

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

Product identifier

Trade name: Cleaner

Article number: BRE

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

Application of the substance / the preparation

As CLEANER at the penetration process by colours acc. to EN ISO 3452-1 [EN 571-1] (DIN 54 152 part 1) for finding surface cracks.

Details of the supplier of the safety data sheet

Manufacturer/Supplier

Helmut Klumpf

Technische Chemie KG

Industriestr. 15

D - 45699 Herten Phone.: +49(0)2366 1003 - 0 Fax: +49(0)2366 1003 - 11 Email: klumpf@diffu-therm.de

Emergency telephone number: a.m. or next Emergency phone:

2. Hazards identification

Classification of the substance or mixture

Flammable Aerosol, Category 1

GHS02 Flam

GHS07 Exclamation mark

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE. 3 H336 May cause drowsiness or dizziness.

Labelling according to Regulation (EC) No 1272/2008

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



Hazard pictograms GHS02, GHS07

Signal word Danger

Hazard statements

H222 Extremely flammable aerosol.

H229 Pressurised container: May burst if heated.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

P271 Use only outdoors or in a well-ventilated area.

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

Results of PBT and PvB assessment

PBT: Not applicable

vPvB: Not applicable

3. Composition/information on ingredients

Chemical characterization: Aerosol with mixture of substances listed below and non-hazardous additions.

Components:	Name of chemical	weight %
CAS: 78-93-3	butanone	50 - 100
EINECS: 201-159-0	GHS02 Flam. Liq. 2, H225; GHS07 Eye Irrit. 2, H319; STOT SE 3, H336	
CAS: 124-38-9	Carbon dioxide	< 10
EINECS: 204-696-9	GHS04 Press. Gas, H280	

4. First aid measures

Description of first aid measures

General information Take affected persons out of danger area and instruct to lie down.

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness bring patient into stabile side position for transport.



After skin contact

Instantly wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor.

After eye contact

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

After swallowing

Do not induce vomiting; instantly call for medical help. In case of persistent symptoms consult doctor

5. Fire fighting measures

Description of first aid measures

Suitable extinguishing agents

water haze, water spray-jet, alcohol resistant foam.
use dry extinguishers like power, sand just for small fires.

For safety reasons unsuitable extinguishing agents Water with a full water jet.

Special hazards arising from the substance or mixture Carbon monoxide (CO)

Advice for fighters

Protective equipment: Wear self-contained breathing apparatus.

Additional information:

Cool containers at risk with water spray jet.
Danger for bursting of aerosols when heated for more than 50°C.
Aerosols that burst in fire can be mightily shot away.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources
Bring persons out of danger.

Environmental precautions:

Do not allow product to reach sewage system or water bodies.
Prevent material from reaching sewage system, holes and cellars.
Inform respective authorities in case product reaches water or sewage system.
Dilute with much water. Prevent from spreading (e.g. by damming-in or oil barriers).

Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.

Reference to other sections

See Section 8 for information on personal protection equipment.

7. Handling and storage

Handling:

Advice on safe handling:

Provide good room ventilation even at ground level (vapours are heavier than air).

Advice on protection against fire and explosion:

Keep away from sources of ignition.
Do not smoke.
Take precautionary measures against static discharges.

Storage:

Requirements for storage rooms and vessels:

Filled aerosols must not be exposed to:
1. Heating of more than 50°C by sun beams or other heat sources.
2. Storage in gates, passages, wells of staircases, buildings, floors, and lofts.
Keep container in a well-ventilated place.

Advice on storage compatibility:

Do not store together with oxidizing agents.

Further information on storage conditions:

Keep container in a well-ventilated place.

Classification acc. to prescription:

Aerosols (Aerosol containers) (TRG 300)
Ordinance on Industrial Safety and Health
TRGS 510.

Storage class: 2B



8. Exposure controls/personal protection

Additional information about design for technical systems:

No other information's, see point 7.

