BLQ 1600

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name/designation:

BLQ 1600

UFI:
A300-P0GY-Y00K-G4JX

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture:
Evaporation liquid

Relevant identified uses:

Life cycle stage [LCS]
PW: Widespread use by professional workers
Sector of uses [SU]
SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories [PROC]
PROC 4: Chemical production where opportunity for exposure arises
Environmental release categories [ERC]
ERC 4: Use of non-reactive processing aid at industrial site (no inclusion into or onto article)

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

MIG-O-MAT Mikrofügetechnik GmbH
Werksstraße 20
57299 Burbach
Telephone: +49 (0) 2736 4154 0
Telefax: +49 (0) 2736 4154 99
E-mail: info@mig-o-mat.com
Website: www.mig-o-mat.com

E-mail (competent person): reach@tuvsud.com
TÜV SÜD Industrie Service GmbH -
Environmental Service REACH -
Westendstraße 199 -
80686 Munich -
Germany
+49 (0) 89 5791 3031

1.4. Emergency telephone number

24h: +49 (0) 89 19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Hazard classes and hazard categories	Hazard statements	Classification procedure
flammable liquids *(Flam. Liq. 2)*	H225: Highly flammable liquid and vapour.	On basis of test data.
Serious eye damage/eye irritation *(Eye Irrit. 2)*	H319: Causes serious eye irritation.	Minimum classification.
STOT-single exposure *(STOT SE 3)*	H336: May cause drowsiness or dizziness.	Minimum classification.

2.2. Label elements

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

Hazard pictograms:

GHS02
Flame

GHS07
Exclamation mark

Signal word: Danger

Hazard components for labelling:
butanone

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.

Supplemental hazard information	
EUH066	Repeated exposure may cause skin dryness or cracking.

Precautionary statements Prevention	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243	Take action to prevent static discharges.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements Response	
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or 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.

Precautionary statements Storage	
P403 + P235	Store in a well-ventilated place. Keep cool.

2.3. Other hazards

Adverse physicochemical effects:
This material is combustible and can be ignited by heat, sparks, flames, or other sources of ignition (e.g. static electricity, pilot lights, or mechanical/electrical equipment).

Adverse human health effects and symptoms:
No information available.
This product does not contain a substance that has endocrine disrupting properties with respect to humans as no component meets the criteria.

Adverse environmental effects:
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.
This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no component meets the criteria.

Other adverse effects:
No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No. 1272/2008 [CLP]	Concentration
CAS No.: 78-93-3 EC No.: 201-159-0 Index No.: 606-002-00-3	**butanone** Eye Irrit. 2 (H319), Flam. Liq. 2 (H225), STOT SE 3 (H336)  Danger EUH066	80 – 90 weight-%
CAS No.: 64-17-5 EC No.: 200-578-6 Index No.: 603-002-00-5 REACH No.: 01-2119487297-23	**ethanol** Flam. Liq. 2 (H225)  Danger	10 – 20 weight-%

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove victim out of the danger area. Remove contaminated, saturated clothing. If unconscious but breathing normally, place in recovery position and seek medical advice. Do not leave affected person unattended.

Following inhalation:
Provide fresh air. In case of respiratory tract irritation, consult a physician. Get medical advice/attention if you feel unwell.

In case of skin contact:
After contact with skin, wash immediately with plenty of water and soap. If skin irritation or rash occurs: Get medical advice/attention. Take off immediately all contaminated clothing.

After eye contact:
In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

Following ingestion:
Do NOT induce vomiting.
Rinse mouth immediately and drink plenty of water.
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Self-protection of the first aider:
Use personal protection equipment.

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

Serious eye damage/eye irritation Dizziness Dizziness

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Carbon dioxide (CO_2)
Water spray
alcohol resistant foam
Extinguishing powder

Unsuitable extinguishing media:
Full water jet

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Carbon dioxide (CO_2), Hazardous combustion products
Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Hazardous combustion products:
In case of fire: Gases/vapours, toxic

5.3. Advice for firefighters
In case of fire: Wear self-contained breathing apparatus.
Wear full chemical protective clothing.

5.4. Additional information
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Beware of reignition.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Personal precautions:
Wear personal protection equipment.
Keep unprotected people away and stay on the upwind side.
Protective equipment:
Wear protective gloves/protective clothing/eye protection/face protection.
Emergency procedures:
Remove all sources of ignition. Provide adequate ventilation.

6.1.2. For emergency responders
Personal protection equipment:
Chemical protection clothing

6.2. Environmental precautions
Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up
For containment:
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

6.4. Reference to other sections
Safe handling: see section 7 Personal protection equipment: see section 8 Disposal: see section 13

6.5. Additional information
Use appropriate container to avoid environmental contamination.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures
Advices on safe handling:
Use only in well-ventilated areas.
Fire prevent measures:
Keep away from sources of ignition - No smoking.
Take precautionary measures against static discharges.
Fire class: B
Temperature Class: T1
Explosion group: II A
Environmental precautions:
See section 8.

Advices on general occupational hygiene
When using do not eat, drink or smoke. Avoid contact with eyes and skin.

7.2. Conditions for safe storage, including any incompatibilities
Technical measures and storage conditions:
Keep container tightly closed in a cool, well-ventilated place.
Requirements for storage rooms and vessels:
Keep/Store only in original container.

Take precautionary measures against static discharges.
Storage class (TRGS 510, Germany): 3 – Flammable liquids

7.3. Specific end use(s)
No data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
IOELV (EU)	**butanone** CAS No.: 78-93-3 EC No.: 201-159-0	① 200 ppm (600 mg/m³) ② 300 ppm (900 mg/m³)
TRGS 900 (DE)	**butanone** CAS No.: 78-93-3 EC No.: 201-159-0	① 200 ppm (600 mg/m³) ② 200 ppm (600 mg/m³) ⑤ (kann über die Haut aufgenommen werden) DFG, EU, H, Y
TRGS 900 (DE) from 29 Mar 2019	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 200 ppm (380 mg/m³) ② 800 ppm (1,520 mg/m³) ⑤ DFG, Y

8.1.2. Biological limit values

Limit value type (country of origin)	Substance name	Limit value	① Parameter ② Test material ③ Time of sampling: ④ Remark
TRGS 903 (DE) from 9 Nov 2015	**butanone** CAS No.: 78-93-3 EC No.: 201-159-0	2 mg/L	① 2-Butanon ② Urin ③ Expositionsende bzw. Schichtende

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
ethanol CAS No.: 64-17-5 EC No.: 200-578-6	950 mg/m³	① DNEL worker ② Long-term – inhalation, systemic effects

Substance name	PNEC Value	① PNEC type
ethanol CAS No.: 64-17-5 EC No.: 200-578-6	0.96 mg/L	① PNEC aquatic, freshwater

8.2. Exposure controls

8.2.1. Appropriate engineering controls
No data available

8.2.2. Personal protection equipment

Eye/face protection:
Eye glasses with side protection EN 166

Skin protection:
Tested protective gloves must be worn EN ISO 374
Suitable material: Butyl caoutchouc (butyl rubber)

Thickness of the glove material 0,5 mm
Breakthrough time: 60 min
In the case of wanting to use the gloves again, clean them before taking off and air them well.
Breakthrough times and swelling properties of the material must be taken into consideration.

Respiratory protection:
Respiratory protection necessary at: exceeding exposure limit values
Filtering device with filter or ventilator filtering device of type: AX

8.2.3. Environmental exposure controls
No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance
Physical state: Liquid
Colour: colourless
Odour: Isobutanol
Odour threshold: not determined

Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	6.4		② MEK
Melting point	-86 °C		② MEK
Freezing point	*not determined*		
Initial boiling point and boiling range	79 °C		② MEK
Decomposition temperature	*not determined*		
Flash point	-4 °C		② MEK
Evaporation rate	*not determined*		
Auto-ignition temperature	514 °C		② MEK
Upper/lower flammability or explosive limits	1.8 – 11.5 Vol-%		② MEK
Vapour pressure	126 hPa	20 °C	
Vapour density	*not determined*		
Density	0.81 kg/L		② MEK
Relative density	*not determined*		
Bulk density	*not determined*		
Water solubility	250 g/L	20 °C	② MEK
Partition coefficient: n-octanol/water	1.8 – 2		② MEK
Dynamic viscosity	*not determined*		
Kinematic viscosity	*not determined*		

9.2. Other information
MEK = Methylethylketon

SECTION 10: Stability and reactivity

10.1. Reactivity
This material is considered to be non-reactive under normal use conditions.

10.2. Chemical stability
The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions
Oxidising agent, strong
Ignition hazard

10.4. Conditions to avoid
Heat

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

10.5. Incompatible materials

Oxidising agent, strong
Alkali (lye), concentrated
Acid, concentrated

10.6. Hazardous decomposition products

Gases/vapours, irritant

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No. 1272/2008

butanone CAS No.: 78-93-3 EC No.: 201-159-0
LD_{50} oral: =3,300 mg/kg (Rat)
LD_{50} dermal: =5,000 mg/kg (Rabbit)
LC_{50} Acute inhalation toxicity (vapour): =34.5 mg/L 4 h (Rat)

Acute oral toxicity:
The classification criteria for this hazard class are not met by definition.

Acute dermal toxicity:
The classification criteria for this hazard class are not met by definition.

Acute inhalation toxicity:
The classification criteria for this hazard class are not met by definition.

Skin corrosion/irritation:
Repeated exposure may cause skin dryness or cracking.

Serious eye damage/irritation:
Causes serious eye irritation.

Respiratory or skin sensitisation:
The classification criteria for this hazard class are not met by definition.

Germ cell mutagenicity:
The classification criteria for this hazard class are not met by definition.

Carcinogenicity:
The classification criteria for this hazard class are not met by definition.

Reproductive toxicity:
The classification criteria for this hazard class are not met by definition.

STOT-single exposure:
May cause drowsiness or dizziness.

STOT-repeated exposure:
The classification criteria for this hazard class are not met by definition.

Aspiration hazard:
The classification criteria for this hazard class are not met by definition.

