1. Identification of the substance / preparation and of the company

Product name	:	**BT10441 Ink, black**
Use of the substance/preparation:		**Ink for industrial ink jet printers (CIJ-printers)**
Manufacturer / Supplier	:	**Beschriftungstechnik Frank Gärtner** **Langenbergerstr. 7a** **01612 Glaubitz** **Germany** **Phone: +49 35265 526-0 Fax: +49 35265 526-45** **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 (for Transport & Environment)	:	**+44 (0) 1235 239 670 (24h service)**

2. Hazards Identification

2.1 Classification of the substance or mixture:
This product is dangerous within the meaning of Regulation (EC) No 1272/2008.

Classification according to Regulation (EC) No 1272/2008:
Hazard category:
Flammable liquids, category 2
Irritation to eyes, category 2
Specific target organ toxicity (single exposure), category 3
Aquatic chronic hazard, category 3

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.
H412 Harmful to aquatic life with long lasting effects.
EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements:
P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

2.3 Other hazards

Results of PBT and vPvB assessment
- PBT: Not applicable..
- vPvB: Not applicable.

3. Composition / information on ingredients

3.1 Substances

This product is a mixture within the meaning of GHS regulation (EC) no. 1272/2008

3.2 Mixtures

Description of the mixture:

Mixture(s) based on organic solvents, resins, cellulose nitrate, pigments
Dangerous components pursuant to REACH-Directive 67/548/EEC:

Name of substance		
CAS-No.	**EC-No.**	**REACH-No.**
Symbol of danger	**R-Phrase**	**Wt.- %**
Hazard class	**H-Phrase**	**Symbol**

Butanone		
78-93-3	201-159-0	01-2119457290-43-000
Xi, F, GHS02, GHS07	11-36-66-67	70-80
Flam. Liq.2, Eye Irrit.2, STOT SE3	225,319,336,EUH066	

C.I Solvent Black 29		
117527-94-3	403-720-7	01-2119848161-43-000
N, GHS09	51/53	5-10
Aquat. Chron. 2	411	

Cellulosenitrat <12,6%		
9004-70-0	-	
E, GHS01	3	5 - 10
Expl. 1.1	201	

2-Naphtol		
135-19-3	205-182-7	
Xn, N, GHS07, GHS09	20/22-50	<0,2
Acute Tox.4, Aquatic Acute 1	332, 302, 400	

Full text of R/H phrases see heading 16.

4. First aid measures

4.1 Description of first aid measures
Eye contact: Rinse thoroughly with plenty of water and seek medical advice immediately.
Skin contact: Wash with water and soap immediately; flush well.
In case of permanent skin irritation seek medical advice.
Inhalation: Fresh air; in case of permanent troubles seek medical advice.
Ingestion: Wash out mouth with water and seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed
Nausea
Headache
Dazed
Dizziness
Dermatitis
coma
Contraction of pupils
Liver and kidney damage are possible.
Irritant to eyes, skin and respiratory organs.

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5. Fire-fighting measures

5.1 Extinguishing media:
Suitable extinguishing media: Carbon dioxide (CO_2), powder or water spray.
Fight larger fires with water spray or alcohol resistant foam.
Unsuitable extinguishing media: Water with full jet.

5.2 Special hazards arising from the substance or mixture
Danger of bursting.
In case of fire, the following can be released:
Flammable gases/vapours
Carbon monoxide (CO) and Carbon dioxide (CO_2)

5.3 Advice for fire-fighters
Wear self-contained respiratory protective device.
Additional information
Cool endangered receptacles with water spray.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
If without risk possible, move drums with material away from dangerous area.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Keep away from ignition sources.
Avoid contact with skin and eyes.
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Take precautionary measures against static discharge.

6.2 Environmental precautions:
Suppress gases/fumes/haze with water spray.
Do not allow to enter sewers/ surface or ground water.
Do not allow to penetrate the ground/soil.

6.3 Methods and material for containment and cleaning up:
Ensure adequate ventilation.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Send for recovery or disposal in suitable receptacles.
Dispose of the material collected according to regulations.

6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
Explosion risk in case of fire.

7. Handling and storage

7.1 Precautions for safe handling
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
Open and handle receptacle with care.
Avoid splashes or spray in enclosed areas.
Prevent formation of aerosols.
Do not inhale vapours/aerosols.
Make sure that all applicable workplace limits are observed.
Avoid contact with the eyes and skin.

Information about fire - and explosion protection:
Protect from heat.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Fumes can combine with air to form an explosive mixture.
Flammable gas-air mixtures may form in empty receptacles.
Use explosion-proof apparatus / fittings and spark-proof tools.
Do not spray onto a naked flame or any incandescent material.
Emergency cooling must be available in case of nearby fire.
Keep respiratory protective device available.
Handle only outside or in explosion protected rooms.

7.2 Conditions for safe storage, including any incompatibilities
Provide floor trough without outlet.
Observe all local and national regulations for storage of water polluting products.

Information about storage in one common storage facility:
Store away from oxidizing agents.

Further information about storage conditions:
Store receptacle in a well ventilated area.
Keep container tightly sealed.
Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.
Store only outside or in explosion proof rooms.

7.3 Specific use(s)
Ink for industrial InkJet Printers

8. Exposure controls / personal protection

8.1 Control parameters

8.1 Occupational exposure limits:

CAS-No.	Name of substance	Kind of TLV	Value	Year	Country
78-93-3	Butanone	TLV	200 ml/m³]	2000	EU

8.1.2 Biological limit values:
DNELs: No Data available
PNECs: No Data available
Additional information: The lists valid during the making were used as basis.

