

1. IDENTIFICATION OF PRODUCT AND COMPANY

Product Name : 70000-00034 Ink, black
Use of the substance/preparation: Ink for industrial ink jet printers (CIJ-printers)
Supplier : Paul Leibinger GmbH & Co. KG
Distributor : Redemac Inc.
 3540 Rue Griffith
 Ville Saint-Laurent (QC) H4T 1 A7
 Phone : 888-335-9570 Fax : 887-735-4087
 www.redemac.com www.leibinger-group.com

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]

| Hazard classes and Hazard categories | Hazard Statements | Classification procedure |
|--------------------------------------|-------------------|--------------------------|
| Flam. Liq. 2 | H225 | |
| Eye Irrit. 2 | H319 | |

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]



Signal word: Danger

Hazard statements for physical hazards

H225 Highly flammable liquid and vapour.

Hazard statements for health hazards

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Precautionary Statements

Prevention

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

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

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

Response

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

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.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Hazardous ingredients for labeling

butanone,

Supplemental Hazard information (EU)

Physical properties: In use may form flammable/explosive vapour-air mixture.

Health properties: Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

Adverse physicochemical effects

In the case of insufficient ventilation and/or through the formation of a explosive/highly flammable mixture is possible.

Adverse human health effects and symptoms

Prolonged/repetitive skin contact may cause skin defatting or dermatitis.

Information pertaining to special dangers for human and environment

In use, may form flammable/explosive vapour-air mixture.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Substances

not applicable

3.2. Mixtures

Hazardous ingredients (Classification according to 67/548/EEC)

| CAS No | EC No | Name | [% weight] | Classification according to Regulation (EC) No 1272/2008 [CLP/ GHS] |
|----------|-----------|----------------------|------------|---------------------------------------------------------------------|
| 78-93-3 | 201-159-0 | Butanone | 75-85 | Flam. Liq. 2, H225 Eye Irrit. 2, H319 / STOT SE 3, H336 |
| 107-98-2 | 203-539-1 | 1-methoxy-2-propanol | <5 | Flam. Liq. 3, H226 STOT SE 3, H336 |

4. FIRST AID MEASURES

4.1. Description of first aid measures

General information

Remove contaminated soaked clothing immediately.

In the event of persistent symptoms receive medical treatment.

Take affected person into fresh air.

Take away from danger area and lay down affected person. In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

In case of inhalation

Ensure of fresh air.

In the event of symptoms refer for medical treatment.

In case of skin contact

In case of contact with skin wash off with soap and water.

Consult a doctor if skin irritation persists.

In case of eye contact

In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

In case of ingestion

Refer to medical treatment.

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

Physician's information / possible symptoms

In case of inhalation of plenty of solvent-containing fumes the following symptoms may occur:

Unconsciousness
Depression of central nervous system
Confusion

Physician's information / possible dangers

In case of severe poisoning depressions of central nervous system, hypotension, bradycardia and hypothermia may occur.

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

No information available.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam
Dry powder, ABC powder
Carbon dioxide
Water spray jet

5.2. Special hazards arising from the substance or mixture

Nitrogen gases (NO_x)
Carbon monoxide (CO)
Carbon dioxide (CO₂)
Hydrogen chloride (HCl)

5.3. Advice for firefighters

Special protective equipment for fire-fighters

Use breathing apparatus with independent air supply.

Additional information

Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Ensure adequate ventilation.
Use personal protective clothing.
Keep away sources of ignition.

6.2. Environmental precautions

Do not discharge into the drains or bodies of water..
Do not seep away runed out product into ground or body of water.
Do not discharge into the subsoil/soil.

6.3. Methods and material for containment and cleaning up

Take up with absorbent material (e.g. sand, kieselguhr, acid binder, general-purpose binder, sawdust).

Additional Information

Informations for disposal see chapter 13.

6.4. Reference to other sections

No information available.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling

Take measures against electrostatically charging.

Provide good room ventilation even at ground level (vapours are heavier than air).

Take the usual precautions when handling with chemicals.

General protective measures

Do not inhale vapours.

Avoid contact with the skin.

Hygiene measures

Do not eat or drink when working.

Remove soaked clothing immediately.

After work wash thoroughly.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking

The product is easy combustible.

Take precautionary measures against static discharges.

Formation of explosive gas mixtures in air.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in closed original container.

Ventilate store-rooms thoroughly.

Advice on storage compatibility

Do not store together with food.

Do not store together with oxidizing agents.

Store at cool and aired place and at distance to acids and alkalis.

Further information on storage conditions

Keep container tightly closed and store at cool and aired place.

Protect from light.

Do not keep long-term to heat.

Storage temperature between 10°C to 30°C (=50°F to 86°F).

Keep in a cool place, heat causes increase in pressure and risk of bursting.

7.3. Specific end use(s)

Ink for industrial InkJet-printers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Indicative occupational exposure limit values (91/322/EEC, 2000/39/EC, 2006/15/EC or 2009/161/EU)

| CAS No | Name | Code | [mg/m ³] | [ppm] | Remark |
|----------|----------------------|------------|----------------------|-------|--------|
| 78-93-3 | Butanone | 8 hours | 600 | 200 | |
| | | Short-term | 900 | 300 | |
| 107-98-2 | 1-methoxy-2-propanol | 8 hours | 375 | 100 | skin |
| | | Short-term | 568 | 150 | |

8.2. Exposure controls

Respiratory protection

Breathing apparatus in the event of high concentrations.

