1. IDENTIFICATION OF PRODUCT AND COMPANY

Product Name	:	**71000-00002 Ink, silver-grey**
Use of the substance/preparation:		**Ink 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	**H31**	
Spec. Tar. Organ tox. 3	**H336**	

2.2. Label elements
Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]

Signal word: Danger

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/sparks/open flames/hot surfaces – No smoking
P233 Keep container tightly closed
P240 Ground/bond container and receiving equipment
P241 Use explosion-proof electrical/ventilating/light/…/equipment
P242 Use only non-sparking tools
P243 Take precautionary measures against static discharge
P261 Avoid breathing dust/fume/gas/mist/vapours/spray
P264 Wash thoroughly after handling
P271 Use only outdoors or in a well-ventilated area
P280 Wear protective gloves/protective clothing/eye protection/face protection
P312 Call a POISON CENTER or doctor/physician if you feel unwell
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

P305+P351+P338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P337+P313 Get medical advice/attention
P405 Store locked up
P403+P233 Store in a well ventilated place. Keep container tightly closed
P403+P235 Store in a well ventilated place. Keep cool
P501 Dispose of contents/container in accordance with applicable local, state, or federal regulations

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 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 (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	50-60	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
123-86-4	204-658-1	n-Butyl acetate	5-10	Flam. Liq. 2, H225 STOT SE 3, H336

4. FIRST AID MEASURES

4.1. Description of first aid measures
General advice:
Show this safety datasheet to the doctor in attendance.

In case of inhalation
Move exposed person to fresh air at once. Perform artificial respiration if breathing has stopped. Keep affected person warm and at rest. Seek medical attention.

In case of eye contact
Promptly wash eyes with plenty of water while lifting the eyelids. Remove contact lenses, if worn. Continue to rinse for at least 15 minutes. Seek medical attention, preferably with an ophthalmologist.

In case of skin contact
Remove contaminated clothing. Wash affected area with plenty of soap and water. Seek medical attention if irritation develops or persists.

In case of ingestion
NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! If affected person is conscious and alert, give 2 to 3 glasses of water to dilute the swallowed material. Do not induce vomiting. If vomiting occurs, the head should be kept low so the stomach vomit does not enter the lungs. Seek medical attention.

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: Butanone is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity when deciding whether to induce vomiting. Preexisting disorders of the following organs may be aggravated by exposure to this material: skin, lungs (for example, asthma-like conditions).

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media
Alcohol-resistant foam
Dry powder
Water spray jet

UNUSUAL FIRE & EXPLOSION HAZARDS: Vapors from this product may travel or be moved by air currents and could be ignited by any source of ignition, including static electricity. Contains nitrocellulose: Dried ink is flammable and should be extinguished with large quantities of water. Do not use carbon dioxide, foam, dry powder or sand to extinguish dried ink fire.

5.2. Special hazards arising from the substance or mixture

Hazardous Combustion Products: Fire creates toxic gases/vapors/fumes or carbon monoxide (CO), carbon dioxide (CO2) and/or nitrous oxides.

5.3. Advice for firefighters

Special Procedures: Keep run-off water out of sewer and water sources. Dike for water control. If risk of water pollution occurs, notify appropriate authorities. Use water to keep fire exposed containers cool and disperse vapors. Move container from the fire area if it can be done without risk. Do not direct a solid stream of water or foam into hot, burning pools; this may cause frothing and increase fire intensity.

Personal Protective Equipment: Wear approved/certified self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Chemical splash goggles, protective clothing, gloves. Use approved respirator if air contamination is above accepted risk level.

6.2. Environmental precautions

Do not allow material to enter into public sewer system, waterway, or ground. If large amounts of material are released, report to appropriate local and/or state agencies.

6.3. Methods and material for containment and cleaning up
6.3.1 For Containment:
Ventilation. Stop leak if it can be done without risk. If needed, dike spill using absorbent or impervious material such as vermiculite, dry sand, clay, or earth.
6.3.2 Clean up and Disposal of Spill:
Collect spills with absorbent, non-combustible material into suitable containers.

6.4. Reference to other sections
No information available.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling
Handling Precautions: Keep away from heat, sparks, and open flame. Avoid spilling, skin and eye contact. Use in well ventilated area, avoid breathing vapors. Protect material from direct sunlight. Material will accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or grounding procedures. Do not pressurize, cut, heat or weld containers. Empty containers may contain product residue. Do not reuse empty containers.

7.2. Conditions for safe storage, including any incompatibilities
Storage Precautions: Keep container closed to prevent contamination. Store at an ambient temperature. Store in a cool, well ventilated place away from incompatible materials. Do not handle or store near an open flame, heat or other sources of ignition.

