

SAFETY DATA SHEET

 ACCORDING TO REGULATION (EC) 1907/2006

Product name: beko Druckluft-/Kältespray

Creation date: 07.12.2017, **Revision:** 27.11.2023, **version:** 1.7

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name

beko Druckluft-/Kältespray

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

Relevant identified uses

Aerosol propellant gas.

Uses advised against

No information.

1.3 Details of the supplier of the safety data sheet

Supplier

beko GmbH

Rappenfeldstr. 5, DE-86653 Monheim

Telefon: +49 (0) 9091 90898-0

e-mail: info@beko-group.com

www.beko-group.com

1.4 Emergency Telephone Number

Emergency

Poison Control Center Mainz - 24 hour emergency service - phone: +49 (0) 6131/19240

Supplier

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

Aerosol 1; H222 Extremely flammable aerosol.

Aerosol 1; H229 Pressurised container: May burst if heated.

2.2 Label elements

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



Signal word: DANGER

- H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
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.
P251 Do not pierce or burn, even after use.
P410 + P412 Protect from sunlight. Do no expose to temperatures exceeding 50 °C/122°F.

2.3 Other hazards

PBT/vPvB
No information.

Endocrine disrupting properties
The product does not contain substances with the potential for endocrine disorders.

Additional information
No information.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

For mixtures see 3.2.

3.2 Mixtures

Name	CAS EC Index Reach	%	Classification according to Regulation (EC) No 1272/2008 (CLP)	Specific Concentration Limits	Notes for substances
isobutane	75-28-5 200-857-2 601-004-00-0 01-2119485395-27	50-100	Flam. Gas 1; H220 Press. Gas; H280	/	C, S, U
propane	74-98-6 200-827-9 601-003-00-5 01-2119486944-21	25-50	Flam. Gas 1; H220 Press. Gas; H280	/	U

Notes for substances

C	Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.
S	This substance may not require a label according to Article 17 (see Section 1.3 of Annex I) (Table 3).
U	When put on the market gases have to be classified as 'Gases under pressure', in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned: Press. Gas (Comp.) Press. Gas (Liq.) Press. Gas (Ref. Liq.) Press. Gas (Diss.) Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2).

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General notes

When in doubt or if feeling unwell seek medical assistance. Show the safety data sheet and label to the physician.

Following inhalation

Leave contaminated area - breathe fresh air. If symptoms develop and persist, seek medical attention.

Following skin contact

Areas of the body that have come into contact with the product must be rinsed with water and soap. If symptoms develop and persist, seek medical attention.

Following eye contact

Immediately flush eyes with running water, keeping eyelids apart. If irritation persists, seek professional medical attention.

Following ingestion

Not likely.

4.2 Most important symptoms and effects, both acute and delayed

Following inhalation

Because of breathing vapours at high concentrations symptoms like headache, dizziness, nausea and unconsciousness. Difficulties with breathing.

Following skin contact

Rapid evaporation of the liquid may cause frostbite.

Following eye contact

Contact with eyes can cause irritation (redness, tearing, pain). May cause frostbite.

Following ingestion

Not likely.

4.3 Indication of any immediate medical attention and special treatment needed

No information.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂).

Fire extinguishing powder.

Water spray. Extinguish large fires with water spray or alcohol-resistant foam.

Unsuitable extinguishing media

Full water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Vapours and air can form explosive mixtures. In case of a fire toxic gases can be generated; do not inhale gases/smoke. In the event of fire the following can be generated: carbon monoxide (CO), carbon dioxide (CO₂).

5.3 Advice for firefighters

Protective actions

In case of fire or heating do not breathe fumes/vapours. Closed container exposed to heat and fire can cause increased pressure and explosion. Vapours can travel to a source of ignition and flash back. Cool containers at risk with water spray. If possible remove containers from endangered area. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

Firefighters should wear appropriate protective clothing for firefighters (including helmets, protective boots and gloves) (EN 469) and self-contained breathing apparatus (SCBA) with a full face-piece (EN 137).

Additional information

Contaminated firefighting water and fire residues must be disposed of in accordance with the local regulations.

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures****For non-emergency personnel****Protective equipment**

Use personal protective equipment (Section 8).

Precautionary measures

Ensure adequate ventilation. Keep away from sources of ignition and/or heat; No smoking!

Emergency procedures

Prevent access to unprotected personnel. Prevent access to unauthorised personnel. Avoid contact with skin and eyes. Do not breathe gas.

For emergency responders

Use personal protective equipment. Prevent accumulation of vapours with water spray.

