Physical state: | Liquid       |
| Colour:         | Black        |
| Odour:          | Solvent-like |

**Changes in the physical state**

|  |                                   |    |
|--|-----------------------------------|----|
| Melting point:                           | - 87 °C                           | *) |
| Initial boiling point and boiling range: | 80 °C                             | *) |
| Flash point:                             | - 4,6 °C                          |    |
| Lower explosion limits:                  | 1,8 vol. %                        | *) |
| Upper explosion limits:                  | 11,5 vol. %                       | *) |
| Ignition temperature:                    | 505 °C                            | *) |
| Vapour pressure:                         | 105 hPa                           | *) |
| Density (at 20 °C):                      | 0,87 g/cm <sup>3</sup>            |    |
| Water solubility:<br>(at 20 °C)          | Miscible                          |    |
| Partition coefficient:                   | (n-octanol/water) Log Pow: 0,29 * |    |
| Solvent content:                         | < 90 %                            |    |

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**9.2. Other information**

\*) Butanone

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**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No decomposition if stored and applied as directed.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

Reactions with acids and strong oxidizing agents.

**10.4. Conditions to avoid**

Vapour/air mixtures are explosive at intensive warming.  
Heating can release vapours which can be ignited.

**10.5. Incompatible materials**

Strong acids and oxidizing agents

**10.6. Hazardous decomposition products**

Carbon monoxide and carbon dioxide.

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**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Acute toxicity**

Based on available data, the classification criteria are not met.

No toxicological data available.

Butanone

LD50/oral/rat: 2737 mg/kg

LD50/dermal/rabbit: 6480 mg/kg

**Irritation and corrosivity**

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

**Sensitising effects**

Based on available data, the classification criteria are not met.

**STOT-single exposure**

May cause drowsiness or dizziness. (Butanone)

**Severe effects after repeated or prolonged exposure**

Repeated exposure may cause skin dryness or cracking.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Additional information on tests**

Classification in compliance with the assessment procedure specified in the Regulation (EC) no 1272/2008.

**Practical experience**

**Other observations**

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Repeated exposure may cause skin dryness or cracking.

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**SECTION 12: Ecological information**

**12.1. Toxicity**

Ecological data are not available.

**12.2. Persistence and degradability**

Butanone

Readily biodegradable.

**12.3. Bioaccumulative potential**

Butanone

Low bio-accumulation can be estimated because of low log Po/w. (Log Pow: 0,29)

**12.4. Mobility in soil**

No data available.

**12.5. Results of PBT and vPvB assessment**

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

**12.6. Other adverse effects**

Low hazard to waters.

**Further information**

Do not flush into surface water or sanitary sewer system.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Advice on disposal**

Where possible recycling is preferred to disposal.

Can be incinerated, when in compliance with local regulations.

**Waste disposal number of waste from residues/unused products**

080312 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of printing inks; waste ink containing hazardous substances  
Classified as hazardous waste.

**Contaminated packaging**

Empty containers should be taken for local recycling, recovery or waste disposal.

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

Contaminated packagings are to be treated like the product itself.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

**14.1. UN number:** UN 1210  
**14.2. UN proper shipping name:** Printing ink  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
Hazard label: 3



Classification code: F1  
Limited quantity: 5 L / 30 kg  
Excepted quantity: E2  
Transport category: 2  
Hazard No: 33  
Tunnel restriction code: D/E

**Inland waterways transport (ADN)**

**14.1. UN number:** UN 1210  
**14.2. UN proper shipping name:** Printing ink  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
Hazard label: 3



Classification code: F1  
 Limited quantity: 5 L / 30 kg  
 Excepted quantity: E2

**Marine transport (IMDG)**

**14.1. UN number:** UN 1210  
**14.2. UN proper shipping name:** Printing ink  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
 Hazard label: 3



Marine pollutant: No  
 Limited quantity: 5 L / 30 kg  
 Excepted quantity: E2  
 EmS: F-E, S-D

**Air transport (ICAO)**

**14.1. UN number:** UN 1210  
**14.2. UN proper shipping name:** Printing ink  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
 Hazard label: 3



Limited quantity Passenger: 1 L  
 Passenger LQ: Y341  
 Excepted quantity: E2  
 IATA-packing instructions - Passenger: 353  
 IATA-max. quantity - Passenger: 5 L  
 IATA-packing instructions - Cargo: 364  
 IATA-max. quantity - Cargo: 60 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

**14.6. Special precautions for user**

Handle in accordance with good industrial hygiene and safety practice.

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

The transport takes place only in approved and appropriate packaging.

**SECTION 15: Regulatory information**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**EU regulatory information**

2004/42/EC (VOC): < 90%

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D): 1 - slightly water contaminating

**Additional information**

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

**15.2. Chemical safety assessment**

For this substance a chemical safety assessment has not been carried out.

**SECTION 16: Other information**

**Abbreviations and acronyms**

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route

RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses

ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure

IMDG = International Maritime Code for Dangerous Goods

IATA/ICAO = International Air Transport Association / International Civil Aviation Organization

MARPOL = International Convention for the Prevention of Pollution from Ships

IBC-Code = International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

REACH = Registration, Evaluation, Authorization and Restriction of Chemicals

CAS = Chemical Abstract Service

EN = European norm

ISO = International Organization for Standardization

DIN = Deutsche Industrie Norm

PBT = Persistent Bioaccumulative and Toxic

vPvB = Very Persistent and very Bio-accumulative

LD = Lethal dose

LC = Lethal concentration

EC = Effect concentration

IC = Median immobilisation concentration or median inhibitory concentration

**Relevant H and EUH statements (number and full text)**

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

EUH066 Repeated exposure may cause skin dryness or cracking.

**Further Information**

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.

The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge.

The delivery specifications are contained in the corresponding product sheet.

This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

(n.a. = not applicable; n.d. = not determined)

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*