8.1.3 Exposure limits at intended use:
No Data available

8.2 Exposure controls

8.2.1 Appropriate engineering controls:
No Data available.

8.2.2 Personal protective equipment
General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Do not eat, drink, smoke or sniff while working.
Immediately remove all soiled and contaminated clothing.
Do not carry product impregnated cleaning cloths in trouser pockets.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
Apply solvent resistant skin cream before starting work.
Wash hands before breaks and at the end of work.

Respiratory protection:
If all workplace limits are observed and good ventilation is ensured, no special precautions necessary.

Recommended filter device for short term use: Filter AX

Protection of hands:
Solvent resistant gloves
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Check the permeability prior to each anewed use of the glove.
To avoid skin problems reduce the wearing of gloves to the required minimum.
Sensibilization by the components in the glove materials is possible.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
Advice: Butyl rubber, BR

Penetration time of glove material
Penetration time: ≥ 60 minutes
Thickness: > 0,5 mm
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed. Protective gloves should be replaced at first signs of wear.

Eye protection: Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:
Solvent resistant protective clothing.
Protective clothing should be selected specifically for the working place.

Boots: antistatic

Protective suit: antistatic

8.2.3 Environmental exposure controls:
No Data available.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	liquid
Colour:	black
Odour:	ketone-like
Boiling range:	> 80 °C
Melting range:	n.d.
Relative density:	~0,9 g/cm³
Vapour pressure:	< 105 hPa
Viscosity:	6,3 - 7 mPas
pH:	n.a.
Flash point:	- 7,6 °C
Autoingnition temperature:	>505 °C
Explosion limit, lower:	1,8 %vol
Explosion limit, upper:	11,5 %vol
Water solubility:	partially miscible

9.2 Other information:
Explosion limits, vapour pressure and the auto-ignition temperatur refer to the solvents contained.
Viscosity at 20 degrees.

10. Stability and reactivity

10.1 Reactivity
See 10.3

10.2 Chemical stability
Thermal decomposition / conditions to be avoided:
Avoid impact, friction, heat, sparks, electrostatic charges.

10.3 Possibility of hazardous reactions
Violent reactions with strong alkalis and oxidizing agents.
Danger of receptacles bursting because of high vapour pressure when heated

10.4 Conditions to avoid
No further relevant information available.

10.5 Incompatible materials:
Oxidizing agents, strongly acidic and alkaline materials

10.6 Hazardous decomposition products:
Carbon monoxide (CO) and Carbon dioxide (CO_2)

11. Toxicological information

11.1 Information on toxicological effects
Primary irritant effect:
on the skin: Long or repeated contact can defat skin and may cause dermatitis.
on the eye: Causes serious eye irritation.
Sensitization: No sensitizing effects known.
CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
According to present knowledge no CMR-effects known.

12. Ecological information

12.1 Toxicity:
Aquatic toxicity: Not determined

12.2 Persistence and degradability:
Not determined

12.3 Bioaccumulative potential:
Not determined

12.4 Mobility in soil:
No further relevant information available.
Additional ecological information:
General notes:
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

12.6 Other adverse effects
No further relevant information available.

13. Disposal considerations

13.1 Waste treatment methods
Waste disposal key: According to local/national regulations.

European waste catalogue
Waste disposal key numbers from EWC have to be assigned depending on origin and processing.

Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agents: Water

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	Yes	Yes	Yes
Marine polutant	No	No	No

14.6. Special precautions for user
Warning: Flammable liquids.
Danger code (Kemler): 33
EMS Number: F-E,S-D .
Tunnel restriction code D/E
Classification code F1

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
No information available.

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
National regulations:

Information about limitation of use:
Employment restrictions concerning juveniles must be observed.

Breakdown regulations:
Critical quantity values according to the regulations on accidents should be adhered to.

Waterhazard class:
Water hazard class (Germany): 2 - Hazard for water (self classification)

15.2 Chemical safety assessment:
A Chemical Safety Assessment has not been carried out yet.

16. Other informations

Shortcuts:
n.a.: not applicable - n.d.: not determined

Abbreviations and acronyms:
n.a.: not applicable
n.d.: not determined
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organization
LEV: Local Exhaust Ventilation
RPE: Respiratory Protective Equipment
RCR: Risk Characterisation Ratio (RCR= PEC/PNEC)
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CLP: Classification, Labelling and Packaging (Regulation (EC) No. 1272/2008)
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
TRGS: Technische Regeln für Gefahrstoffe (Technical Rules for Dangerous Substances, BAuA, Germany)
DNEL: Derived No-Effect Level (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

According to Directives 67/548/EEC and 1999/45/EC:
Full text of R phrases in heading 3:
R20/22 Harmful by inhalation and if swallowed
R50 Very toxic to aquatic organisms
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R11 Highly flammable
R36 Irritating to eyes
R66 Repeated exposure may cause skin dryness or cracking
R67 Vapours may cause drowsiness and dizziness
R3 Extreme risk of explosion, by shock, friction, fire or other sources of ignition

According to Regulation (EC) No 1272/2008:
Full text of H phrases in heading 3:
H201 Exlosive; mass explosion hazard.
H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.
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 and is subject to change without notice.