







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

- **1.1 Product identifier**
- **Trade name: PU-Cleaner**
- **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 material/ Detergent
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
DEN BRAVEN AEROSOLS GmbH & Co. KG
Giebelstadter Weg 16
D-97234 Albertshausen
Tel.: +49 (0) 9366/9071-0
Fax.: +49 (0) 09366/9071-22
www.denbraven-aerosols.de
- **Further information obtainable from:**
Labor: Herr Söder
Tel.: +49 (0) 9366/907126
E-Mail: j.soeder@denbraven-aerosols.de
- **1.4 Emergency telephone number:** Tel: +49 (0)9366/9071-0 Monday to Thursday 7:15 to 18:00 CET.

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
-  GHS02 flame
 Flam. Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
-  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 product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**
- 


GHS02 GHS07
- **Signal word** Danger
- **Hazard-determining components of labelling:**
acetone
- **Hazard statements**
H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
- **Precautionary statements**
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
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.

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- P251 Do not pierce or burn, even after use.
 P261 Avoid breathing vapours or spray.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves / eye protection / face protection.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P312 Call a POISON CENTER/doctor if you feel unwell.
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C.
 P501 Dispose of contents/container to hazardous or special waste collection point.
- **Additional information:**
 EUH066 Repeated exposure may cause skin dryness or cracking.
 Buildup of explosive mixtures possible without sufficient ventilation.
 - **2.3 Other hazards**
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 67-64-1 EINECS: 200-662-2 Reg.nr.: 01-2119471330-49-xxxx	acetone ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	50-100%
CAS: 75-28-5 EINECS: 200-857-2 Reg.nr.: 01-2119485395-27-xxxx	isobutane ⚠ Flam. Gas 1, H220; Press. Gas C, H280	2.5-10%
CAS: 124-38-9 EINECS: 204-696-9	carbon dioxide ⚠ Press. Gas L, H280	2.5-10%
CAS: 74-98-6 EINECS: 200-827-9 Reg.nr.: 01-2119486944-21-xxxx	propane ⚠ Flam. Gas 1, H220; Press. Gas C, H280	1.0-2.5%

· **Regulation (EC) No 648/2004 on detergents / Labelling for contents**

aliphatic hydrocarbons	5 - 15%
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- **Additional information:** For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **After inhalation:**
 Supply fresh air; consult doctor in case of complaints.
 Take affected persons into fresh air and keep quiet.
- **After skin contact:**
 Immediately wash with water and soap and rinse thoroughly.
 Immediately remove any clothing soiled by the product.
- **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**
 Breathing difficulty
 Headache

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Disziness
Disziness
Nausea

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

If swallowed or in case of vomiting, danger of entering the lungs.
Later observation for pneumonia and pulmonary oedema.

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

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

Can form explosive gas-air mixtures.
Formation of toxic gases is possible during heating or in case of fire.
Carbon monoxide and carbon dioxide

· 5.3 Advice for firefighters

· Protective equipment: 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.

SECTION 6: Accidental release measures**· 6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources.

· 6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

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).

Ensure adequate ventilation.

· 6.4 Reference to other sections See Section 13 for disposal information.**SECTION 7: Handling and storage****· 7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Avoid contact with skin and eyes.

· Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.

Do not spray onto a naked flame or any incandescent material.

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- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 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:**

67-64-1 acetone	
WEL	Short-term value: 3620 mg/m ³ , 1500 ppm Long-term value: 1210 mg/m ³ , 500 ppm
124-38-9 carbon dioxide	
WEL	Short-term value: 27400 mg/m ³ , 15000 ppm Long-term value: 9150 mg/m ³ , 5000 ppm

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

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:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Use suitable respiratory protective device in case of insufficient ventilation.

- **Recommended filter device for short term use:** Filter AX

- **Protection of hands:**

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

- **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.

Butyl rubber, BR

Recommended thickness of the material: ≥ 0.5 mm

- **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.

≥ 240 min

- **Eye protection:**



Tightly sealed goggles

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· **Body protection:** Protective work clothing

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SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Aerosol
Colour: Colourless
Odour: Acetone-like

· Change in condition

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: Not applicable, as aerosol.

· **Flash point:** Not applicable, as aerosol.

· **Ignition temperature:** >200 °C

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Density at 20 °C:** 0.7813 g/cm³

· Solubility in / Miscibility with

water: Fully miscible.
Organic solvents: 96.2 %
VOC (EC) 751.3 g/l

· **9.2 Other information** No further relevant information available.

SECTION 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:** Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

· Acute toxicity

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Inhalative	LC50/4 h	824 mg/l (rat)
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67-64-1 acetone

Oral	LD50	5800 mg/kg (rat)
Dermal	LD50	20000 mg/kg (rabbit)
Inhalative	LC50/4 h	76 mg/l (rat)

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75-28-5 isobutane

Inhalative	LC50/4 h	>50 mg/l (rat)
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74-98-6 propane

Inhalative	LC50/4 h	20 mg/l (rat)
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- **Primary irritant effect:**
- **Skin corrosion/irritation** No irritant effect.
- **Serious eye damage/irritation** Irritating effect.
- **Respiratory or skin sensitisation** No sensitising effects known.

- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

Vapours have narcotic effect.

SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

67-64-1 acetone

EC50/48 h	8800 mg/l (daphnia)
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- **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) (Self-assessment): 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.

SECTION 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.

- **European waste catalogue**

16 05 04	gases in pressure containers (including halons) containing dangerous substances
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15 01 04	metallic packaging
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- **Uncleaned packaging:**

- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**

- **ADR,RID,ADN, IMDG, IATA**

UN1950

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Trade name: PU-Cleaner

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· 14.2 UN proper shipping name	
· ADR/RID/ADN	UN1950 AEROSOLS
· IMDG	AEROSOLS
· IATA	AEROSOLS, flammable

· **14.3 Transport hazard class(es)**· **ADR/RID/ADN**

· Class	2 5F Gases.
· Label	2.1

· **IMDG, IATA**

· Class	2.1
· Label	2.1

· **14.4 Packing group**· **ADR,RID,ADN, IMDG, IATA** Void· **14.5 Environmental hazards:**· **Marine pollutant:** No· **14.6 Special precautions for user**

Warning: Gases.

· **Danger code (Kemler):**

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· **EMS Number:**

F-D,S-U

· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**· **ADR/RID/ADN**· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E0

Not permitted as Excepted Quantity

· **Transport category**

2

· **Tunnel restriction code**

D

· **IMDG**· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E0

Not permitted as Excepted Quantity

· **UN "Model Regulation":**

UN1950, AEROSOLS, 2.1

SECTION 15: Regulatory information

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

No further relevant information available.

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

GB

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SECTION 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

- H220 Extremely flammable gas.
- H225 Highly flammable liquid and vapour.
- H280 Contains gas under pressure; may explode if heated.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.

· **Department issuing MSDS:** Product Safety department.

· **Contact:** Jan Söder

· 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)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- Flam. Gas 1: Flammable gases, Hazard Category 1
- Flam. Aerosol 1: Flammable aerosols, Hazard Category 1
- Press. Gas C: Gases under pressure: Compressed gas
- Press. Gas L: Gases under pressure: Liquefied gas
- Flam. Liq. 2: Flammable liquids, Hazard Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
- STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

· *** Data compared to the previous version altered.**