Hand protection

Gloves (solvent-resistant)

Not suitable: PVC gloves

Eye protection

tightly fitting goggles

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

| Appearance | Colour | Odour |
|------------|--------|-------------|
| Liquid | black | like ketone |

Odour threshold

No information available.

Important health, safety and environmental information

| | Value | Temperature at | Method | Remark |
|-------------------------------------------------------------|---------------------------|----------------|-----------|-------------------------------|
| pH value | No information available. | | | |
| starts to boil | > 78 °C | | | |
| Melting point / Freezing point | No information available. | | | |
| Flash point | -6.0 °C | | ASTM D 93 | |
| Vapourisation rate | No information available | | | |
| Flammable (solid) | No information available. | | | |
| Flammability (gas) | No information available. | | | |
| Ignition temperature | > 250 °C | | | (information concern solvent) |
| Self ignition temperature | No information available. | | | |
| Lower explosion limit | 1,5Vol-% | | | (information concern solvent) |
| Upper explosion limit | 14 Vol-% | | | (information concern solvent) |
| Vapour pressure | < 110 kPa | 50 °C | | |
| Relative density | 0,84 - 0,88 g/cm3 | 20 °C | | |
| Vapour density | No information available. | | | |
| Solubility in water | Forms colloidal solution | | | |
| Solubility/other | No information available. | | | |
| Partition coefficient noctanol/ water (log PO/W) | No information available. | | | |
| Decomposition temperature | No information available. | | | |
| Viscosity dynamic | 3 - 6 mPa*s | 20 °C | | |

Oxidising properties

No information available.

Explosive properties

No information available.

9.2. Other information

Vapours are heavier than air.
flammable liquid

10. STABILITY AND REACTIVITY

10.1. Reactivity

No information available.

10.2. Chemical stability

No information available.

10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

Reactions with acids and strong oxidising agents.

Reactions with alkalis.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

Carbon monoxide and carbon dioxide.

Nitrous oxides (NO_x)

Hydrogen chloride (HCl)

Thermal decomposition

Remark No decomposition if used as directed.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity/Irritability/Sensitization

| | Value/Validation | Species | Method | Remark |
|------------------------------|------------------|---------|--------|-----------------------------------------|
| LD50 acute oral | 3300 mg/kg | rat | | Information concerns to main component. |
| LD50 acute dermal | 5000 mg/kg | rabbit | | |
| LC50 acute inhalation | 36 mg/l (4 h) | rat | | |
| Irritability eye | strong irritant | | | |

Experiences made from practice

May be absorbed through the skin.

Experiences at humans: may cause hypersensitivity reactions on skin in case of persons suffering from hypersensitivity.

Sensitization through skin contact possible.

Has a degreasing effect on the skin.

Irritates respiratory tract.

Inhalation causes headache/nausea.

Irritates mucous membranes.

Inhalation causes narcotic effect/intoxication.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicological effects

| | Value | Species | Method | Validation |
|----------------|-----------------------|---------------|--------|------------|
| Fish | LC50 >100 mg/l (96 h) | Golden orfe | | |
| Daphnia | EC50 >100 mg/l (48 h) | Daphnia magna | | |

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

General regulation

Do not allow uncontrolled leakage of product into the environment.

Product is not allowed to be discharged into the ground water or aquatic environment.

Product is not allowed to be discharged into aquatic environment, drains or sewage treatment plants.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste code No.

08 03 12*

Name of waste

waste ink containing dangerous substances

Wastes marked with an asterisk are considered to be hazardous waste pursuant to Directive 2008/98/EC on hazardous waste.

Recommendations for the product

Collect waste separated in suitable, labeled and lockable containers.

Product rests: send for disposal, e.g. special waste incineration.

Recommendations for packaging

Totally emptied packaging may be treated as household waste.

14. TRANSPORT INFORMATION

| | <u>ADR/RID</u> | <u>IMDG</u> | <u>IATA-DGR</u> |
|-----------------------------------------|----------------------------|----------------------------|----------------------------|
| 14.1. UN number | 1210 | 1210 | 1210 |
| 14.2. UN proper shipping name | PRINTING INK (butanone) | PRINTING INK (butanone) | Printing ink (butanone) |
| 14.3. Transport hazard class(es) | 3 | 3 | 3 |
| 14.4. Packing group | II | II | II |
| 14.5. Environmental hazards | No | No | No |

14.6. Special precautions for user

No information available.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No information available.

Land and inland navigation transport ADR/RID

Hazard label(s) 3

tunnel restriction code D/E

Special provisions 640D

Classification code F1

Transport/further information

Regulations concerning free quantities are to be observed.

15. REGULATORY INFORMATION

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

VOC standard

VOC value: -740 g/L

15.2. Chemical Safety Assessment

No information available.

16. OTHER INFORMATION

Recommended uses and restrictions

Only for industrial usage (for industrial InkJet printers)

National and local regulations concerning chemicals shall be observed.

Further information

The information contained herein is based on the state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Wording of the R/H-phrases specified in chapter 3 (not the classification of the mixture!)

R 10 Flammable.

R 11 Highly flammable.

R 36 Irritating to eyes.

R 66 Repeated exposure may cause skin dryness or cracking.

R 67 Vapours may cause drowsiness and dizziness.

H225 Highly flammable liquid and vapour.

H226 Flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties. These products should be stored, handled, and used in conformity with any legal regulation. The information provided above is for general guidance only without responsibility, liability, and warranty on our part.