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 Art.-No., product name: **02636 smartclean® Hygienic foam**

DETAX

complex gas-aerosol-mixtures may be formed, containing carbon monoxide, nitric oxides, soot, sulphuric dioxide and organic compounds.

5.5 Special measures during fire-fighting operations:
 An uncontrolled, explosion like re-ignition may be possible, therefore never extinguish the flames near their place of escape. Interrupt the supply of the product and/or let the flames burn out. Cool endangered containers with water mist.

5.6 Special protective equipment for fire fighting:
 Use protection against heat and respiratory protection independent of recirculated air. Accomplish decontamination by means of explosion-proofed equipment.

6 Accidental release measures

6.1 Personal precautions: Interrupt inflow of gas. Cool endangered containers with water mist - danger of bursting. Ventilate well all contaminated rooms.

6.2 Environmental precautions: Avoid release of liquid gas to sewerage system - explosion risk. Observe local byelaws.

6.3 Methods for cleaning up: Let volatilise; possibly suck off near the floor. Ensure a good ventilation.

7 Handling and storage

7.1 Handling:
 Precautions for safe handling: When using do not eat, drink or smoke.
 Precautions against fire and explosion: Take precautionary measures against static discharges. Keep away from sources of ignition - No smoking. Cool endangered containers with water mist.

7.2 Storage:
 Conditions for storage, rooms and vessels: Store in the open air or in a cool, dry and well ventilated place, not deeper than ground level.

Advice for storage of incompatible materials: Avoid contact with acetylene, chlorine, nitric oxides, oxygen cylinders and nickel tetracarbonyl.

Further information for storage: Keep at temperature not exceeding 25 °C /77 °F.

8 Exposure controls / personal protection

8.1 Further information for system design and engineering measures: Use only in a well-ventilated place.

8.2 Associate substance with specific control parameters such as limit values (Air limits according to EC-guideline 2000/39/EC and TRGS 900 respectively):

CAS- No.	Substance	mg/m ³
67-64-1	Acetone	1210 mg/m ³ = 500 ppm
106-97-8	n-Butane	2400 mg/m ³ = 1000 ppm

8.3 Personal protection equipment:
 General protection and hygiene measures: The usual precautions in handling with cleansing agents are to be observed. Do not breathe vapours. Ensure a good ventilation.

Respiratory protection: At usual conditions not necessary. However, avoid breathing the spray during its application.

Hand protection: It is recommended to use a skin protection cream.

Eye protection: It is recommended to wear glasses.

Body protection: Avoid strictly all direct contact of the product with eyes, skin and mucous membranes.

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9.1 Appearance:

Form: compressed, liquefied gas with liquid parts
 Colour: colourless; forms a white foam after spraying
 Odour: like lemon grass

9.2 Safety parameters:

Method (67 / 548 / EC)

Change in physical state:		
Boiling point	= 63 °C / 145 °F	DIN 15356
Flash point	= 3 °C / 37 °F	DIN 51755
Inflammability	not available	
Ignition temperature	= approx. 365 °C / 689 °F	DIN 51794
Autoflammability	= approx. 430 °C / 806 °F	
Oxidising properties	not available	
Explosive properties	critical temperature: 152.03 °C / 305.65 °F	
Explosion limits	lower: approx. 1.5 Vol.-% • upper: approx. 8.5 vol.-%	
Vapour pressure	= approx. 900 kPa at 70 °C / 158 °F	DIN 51640
Density	= approx. 0.57 g/cm ³ at 15 °C / 59 °F	DIN 51618
Solubility in water	= virtually insoluble	
pH-value	: n.a.	
Distribution coefficient octanol / water:	not available	

9.3 Further information:

Thermal decomposition: not available

10 Stability and reactivity

10.1 Conditions to avoid:

Keep away from heat, flames and other sources of ignition.

10.2 Materials to avoid:

Keep away from strong oxidising substances such as chlorine or concentrated oxygen.

10.3 Hazardous decomposition products:

If stored and handled appropriately no hazardous decomposition products are known.

