

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 12.12.2013

Version number 121

Revision: 12.12.2013

**1 Identification of the substance/mixture and of the company/undertaking**

**1.1 Product identifier**

Trade name: Cleaner

CAS Number:

78-93-3

EC number:

201-159-0

Index number:

606-002-00-3

**1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.

**Application of the substance / the mixture** Cleaning agent/ Cleaner

**1.3 Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:**

Bison International

Dr.A.F.Philipsstraat 9

NL-4462 EW Goes

PO Box 160

NL-4460 AD Goes

tel. +31 88 3235700

fax. +31 88 3235800

e mail: msds@bison.boltongroup.nl

**Further information obtainable from:** Bison QESH

**1.4 Emergency telephone number:** +31 88 3235700

**2 Hazards identification**

**2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008



GHS02

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

**2.2 Label elements**

**Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

**Hazard pictograms** GHS02, GHS07

**Signal word** Danger

**Hazard-determining components of labelling:**

methyl ethyl ketone

**Hazard statements**

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

(Contd. on page 2)

GB



### Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.12.2013

Version number 121

Revision: 12.12.2013

**Trade name:** Cleaner

(Contd. of page 1)

H336 May cause drowsiness or dizziness.

**Precautionary statements**

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P261 Avoid breathing vapours.
- P280 Wear eye protection / face protection.
- P370+P378 In case of fire: Use to extinguish: Water haze, Alcohol resistant foam, Fire-extinguishing powder, Carbon dioxide.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Additional information:**

EUH066 Repeated exposure may cause skin dryness or cracking.

**2.3 Other hazards****Results of PBT and vPvB assessment**

- PBT:** Not applicable.
- vPvB:** Not applicable.

**3 Composition/information on ingredients****3.1 Substances****CAS No. Description**

78-93-3 methyl ethyl ketone

**Identification number(s)****EC number:** 201-159-0**Index number:** 606-002-00-3**Dangerous components:**

CAS: 78-93-3	methyl ethyl ketone	50-100%
EINECS: 201-159-0	⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319;	
Reg.nr.: 01-2119457290-43	STOT SE 3, H336	

**4 First aid measures****4.1 Description of first aid measures****After inhalation:** Supply fresh air; consult doctor in case of complaints.**After skin contact:** Generally the product does not irritate the skin.**After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

**After swallowing:** Do not induce vomiting; call for medical help immediately.**4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

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

No further relevant information available.

**5 Firefighting measures****5.1 Extinguishing media****Suitable extinguishing agents:**

- Water haze
- Alcohol resistant foam
- Fire-extinguishing powder
- Carbon dioxide

**For safety reasons unsuitable extinguishing agents:** Water with full jet**5.2 Special hazards arising from the substance or mixture**

No further relevant information available.

(Contd. on page 3)

GB



### Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.12.2013

Version number 121

Revision: 12.12.2013

**Trade name:** Cleaner

(Contd. of page 2)

- . **5.3 Advice for firefighters**
- . **Protective equipment:** Mount respiratory protective device.
- . **Additional information**  
Cool endangered receptacles with water spray.  
Collect contaminated fire fighting water separately. It must not enter the sewage system.

### \* 6 Accidental release measures

- . **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- . **6.2 Environmental precautions:**  
Prevent seepage into sewage system, workpits and cellars.  
Do not allow to enter sewers/ surface or ground water.
- . **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- . **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.

### 7 Handling and storage

- . **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
- . **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- . **7.2 Conditions for safe storage, including any incompatibilities**
- . **Storage:**
- . **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- . **Information about storage in one common storage facility:** Not required.
- . **Further information about storage conditions:**  
Keep receptacle tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.
- . **7.3 Specific end use(s)** No further relevant information available.

### \* 8 Exposure controls/personal protection

- . **Additional information about design of technical facilities:**  
No further data; see item 7.
- . **8.1 Control parameters**
- . **Ingredients with limit values that require monitoring at the workplace:**  
**78-93-3 methyl ethyl ketone**  
WEL ( ) Short-term value: 899 mg/m<sup>3</sup>, 300 ppm  
Long-term value: 600 mg/m<sup>3</sup>, 200 ppm  
Sk, BMGV
- . **Additional information:** The lists valid during the making were used as basis.

(Contd. on page 4)

GB

### Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.12.2013

Version number 121

Revision: 12.12.2013

Trade name: Cleaner

(Contd. of page 3)

#### . 8.2 Exposure controls

##### . Personal protective equipment:

##### . General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

##### . Respiratory protection: Not required.

##### . Protection of hands:



Protective gloves

Solvent resistant gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

##### . 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.

##### . Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

##### . For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:

PVC or PE gloves

##### . Eye protection:



Tightly sealed goggles

##### . Body protection: Solvent resistant protective clothing

### \* 9 Physical and chemical properties

#### . 9.1 Information on basic physical and chemical properties

##### . General Information

##### . Appearance:

Form: Fluid

Colour: Colourless

. Odour: Like ketone

. Odour threshold: Not determined.

. pH-value: Not determined.

##### . Change in condition

Melting point/Melting range: -86.3 °C

Boiling point/Boiling range: 79 °C

. Flash point: &lt; 0 °C

(Contd. on page 5)

GB



### Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.12.2013

Version number 121

Revision: 12.12.2013

Trade name: Cleaner

(Contd. of page 4)

- . **Flammability (solid, gaseous):** Not applicable.
- . **Ignition temperature:** 514 °C
- . **Decomposition temperature:** Not determined.
- . **Self-igniting:** Not determined.
- . **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
- . **Explosion limits:**
  - Lower: 1.8 Vol %
  - Upper: 11.5 Vol %
- . **Vapour pressure at 20 °C:** 105 hPa
- . **Density at 20 °C:** 0.82 g/cm<sup>3</sup>
- . **Relative density** Not determined.
- . **Vapour density** Not determined.
- . **Evaporation rate** Not determined.
- . **Solubility in / Miscibility with water at 20 °C:** 290 g/l
- . **Partition coefficient (n-octanol/water):** Not determined.
- . **Viscosity:**
  - Dynamic at 20 °C: 1 mPas
  - Kinematic: Not determined.
- . **9.2 Other information** No further relevant information available.

#### \* 10 Stability and reactivity

- . **10.1 Reactivity**
- . **10.2 Chemical stability**
- . **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- . **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- . **10.4 Conditions to avoid** No further relevant information available.
- . **10.5 Incompatible materials:** No further relevant information available.
- . **10.6 Hazardous decomposition products:** Danger of forming toxic pyrolysis products.

#### \* 11 Toxicological information

- . **11.1 Information on toxicological effects**
- . **Acute toxicity:**
- . **LD/LC50 values relevant for classification:**
  - 78-93-3 methyl ethyl ketone
  - Oral LD50 3300 mg/kg (rat)
  - Dermal LD50 5000 mg/kg (rbt)
- . **Primary irritant effect:**
- . **on the skin:** No irritant effect.
- . **on the eye:** Irritating effect.
- . **Sensitization:** No sensitizing effects known.

(Contd. on page 6)

GB

### Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.12.2013

Version number 121

Revision: 12.12.2013

Trade name: Cleaner

(Contd. of page 5)

#### 12 Ecological information

- . 12.1 Toxicity
- . **Aquatic toxicity:** No further relevant information available.
- . 12.2 Persistence and degradability No further relevant information available.
- . 12.3 Bioaccumulative potential No further relevant information available.
- . 12.4 Mobility in soil No further relevant information available.
- . **Additional ecological information:**
- . **General notes:**  
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water  
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
- . **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- . **Uncleaned packaging:**
- . **Recommendation:**  
Disposal must be made according to official regulations.  
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

#### 14 Transport information

- . 14.1 UN-Number
- . ADR, IMDG, IATA UN1193
- . 14.2 UN proper shipping name
- . ADR 1193 ETHYL METHYL KETONE (METHYL ETHYL KETONE)
- . IMDG, IATA ETHYL METHYL KETONE (METHYL ETHYL KETONE)
- . 14.3 Transport hazard class(es)
- . ADR



- . Class 3 (F1) Flammable liquids.
- . Label 3

. IMDG, IATA



- . Class 3 Flammable liquids.
- . Label 3

(Contd. on page 7)

GB



### Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.12.2013

Version number 121

Revision: 12.12.2013

Trade name: Cleaner

(Contd. of page 6)

- . 14.4 Packing group II
- . ADR, IMDG, IATA
- . 14.5 Environmental hazards:
- . Marine pollutant: No
- . 14.6 Special precautions for user Warning: Flammable liquids.
- . Danger code (Kemler): 33
- . EMS Number: F-E,S-D
- . 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.
- . Transport/Additional information:
- . ADR
- . Limited quantities (LQ) 1L
- . Transport category 2
- . Tunnel restriction code D/E
- . IMDG
- . Remarks: Under certain conditions substances in Class 3 (flammable liquids) can be classified in packinggroup III. See IMDG, Part 2, Chapter 2.3, Paragraph 2.3.2.2
- . UN "Model Regulation": UN1193, ETHYL METHYL KETONE (METHYL ETHYL KETONE), 3, II

### 15 Regulatory information

- . Registration number 01-2119457290-43
- . 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- . Labelling according to Regulation (EC) No 1272/2008  
The substance is classified and labelled according to the CLP regulation.
- . Hazard pictograms GHS02, GHS07
- . Signal word Danger
- . Hazard-determining components of labelling:  
methyl ethyl ketone
- . 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.  
P261 Avoid breathing vapours.  
P280 Wear eye protection / face protection.  
P370+P378 In case of fire: Use to extinguish: Water haze, Alcohol resistant foam, Fire-extinguishing powder, Carbon dioxide.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 8)

GB



### Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.12.2013

Version number 121

Revision: 12.12.2013

**Trade name:** Cleaner

(Contd. of page 7)

- . **National regulations:**
- . **Technical instructions (air):**
- . **Class Share in %**
  - . NK 50-100
- . **Waterhazard class:**  
Water hazard class 1 (Assessment by list): slightly hazardous for water.
- . **15.2 Chemical safety assessment:**  
A Chemical Safety Assessment has not been carried out.

#### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- . **Relevant phrases**  
H225 Highly flammable liquid and vapour.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.
- . **Department issuing MSDS:** QESH Department
- . **Contact:** Reach coördinator
- . **\* Data compared to the previous version altered.**

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