6.2 Environmental precautions

Prevent the gas from spreading to places where accumulation of it could be dangerous (sewage system, surface depressions, etc.) Prevent from reaching sewage system, holes and cellars.

6.3 Methods and material for containment and cleaning up**For containment**

No information.

For cleaning up

Ventilate the premises.

Other information

No information.

6.4 Reference to other sections

See also sections 8 and 13.

SECTION 7: HANDLING AND STORAGE**7.1 Precautions for safe handling****Protective measures****Measures to prevent fire**

Ensure adequate ventilation. Vapours and air form explosive mixtures. Protect from open fire and other sources of ignition or heat. Do not smoke. Take precautionary measures against static discharges. Ignitable mixtures can form in the empty container. Use explosively safe equipment (ventilators, lighting, working instruments and devices,...); Use spark-proof tools. Do not spray on a naked flame or incandescent material.

Measures to prevent aerosol and dust generation

Ensure good ventilation and extraction.

Measures to protect the environment

No information.

Other measures

Make sure that all applicable workplace limits are observed.

Advice on general occupational hygiene

Use good personal hygiene practices – wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Avoid contact with skin and eyes. Do not breathe gas.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Follow safe storage practices for packed compressed gas as described by the Compressed Gas Association or the relevant agency in the country where the product is used. Keep in cool place. Keep in a dry place. Store in well-ventilated, explosion-proof areas. Keep away from sources of ignition - no smoking. Protect against heat and direct sunlight. Handle and open the container carefully. Keep away from flammable substances. Keep away from self-igniting materials. Keep away from oxidising substances. Keep away from food, drink and animal feeding stuffs. Storage temperature < 50°C.

Packaging materials

Store only in original container.

Requirements for storage rooms and vessels

No information.

Storage class

No information.

Further information on storage conditions

No information.

7.3 Specific end use(s)

Recommendations

No information.

Industrial sector specific solutions

No information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure limit values

No information.

Information on monitoring procedures

BS EN 14042:2003 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. BS EN 689:2018 Workplace exposure. Measurement of exposure by inhalation to chemical agents. Strategy for testing compliance with occupational exposure limit values. BS EN 482:2021 Workplace exposure. Procedures for the determination of the concentration of chemical agents. Basic performance requirements.

DNEL/DMEL values

For product

No information.

For components

No information.

PNEC values

For product

No information.

For components

No information.

8.2 Exposure controls

Appropriate engineering control

Substance/mixture related measures to prevent exposure during identified uses

Use good personal hygiene practices – wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Avoid contact with eyes and skin. Do not breathe gas. Do not breathe vapours/aerosols.

Structural measures to prevent exposure

No information.

Organisational measures to prevent exposure

No information.

Technical measures to prevent exposure

Provide good ventilation and local exhaust in areas with increased concentration.

Personal protective equipment**Eye and face protection**

Safety goggles (BS EN ISO 16321-1:2022).

Hand protection

Protective gloves (BS EN ISO 374). 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. The product consists of various substances, therefore the resistance of gloves can not be calculated and has to be tested before use. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Appropriate materials**Skin protection**

Protective antistatic clothing BS EN 1149 (1:2006, 2:1997 and 3:2004, 5:2018), protective antistatic shoes (BS EN ISO 20345:2022). Choose body protection according to the activity and possible exposure.

Respiratory protection

In case of insufficient ventilation wear suitable respiratory protection. In case of insufficient ventilation wear mask with filter AX (BS EN 14387). 'High/elevated concentrations' means that the occupational exposure limit values have been exceeded. For dust/gas/ vapor concentrations above the applicable filter limit, in case of oxygen concentrations below 17% or in vague conditions, autonomous self-contained breathing apparatus should be used, according to standard BS EN 137, BS EN 138.

Thermal hazards

No information.

Environmental exposure controls**Substance/mixture related measures to prevent exposure**

No information.

Instruction measures to prevent exposure

No information.

Organisational measures to prevent exposure

No information.

Technical measures to prevent exposure

No information.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state

liquid - aerosol

Colour

colourless

Odour

characteristic

Important health, safety and environmental information

Odour threshold	No information.
Melting point/Freezing point	No information.
Boiling point or initial boiling point and boiling range	-21 °C
Flammability	ca. 365 °C
Lower and upper explosion limit	1.5 — 10.9 vol %

Flash point	ca. -80 °C
Auto-ignition temperature	No information.
Decomposition temperature	No information.
pH	No information.
Viscosity	No information.
Solubility	Water: < 0.1 g/l at 20 °C
Partition coefficient	No information.
Vapour pressure	1200 — 7500 hPa at 20 °C
Density and/or relative density	Density: 0.548 g/cm ³ at 20 °C
Relative vapour density	No information.
Particle characteristics	No information.

9.2 Other information

Weight organic solvents	550 g/l (VOC) 100 % (VOC)
Oxidising properties	Not oxidising.
Explosive properties	Product is not self igniting. In use, may form flammable/explosive vapour-air mixture.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Vapours / aerosols and propellants may form explosive mixture with air.

10.2 Chemical stability

Product is stable under normal conditions of use, recommended handling and storage conditions.

10.3 Possibility of hazardous reactions

Uncleaned empty containers may contain product gases which form explosive mixtures with air.

10.4 Conditions to avoid

Mechanical influences (e.g. pressure, friction, impact, shock). Protect from heat, direct sunlight, open fire, sparks. Because of the high vapour pressure, containers are liable to burst if temperature rises. Do not smoke. Take precautionary measures against static discharges.

10.5 Incompatible materials

Strong oxidising agents.
Peroxide.

10.6 Hazardous decomposition products

Carbon dioxide; Carbon monoxide.

SECTION 11: TOXICOLOGICAL INFORMATION

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

(a) Acute toxicity
No information.

(b) Skin corrosion/irritation
For product

Species	Time	result	Method	Remark
/	/	Non-irritant.	/	/

(c) Serious eye damage/irritation
For product

Species	Time	result	Method	Remark
/	/	Non-irritant.	/	/

(d) Respiratory or skin sensitisation
No information.

Additional information
No sensitising effects known.

(e) (Germ cell) mutagenicity
No information.

(f) Carcinogenicity
No information.

(g) Reproductive toxicity
No information.

Summary of evaluation of the CMR properties
The product is not classified as carcinogenic, mutagenic or toxic for reproduction.

(h) STOT-single exposure
No information.

(i) STOT-repeated exposure
For product

Exposure route	Type	Species	Time	Exposure	organ	value	result	Method	Remark
inhalation	-	/	/	sub-chronic	/	/	Vapours may cause narcotic effects.	/	high vapours concentrations

(j) Aspiration hazard
No information.

Symptoms related to the physical, chemical and toxicological characteristics
No information.
Interactive effects
No information.

11.2 Information on other hazards

Endocrine disrupting properties

The product does not contain substances with the potential for endocrine disorders.

Other information

No information.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Acute (short-term) toxicity

No information.

Chronic (long-term) toxicity

No information.

12.2 Persistence and degradability

Abiotic degradation, physical- and photo-chemical elimination

No information.

Biodegradation

No information.

12.3 Bioaccumulative potential

Partition coefficient

No information.

Bioconcentration factor (BCF)

No information.

12.4 Mobility in soil

Known or predicted distribution to environmental compartments

No information.

Surface tension

No information.

Adsorption/Desorption

No information.

12.5 Results of PBT and vPvB assessment

No evaluation.

12.6 Endocrine disrupting properties

The product does not contain substances with the potential for endocrine disorders.

12.7 Other adverse effects

The product contains no absorbable organic halogens (AOX).

12.8 Additional information

For product

Handle in accordance with good working practices so that the product is not released into the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product / Packaging disposal

Waste chemical

Dispose of in accordance with applicable waste disposal regulation. Disposal must be made according to official regulations: deliver it to authorised collector/remover/transformer of hazardous waste.

Waste codes / waste designations according to LoW

16 05 04* - gases in pressure containers (including halons) containing dangerous substances

Packaging

Dispose of in accordance with applicable waste disposal regulation. Deliver completely emptied containers to approved waste disposal authorities.

Waste codes / waste designations according to LoW

15 01 11* - metallic packaging containing a dangerous solid porous matrix (for example asbestos), including empty pressure containers

Waste treatment-relevant information

No information.





Sewage disposal-relevant information

No information.

Other disposal recommendations

No information.

SECTION 14: TRANSPORT INFORMATION

ADR/RID	IMDG	IATA	ADN
14.1 UN number or ID number			
UN 1950	UN 1950	UN 1950	UN 1950
14.2 UN proper shipping name			
AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS
14.3 Transport hazard class(es)			
2	2	2	2
			
14.4 Packing group			
Not given/not applicable	Not given/not applicable	Not given/not applicable	Not given/not applicable
14.5 Environmental hazards			
NO	NO	NO	NO
14.6 Special precautions for user			
Limited quantities 1 L Special provisions 190, 327, 344, 625 Packing Instructions P207, LP200 Special packing provisions PP87, RR6, L2 Transport category 2 Tunnel restriction code (D) Classification code 5F	Limited quantities 1 L EmS F-D, S-U Flash point -80 °C	Limited Quantity, Packing Instructions (Ltd Qty, Pkg Inst) Y203 Limited Quantity, Maximum Net Quantity/Package (Ltd Qty, Max Net Qty/Pkg) 30 kg G Packing Instructions (Pkg Inst) 203 Maximum Net Quantity/Package (Max Net Qty/Pkg) 25 kg Special provisions A145, A167, A802	Limited quantities 1 L
14.7 Maritime transport in bulk according to IMO instruments			

	Goods may not be carried in bulk in bulk containers, containers or vehicles.		

SECTION 15: REGULATORY INFORMATION

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

- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (including last amendment Commission Regulation (EU) 2020/878)
- Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

Information according 2004/42/EC about limitation of emissions of volatile organic compounds (VOC-guideline)
not applicable

Ingredients according to Regulation (EC) No 648/2004 on detergents
No information.

Special instructions

Observe the restrictions on the employment of minors. Seveso III, P3a: flammable aerosols.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: OTHER INFORMATION

Indication of changes

No information.

Key literature references and sources for data

No information.

Abbreviations and acronyms

ATE - Acute Toxicity Estimate
 ADR - Agreement concerning the International Carriage of Dangerous Goods by Road
 ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 CEN - European Committee for Standardisation
 C&L - Classification and Labelling
 CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
 CAS# - Chemical Abstracts Service number
 CMR - Carcinogen, Mutagen, or Reproductive Toxicant
 CSA - Chemical Safety Assessment
 CSR - Chemical Safety Report
 DMEL - Derived Minimal Effect Level
 DNEL - Derived No Effect Level
 DPD - Dangerous Preparations Directive 1999/45/EC
 DSD - Dangerous Substances Directive 67/548/EEC
 DU - Downstream User
 EC - European Community
 ECHA - European Chemicals Agency
 EC-Number - EINECS and ELINCS Number (see also EINECS and ELINCS)
 EEA - European Economic Area (EU + Iceland, Liechtenstein and Norway)
 EEC - European Economic Community
 EINECS - European Inventory of Existing Commercial Substances
 ELINCS - European List of notified Chemical Substances
 EN - European Standard
 EQS - Environmental Quality Standard
 EU - European Union

Euphrac - European Phrase Catalogue
EWC - European Waste Catalogue (replaced by LoW – see below)
GES - Generic Exposure Scenario
GHS - Globally Harmonized System
IATA - International Air Transport Association
ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG - International Maritime Dangerous Goods
IMSBC - International Maritime Solid Bulk Cargoes
IT - Information Technology
IUCLID - International Uniform Chemical Information Database
IUPAC - International Union for Pure Applied Chemistry
JRC - Joint Research Centre
Kow - octanol-water partition coefficient
LC50 - Lethal Concentration to 50 % of a test population
LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)
LE - Legal Entity
LoW - List of Wastes (see <http://ec.europa.eu/environment/waste/framework/list.htm>)
LR - Lead Registrant
M/I - Manufacturer / Importer
MS - Member States
MSDS - Material Safety Data Sheet
OC - Operational Conditions
OECD - Organization for Economic Co-operation and Development
OEL - Occupational Exposure Limit
OJ - Official Journal
OR - Only Representative
OSHA - European Agency for Safety and Health at work
PBT - Persistent, Bioaccumulative and Toxic substance
PEC - Predicted Effect Concentration
PNEC(s) - Predicted No Effect Concentration(s)
PPE - Personal Protection Equipment
(Q)SAR - Qualitative Structure Activity Relationship
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
RIP - REACH Implementation Project
RMM - Risk Management Measure
SCBA - Self-Contained Breathing Apparatus
SDS - Safety data sheet
SIEF - Substance Information Exchange Forum
SME - Small and Medium sized Enterprises
STOT - Specific Target Organ Toxicity
(STOT) RE - Repeated Exposure
(STOT) SE - Single Exposure
SVHC - Substances of Very High Concern
UN - United Nations
vPvB - Very Persistent and Very Bioaccumulative

List of relevant H phrases

H220 Extremely flammable gas.
H280 Contains gas under pressure; may explode if heated.

The information of this SDS is based on the present state of our knowledge and meets the requirements of EU and national laws. The user's working conditions however, are beyond our knowledge and control. The product is not to be used for purposes other than those specified under section 1 without a written permission. It remains the responsibility of the user to ensure that the necessary steps are taken to meet the laws and regulations. Handling of the product may only be done by people above 18 years of age, who are satisfactorily informed of how to do the work, the hazardous properties and necessary safety precautions. The information given in this SDS is to describe the product only in terms of health and safety requirements and should not, therefore, be construed as guaranteeing specific properties.