

1. IDENTIFICATION OF PRODUCT AND COMPANY

Product Name : 77001-00128 Solvent
Use of the substance/preparation: Solvent for industrial ink jet printers (CIJ-printers)
Supplier : Paul Leibinger GmbH & Co. KG
Daimlerstr. 14
78532 Tuttlingen
Germany
Phone: +49 7461 92 86-0 Fax: +49 7461 92 86-199
www.leibinger-group.com
Emergency phone : +44 (0) 1235 239 670 (24h service)
(for Transport & Environment)

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

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

Acute oral toxicity	Category 4
Acute Toxicity - Vapours	Category 4
Acute Toxicity - Dusts and Mists	Category 4
Serious Eye Damage/Eye Irritation	Category 2
Specific target organ systemic toxicity (single exposure)	Category 3
Physical hazards	Flammable liquids Category 2

2.2. Label elements

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



Signal word: Danger

Hazard statements:

H302 - Harmful if swallowed
H319 Causes serious eye irritation.
H332 - Harmful if inhaled
H225 Highly flammable liquid and vapour.
EUH066 - Repeated exposure may cause skin dryness or cracking

Precautionary Statements

P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell
P280 - Wear eye protection/ face protection
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
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P233 - Keep container tightly closed

Hazardous ingredients for labeling

butanone

2.3. Other hazards

Adverse physicochemical effects

In the case of insufficient ventilation and/or through the formation of an 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	60-70	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
64-17-5	200-578-6	Ethyl Alcohol	20-30	Flam. Liq. 2, H225
65-56-1	200-659-6	Methyl alcohol	1-5	Acute Tox. 3, H301 Acute Tox. 3, H311 Flam. Liq. 2, H225 STOT SE 1, H370 Acute Tox. 3, H331

For the full text of the H-phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

4.1. Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance.

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately if irritation develops and persists.

Skin contact

Wash off immediately with soap and plenty of water. Use a mild soap if available. Rinse immediately with plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation develops, get medical attention.

Inhalation

If breathed in, move person into fresh air. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.

Ingestion

If swallowed, DO NOT induce vomiting. Call a physician or Poison Control Centre immediately. Never give anything by mouth to an unconscious person.

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

Notes to Physician Treat symptomatically

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Foam. Carbon dioxide (CO₂). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Extinguishing media which shall not be used for safety reasons

No information available

5.2. Special hazards arising from the substance or mixture

Carbon monoxide (CO)

Carbon dioxide (CO₂)

Burning produces obnoxious and toxic fumes

5.3. Advice for firefighters

Special protective equipment for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove all sources of ignition. Ventilate the area. Avoid breathing dust or vapor. Avoid contact with skin, eyes and clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2. Environmental precautions

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3. Methods and material for containment and cleaning up

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Do not use sparking tools

Additional Information

Information for disposal see chapter 13.

6.4. Reference to other sections

See section 12 for additional information.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling

Take measures against electrostatically charging.

Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Remove and wash contaminated clothing before re-use. Discard contaminated shoes. When using do not smoke. Take notice of the directions of use on the label. Do not take internally. Harmful or fatal if swallowed.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep out of the reach of children. Keep away from heat and sources of ignition.

7.3. Specific end use(s)

Solvent for industrial InkJet printers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Exposure limits:

CAS No	Name	European Union	United Kingdom	Germany
64-17-5	Ethyl Alcohol		STEL: 3000 ppm STEL: 5760 mg/m ³ TWA: 1000 ppm TWA: 1920 mg/m ³	TWA/MAK: 500 ppm TWA/MAK: 960 mg/m ³ Peak: 1000 ppm Peak: 1920 mg/m ³ TWA/AGW: 500 ppm TWA/AGW: 960 mg/m ³
65-56-1	Methyl alcohol	TWA: 200 ppm TWA: 260 mg/m ³ Skin	STEL: 250 ppm STEL: 333 mg/m ³ TWA: 200 ppm TWA: 266 mg/m ³ Skin	TWA/MAK: 200 ppm TWA/MAK: 270 mg/m ³ Peak: 800 ppm Peak: 1080 mg/m ³ TWA/AGW: 200 ppm TWA/AGW: 270 mg/m ³ Skin
78-93-3	butanone		STEL: 300 ppm STEL: 899 mg/m ³ TWA: 200 ppm TWA: 600 mg/m ³ Skin	TWA/MAK: 200 ppm TWA/MAK: 600 mg/m ³ Peak: 200 ppm Peak: 600 mg/m ³ TWA/AGW: 200 ppm TWA/AGW: 600 mg/m ³ Skin

Derived No Effect Level (DNEL)

No information available

Predicted No Effect Concentration (PNEC)

No information available

8.2. Exposure controls

Engineering Measures

Use ventilation adequate to keep exposures below recommended exposure limits. In case of insufficient ventilation, wear suitable respiratory equipment.

Personal protective equipment

Eye Protection

Ensure that eyewash stations and safety showers are close to the workstation location. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield

Skin Protection

Wear protective gloves/clothing. Solvent-resistant apron and boots

Hand Protection

Nitrile rubber. Neoprene gloves.

Respiratory Protection

Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust). Respirator with a vapour filter

Environmental exposure controls

No information available

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Colour	Odour
Liquid	colorless, clear	like ketone

Odour threshold

No information available.

Important health, safety and environmental information

	Value
pH value	No information available.
Melting point	No information available.
Freezing point	No information available.
Boiling point:	>149°C
Flash point	-9.0 °C
Evaporation rate	No information available
Flammable (solid)	No information available.
Flammability (gas)	No information available.
Vapour pressure	No information available.
Vapour density	heavier than air.
Self ignition temperature	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Specific gravity	0,8
Solubility in water	No information available.
Solubility/other	No information available.
Decomposition temperature	No information available.
Viscosity dynamic	No information available.
Solvent concentration	100 %

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

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal conditions.

10.4. Conditions to avoid

Heat, flames and sparks

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Reducing agents

10.6. Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapours. Carbon dioxide (CO₂). Carbon monoxide

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Component	LD50	LD50 Dermal	LC50 Inhalation
Butanone	2737 mg/kg (Rat)	6480 mg/kg (Rabbit)	
Ethyl alcohol	7060 mg/kg (Rat)		124.7 mg/L (Rat) 4 h
Methyl alcohol	5628 mg/kg (Rat)	15800 mg/kg (Rabbit)	64000 ppm (Rat) 4 h 83.2 mg/L (Rat) 4 h

Irritation	No information available
Corrosivity	No information available
Sensitisation	No information available
Mutagenic Effects	No information available
Carcinogenic effects	No information available
Reproductive Effects	No information available
Developmental hazard	No information available
STOT - single exposure	No information available
STOT - repeated exposure	No information available
Aspiration Hazard	No information available

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicological effects

Component	Algae	Fish	Water Flea
Methyl ethyl ketone (Butanone)		96h LC50 Pimephales promelas: 3130 - 3320 mg/L [flow-through]	48h EC50 Daphnia magna: 4025 - 6440 mg/L [static] 48h EC50 Daphnia magna: 5091 mg/L 48h EC50 Daphnia magna: >520 mg/L
Ethyl alcohol		96h LC50 Oncorhynchus mykiss: 12.0 - 16.0 mL/L [static] 96h LC50 Pimephales promelas: 13400 - 15100 mg/L [flow-through] 96h LC50 Pimephales promelas: >100 mg/L [static]	48h LC50 Daphnia magna: 9268 - 14221 mg/L 24h EC50 Daphnia magna: 10800 mg/L
Methyl alcohol		96h LC50 Lepomis macrochirus: 13500 - 17600 mg/L [flow-through] 96h LC50 Oncorhynchus mykiss: 18 - 20 mL/L [static] 96h LC50 Oncorhynchus mykiss: 19500 - 20700 mg/L [flow-through] 96h LC50 Pimephales promelas: 28200 mg/L [flow-through] 96h LC50 Pimephales promelas: >100 mg/L [static]	

12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

Component	log Pow
Ethyl alcohol	-0.32
Methyl alcohol	-0.77

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 from Residues / Unused Products

Dispose of in accordance with local regulations

Contaminated Packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

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 RELATED MATERIAL (butanone)	PRINTING INK RELATED MATERIAL (butanone)	PRINTING INK RELATED MATERIAL (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

Regulation (EC) No. 1907/2006 (REACH), Article 57

This product does not contain substances of very high concern (Regulation (EC) No. 1907/2006 (REACH), Article 57)

15.2. Chemical Safety Assessment

No information available.

16. OTHER INFORMATION

Recommended uses and restrictions

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!)

Text of R phrases mentioned in Section 3

R11 - Highly flammable

R66 - Repeated exposure may cause skin dryness or cracking

R67 - Vapours may cause drowsiness and dizziness

R36 - Irritating to eyes

R39/23/24/25 - Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed

R23/24/25 - Toxic by inhalation, in contact with skin and if swallowed

R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed

R68/20/21/22 - Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed

Full text of H-Statements referred to under sections 2 and 3

H301 - Toxic if swallowed

H311 - Toxic in contact with skin

H225 - Highly flammable liquid and vapor

H370 - Causes damage to organs (a,b,c) if inhaled

H331 - Toxic if inhaled

H336 - May cause drowsiness or dizziness

H319 - Causes serious eye irritation

EUH066 - Repeated exposure may cause skin dryness or cracking

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.