10.4 Further information:

May form explosive mixtures in contact with air. May react violently with acetylene, chlorine, fluorine and nitric oxides. Risk of explosion when mixed with nickel tetracarbonyl and oxygen.

11 Toxicological information

11.0 General information:

Inhalation of the product in high concentration causes narcotic and suffocating effects. Symptoms: Sleepiness, giddiness, unconsciousness. Repeated or prolonged exposure may cause nausea, obnubilation, headache. During volatilisation the liquid may cause severe congelation to the skin and lesions to the ocular tissue.

11.1 Acute toxicity:

Acute inhalational toxicity (LC₅₀):species rat 659 g/m³ (4 hours)species mouse 680 g/m³ (2 hours)

origin: literature

these data refer to the ingredient n-butane.

12 Ecological information

12.1 Information on elimination (persistence and degradability):

Components of liquid gases have a short half-life and therefore they are not persistent in the atmosphere.

In the air they get oxidised by photochemical process.

12.2 Behaviour in environmental compartments: No data known.

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12.3 Ecotoxicological effects:
 Effects in sewage treatment plants (bacteria toxicity: respiration-/reproduction inhibition):
 No data known.

13 Disposal considerations

13.1 Material: Recommendation: Handing over to an authorised waste management company.
 Observe the local byelaws.
 European Waste Catalogue Ref.No.: 16 05 05 (AVV).

13.2 Contaminated packaging: Recommendation: Fully empty containers. Containers may be recycled or reused. Observe local/national byelaws.

14 Transportation information

14.1 Land transportation ADR/RDI and GGVS/GGVE:
 GGVS/GGVE-class..... : 2 cl.-code 5F
 ADR/RID-class..... : 2 cl.-code 5F
 Transportation emergency card number: 2.1
 Warning board - Hazard No: - Substance No.: 1950
 Nomenclature..... : Aerosols
 Further information..... : Flammable gas
 Labelling of the packages: UN 1950 AEROSOLS
 Limited Quantities : LQ2 (1 L / 30 kg)

14.2 Inland navigation ADN/ADNR:
 Further information: No data available.

14.3 Transportation by sea IMDG/GGVsea:
 IMDG/GGVsea-class .. : 2.1 Label: 2 UN-No.: 1950
 EmS-No..... : F-D, S-U
 Marine pollutant : no
 Proper shipping name.. : Aerosols
 Technical name : Flammable gas
 Flash point : 3 °C c.c.
 LTD. QTY..... : 1000 mL / 30 kg

14.4 Air transportation ICAO-TI and IATA-DGR transportation by air:
 ICAO/IATA-class..... : 2.1 Label: 2 UN-No.: 1950 Page: 140 (48 edition)
 Proper shipping name.. : Aerosols, flammable
 Technical name..... : Flammable gas
 Packing instructions..... : PAC: 203 Max. net.: 75 kg
 CAO: 203 Max. net.: 150 kg
 LTD.QTY..... : 30 kg gross weight (Y203)
 Air mail transportation...: not permitted

15 Regulatory information

15.1 Identification according to EC directives: Identification letter: **F⁺** Hazard indication: extremely flammable
 Contains: Butane, acetone.

EC/R: 12-67 Extremely flammable. Vapours may cause drowsiness and dizziness.

EC/S: 2-7/9-16-26 Keep out of reach of children. Keep container tightly closed and in a well-ventilated place. Keep away from sources of ignition – No smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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DETAX**15.2 National regulations (Germany):**

Additional identification according to TRG 300:

Pressurised container. Keep away from sunlight and do not expose to temperatures exceeding 50 °C / 122 °F. Do not pierce or burn, even after usage. Do not spray near naked flame or any incandescent material. Keep away from sources of ignition – No smoking. Keep out of reach of children.

Classification according to VbF: n.a.

Classification of possible adverse effects in the aquatic environment (Wassergefährdungsklasse):
Class 2 (adverse effects in the aquatic environment)**16 Other information**

n.a. = not applicable

n.s. = not subject to

The above information describes exclusively the safety requirements of the product(s) and is based on our present-day knowledge. It does not represent a guarantee for the properties of the product(s) described in terms of the legal warranty regulations.