Control parameters

Components with critical values that require monitoring at the workplace:	
78-93-3	butanone (> 50%)
MAK /AGW	600 mg/m ³ , 200 ml/m ³ , H, Y; (DFG)
124-38-9	Carbon dioxide (< 10 %)
TRGS 900	9.100 mg/m ³ , 5.000 ml/m ³ limit max: 2(II)

Exposure controls

Personal protection equipment

General protective and hygienic measures

- Keep away from foodstuffs, beverages and food.
- Instantly remove any soiled and impregnated garments.
- Wash hands during breaks and at the end of the work.
- Avoid contact with the eyes and skin.

Breathing equipment:

If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable.

In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

Half-face filter respirator Type A.

Protection of hands: Protective gloves.

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.

Eye protection: Tightly sealed safety glasses.

Body protection: Protective work clothing.

9. Physical and chemical properties

Information on basic physical and chemical properties General Information

Appearance:

Form: Aerosol Colour: Colourless Smell: Characteristic

Data relevant for safety: (Product without power gas)

Boiling point/Boiling range:		86 °C
Flash point:		- 4 °C
Ignition temperature:		515 °C
Danger of explosion:		The Product is not explosive. However, formation of explosive air/steam mixture is possible.
Critical values for explosion:	Lower e.l.:	1,8 Vol.%
	Upper e.l.:	11,5 Vol.%
Steam pressure at 20°C:		89 mbar
Density (20°C):		0,806 g/cm ³
Solubility in water (20°C):		290 g/l

10. Stability and reactivity

Reactivity

Chemical stability

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Possibility of hazardous reactions: Possible formation of peroxide.



11. Toxicological information

Information on toxicological effects

Acute Toxicity: (LD/LC₅₀-values that are relevant for classification):

Component	Method		Value
78-93-3 butanone	Oral	LD 50	3.300 mg/kg (rat)
	Dermal	LD 50	5.000 mg/kg (rabbit)
	inhaled	LC50/4h	12.000 mg/l (rat)

Primary irritant effect:

on the skin: weak irritant effect

on the eye: Strong irritant with the danger of severe eye injury.

Sensitization: No sensitizing effect known.

12. Ecological information

Toxicity

Aquatic toxicity: No further relevant information available.

Additional ecological information:

General notes:

Water hazard class 1 (assessment by list): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

Results of PBT and vPvB assessment

PBT: Not applicable

vPvB: Not applicable

13. Disposal considerations

Product:

Recommendations:

Hand over to authorized disposal agency.

Waste code No.:

EAV: 14 06 03 term: Mixture of solvent

Contaminated packaging:

Recommendations:

Container must be completely emptied and must not be opened by force.

Hand over to authorized disposal agency.

Waste code No.:

EAV: 15 01 10 term: Iron-metal containers with a contaminated rest of the contents

Waste treatment methods

Recommendations

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Disposal must be made according the local authority regulations.

14. Transport information

Land transport

UN-No.: 1950 Identification: DRUCKGASPACKUNGEN flammable

Class: 2 Package Group: -- Tunnel restriction code: D

Classifications code: 5 F shipment category: 2

Labelling of the Package: UN 1950 AEROSOLE Label-no.: 2.1

Packing instruction: P 003, MP 9 Limited Quantities Only: 1L (Package ≤ 30 kg)

Marine transport IMDG/GGVSee

UN-No.: 1950 Class: 2.1 Package Group: --

EMS-No.: F-D, S-U Label-no.: -- Marine Pollutant: -- Label: --

Proper Shipping Name: Aerosols (Limited Quantities Only) (Package ≤ 30 kg)

Air transport ICAO-TI and IATA-DGR

Class/Division: 2.1 UN/ID-No.: 1950

Package Group: --, Label: 2.1

Packing inst. Passenger aircraft: 203/Y203 Max. net/Package: 75 kg/30 kg

Packing inst. Cargo aircraft: 203 Max. net/Package: 150 kg

Proper Shipping Name: Aerosols, flammable



15. Regulatory information

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 statements

- H222 Extremely flammable aerosol.
- H229 Pressurised container: May burst if heated.
- H280 Contains gas under pressure; may explode if heated.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.
- EUH066 Repeated exposure may cause skin dryness or cracking.

National regulations

Water hazard class: Water hazard class 1 (Assessment by list): slightly hazardous for water.

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

16. Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally contractual relationship.

Department issuing data specification sheet:

Contact: Helmut. Klumpf Technische Chemie KG

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent