1. IDENTIFICATION OF PRODUCT AND COMPANY

Product Name	:	**77001-00003 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**

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.
P370 + P378 In case of fire: Use ... to extinguish.

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

Hazardous ingredients for labeling:
Butanone

Supplemental Hazard information (EU)
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 defattening 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

CAS No	EC No	Name	[% weight]	Classification according to Regulation (EC) No 1272/2008 [CLP/ GHS]
67-64-1	200-662-2	Acetone	<5	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
78-93-3	201-159-0	Butanone	70-88	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
141-78-6	205-500-4	Ethyl-acetate	<2	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
Carbon dioxide
Water spray jet

5.2. Special hazards arising from the substance or mixture
Hydrogen chloride (HCl), Carbon monoxide (CO), Carbon dioxide (CO2)

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 alkalies.

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)
Solvent 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/m3]	[ppm]	Remark
67-64-1	acetone	8 hours	1210	500	
107-98-2	1-methoxy-2-propanol	8 hours	375	100	skin
		Short-term	568	150	
78-93-3	butanone	8 hours	600	200	skin
		Short-term	900	300	

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	clear	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	> 75 °C			
Melting point / Freezing point	No information available.			
Flash point	-5.0 °C		ASTM D 93	
Vapourisation rate	No information available			
Flammable (solid)	No information available.			
Flammability (gas)	No information available.			
Ignition temperature	> 260 °C		(information concern solvent)	
Self ignition temperature	No information available.			
Lower explosion limit	1,8 Vol-%		(information concern solvent)	
Upper explosion limit	14 Vol-%		(information concern solvent)	
Vapour pressure	< 110 kPa	50 °C		
Relative density	0,79 - 0,82 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 liqiud

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 alkalies.

10.5. Incompatible materials
No information available.

10.6. Hazardous decomposition products
Carbon monoxide and carbon dioxide.
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

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 (48 h)	Golden orfe		
Daphnia	EC50 >100 mg/l	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.	**Name of waste**
08 03 12*	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

	ADR/RID	IMDG	IATA-DGR
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

VOC standard
VOC value: -805 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 H-phrases specified in chapter 3 (not the classification of the mixture!)
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.