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

CAS No	Name	OSHA TWA	ACGIH TWA	Britain EH40	Germany
78-93-3	Butanone	200ppm	200ppm	200ppm	200ppm
123-86-4	n-Butyl Acetate	150	150	150	62

8.2 Exposure Controls
Engineering Controls: Local exhaust to minimize exposure to vapor and particulate matter.

Eye Protection: Wear safety glasses with side shields or splash proof eye goggles to prevent the possibility of eye contact.

Skin Protection: Wear protective gloves (e.g., polyvinyl alcohol, nitrile, PTFE) and lab coat to minimize possibility of skin contact.

Respiratory Protection: None expected to be needed under normal conditions. However, use NIOSH approved halfmask air purifying respirator, if needed.

Protective Equipment: Safety glasses and Gloves

OTHER PROTECTIVE EQUIPMENT: Eye bath, safety shower.
Hygienic Practices: DO NOT SMOKE IN WORK AREA! Promptly remove contaminated clothing. Wash immediately if skin becomes contaminated. Do not eat or drink in work area while using this product. Wash thoroughly at the end of the workday, before eating and using the restroom.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Colour	Odour
Liquid	grey	like ketone

Odour threshold
No information available.

Important health, safety and environmental information

Vapour pressure:	70 mmHg
Vapour density:	1.0
pH value	No information available.
Melting point / Freezing point	No information available.
Solubility in water	not soluble in water
Boiling range	> 78 °C
Flash point	-8 °C
Vapourisation rate	No information available
Flammable (solid)	No information available.
Autoignition temperature	> = 450 °C
Specific gravity:	~ 0.9 g/cm³

9.2. Other information
Vapours are heavier than air.
flammable liqiud

10. STABILITY AND REACTIVITY

10.1. Reactivity
This product will not react under normal conditions..

10.2. Chemical stability
This product is stable under normal conditions.

10.3. Possibility of hazardous reactions
Stable.

10.4. Conditions to avoid
Reactions with acids and strong oxidising agents.
Reactions with alkalies.

10.5. Incompatible materials
Chemical Incompatibilities: This product is incompatible with strong oxidizing agents, strong bases, strong alkalis, copper, copper alloys, and reducing agents.

10.6. Hazardous decomposition products
CONDITIONS TO AVOID: All ignition sources.
Hazardous Decomposition Products: Fire may create toxic gases/vapors/fumes of carbon monoxide (CO), carbon dioxide (CO2) and/or nitrous oxides.
Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Mixture Toxicity:
Oral Toxicity: 2,868mg/kg

Component Toxicity:
78-93-3 methyl ethyl ketone
Oral: 2,300 mg/kg (rat) Dermal: 5 g/kg (rabbit)

123-86-4 n-Butyl Acetate
Inhalation: 344 mg/L (rat)

Eye Irritation: Eye contact: Irritating to eyes.
Skin Irritation: Skin Contact: Irritating to skin.
Toxicity Studies: The toxicity of this product has not been tested.
Mutagenicity Data: None of the components of this product are considered to be mutagens.
Carcinogenicity Data: None of the components of this product are considered to be carcinogens.

REPRODUCTIVE/TERATOLOGY DATA:
Butanone has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

Routes of entry for this material are:
Inhalation Skin Contact Eye Contact Ingestion

Target organs:
Kidneys Liver Skin

Effects of Over Exposure
This material should not be used for any other purpose than the intended use without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

Warning! Flammable liquid and vapor. May affect the central nervous system causing dizziness, headache, or nausea. May cause eye, skin and respiratory tract irritation. Prolonged or repeated contact may dry skin, cause irritation and burns. May be harmful if inhaled or swallowed.
Symptoms include stinging, tearing redness and swelling of eyes. Can cause skin irritation. Prolonged or repeated contact may dry the skin, causing redness, burning, drying or cracking of skin. Passage of this material into the body through the skin is possible, but is unlikely that this would result in harmful effects during safe handling and use. Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury. Do not induce vomiting.

12. ECOLOGICAL INFORMATION

12.1. Toxicity
No information available.

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 (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: -664 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.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

The information and data stated herein, although in no way guaranteed, are based upon tests and reports considered to be reliable and are believed to be accurate. However, in no event will the above named supplier assume any liability whatsoever for the accuracy or completeness of the information contained herein. It is the responsibility of the person(s) and /or entities receiving these materials to determine the suitability for their intended uses and applications. All materials may present unknown hazards and should be used with caution. Potential hazards include but are not limited to those reported herein.