Additional information:
No data available

11.2. Information on other hazards

Endocrine disrupting properties:
This product does not contain a substance that has endocrine disrupting properties with respect to humans as no component meets the criteria.

SECTION 12: Ecological information

12.1. Toxicity

butanone CAS No.: 78-93-3 EC No.: 201-159-0
LC_{50}: >3,000 mg/L 4 d (fish)
EC_{50}: =1,382 mg/L 2 d (crustaceans)

Aquatic toxicity:
not relevant

Assessment/classification:
not relevant

Additional ecotoxicological information:
Technically correct releases of minimal concentrations to adapted biological sewage plants, will not disturb the biodegradability of activated sludge.

12.2. Persistence and degradability

butanone CAS No.: 78-93-3 EC No.: 201-159-0	
Biodegradation: Yes, rapidly	
ethanol CAS No.: 64-17-5 EC No.: 200-578-6	
Biodegradation: Yes, rapidly	

Biodegradation:
The single components are biodegradable.

12.3. Bioaccumulative potential

Partition coefficient: n-octanol/water:
1.8 – 2; Remark: MEK

Accumulation / Evaluation:
No indication of bioaccumulation potential.

12.4. Mobility in soil

No adsoption in soil or sediment.

12.5. Results of PBT and vPvB assessment

butanone CAS No.: 78-93-3 EC No.: 201-159-0	
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.	
ethanol CAS No.: 64-17-5 EC No.: 200-578-6	
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.	

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no component meets the criteria.

12.7. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product

07 07 04 *	other organic solvents, washing liquids and mother liquors

**: Evidence for disposal must be provided.*

Directive 2008/98/EC (Waste Framework Directive)

HP 3	Flammable

Waste code packaging

07 07 04 *	other organic solvents, washing liquids and mother liquors

**: Evidence for disposal must be provided.*

Waste treatment options

Appropriate disposal / Product:
Consult the appropriate local waste disposal expert about waste disposal.

BLQ 1600

SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1. UN number or ID number			
UN 1193	UN 1193	UN 1193	UN 1193
14.2. UN proper shipping name			
ETHYL METHYL KETONE (METHYL ETHYLKETONE)	ETHYL METHYL KETONE (METHYL ETHYLKETONE)	ETHYL METHYL KETONE (METHYL ETHYLKETONE)	ETHYL METHYL KETONE (METHYL ETHYLKETONE)
14.3. Transport hazard class(es)			
 3	 3	 3	 3
14.4. Packing group			
II	II	II	II
14.5. Environmental hazards			
No	not determined	No	No
14.6. Special precautions for user			
No data available	No data available	No data available	No data available

14.7. Maritime transport in bulk according to IMO instruments
No data available

SECTION 15: Regulatory information

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

15.1.1. EU legislation

Restrictions on use:

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Other regulations (EU):

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive], Hazard categories:

- P5b Flammable liquids

15.1.2. National regulations

[DE] National regulations

Störfallverordnung (12. BImschV)

for substances contained in the product:

Hazard categories:

- P5b Flammable liquids

Water hazard class

WGK:

1 - slightly hazardous to water

15.2. Chemical Safety Assessment
Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

16.1. Indication of changes
Editorial changes only

16.2. Abbreviations and acronyms

ACGIH	American Conference of Governmental Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
DIN	German Institute for Standardization / German Industrial Standard
DNEL	derived no-effect level
EC_{50}	Effective Concentration 50%
EN	European Standard
ERC	Environmental Release Category
ES	Exposure scenario
EWC	European Waste Catalogue
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
LC_{50}	Lethal (fatal) Concentration 50%
LD_{50}	Lethal (fatal) Dose 50%
MAK	Maximum concentration in the workplace air (CH)
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety & Health
OEL	Threshold Limit Value
OSHA	Occupational Safety & Health Administration
PBT	persistent and bioaccumulative and toxic
PNEC	Predicted No Effect Concentration
PROC	Process Category
REACH	Registration, Evaluation and Authorization of Chemicals
RID	Dangerous goods regulations for transport by rail
SU	use category
TRGS	Technische Regeln für Gefahrstoffe
UN	United Nations

16.3. Key literature references and sources for data

REACH Dissemination Portal
https://echa.europa.eu/de/information-on-chemicals/registered-substances

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No. 1272/2008 [CLP]

Hazard classes and hazard categories	Hazard statements	Classification procedure
flammable liquids *(Flam. Liq. 2)*	H225: Highly flammable liquid and vapour.	On basis of test data.
Serious eye damage/eye irritation *(Eye Irrit. 2)*	H319: Causes serious eye irritation.	Minimum classification.
STOT-single exposure *(STOT SE 3)*	H336: May cause drowsiness or dizziness.	Minimum classification.

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Supplemental hazard information	
EUH066	Repeated exposure may cause skin dryness or cracking.

16.6. Training advice

No data available

16.7. Additional information

This Safety Data Sheet was drawn up by TÜV SÜD Industrie Service GmbH (see below), based on data from the supplier, who is named in section 1
and who is responsible for this document.
TÜV SÜD Industrie Service GmbH

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