

PU GUN AND FOAM CLEANER

1. Identification of the substance/preparation and of the company/undertaking**1.1 Identification of the substance or preparation:**

- Not applicable

1.2 Use of the substance or the preparation:

Cleansing agent

1.3 Company/undertaking identification:

SODAL N.V.
Everdongenlaan 18-20
B-2300 Turnhout
Tel. : +32 14 42 42 31
Fax : +32 14 44 39 71

1.4 Telephone number for emergency:

+32 14 58 45 45
Brandweerinformatiecentrum voor gevaarlijke stoffen (B.I.G.)
Technische Schoolstraat 43 A, B-2440 Geel

2. Composition/information on ingredients

Hazardous ingredients	CAS No. EINECS No.	Conc. in %	Hazard symbol	Risks (R-phrases)
acetone	67-64-1 200-662-2	> 25	F;Xi	11-36-66-67 (1)
butane	106-97-8 203-448-7	10 - 20	F+	12 (1)
isobutane	75-28-5 200-857-2		F+	12 (1)
propane	74-98-6 200-827-9	10 - 20	F+	12 (1)

(1) For R-phrases in full: see heading 16

3. Hazards identification

- Extremely flammable
- Irritant to the eyes
- Repeated exposure may cause skin dryness or cracking
- Vapours may cause drowsiness and dizziness

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4. First aid measures

- 4.1 Eye contact:**
- Rinse immediately with plenty of water
 - Seek medical advice
- 4.2 Skin contact:**
- Rinse immediately with plenty of water
 - If irritation persists: seek medical advice
- 4.3 After inhalation:**
- Remove the victim into fresh air
 - Seek medical advice
- 4.4 After ingestion:**
- Never give water to an unconscious person
 - Do not induce vomiting
 - Seek medical advice

5. Fire-fighting measures

- 5.1 Suitable extinguishing media:**
- Water spray
 - BC powder
 - Sand/earth
- 5.2 Unsuitable extinguishing media:**
- None
- 5.3 Special exposure hazards:**
- On burning: release of carbon monoxide and carbon dioxide
 - Gas/vapour spreads at floor level: ignition hazard
 - Aerosol may explode under the effect of heat
- 5.4 Instructions:**
- Take account of toxic firefighting water
 - Use firefighting water moderately and contain it
 - Do not move the load if exposed to heat
- 5.5 Special protective equipment for firefighters:**
- Heat/fire exposure: compressed air/oxygen apparatus

6. Accidental release measures

- 6.1 Personal protection/precautions:**
See headings 8.1/8.3/10.3
- 6.2 Environmental precautions:**
- Use appropriate containment to avoid environmental contamination
- 6.3 Methods of cleaning up:**
- Take up liquid spill into inert absorbent material, e.g.: sand/earth
 - Take collected spill to competent authority
 - Wash clothing and equipment after handling

7. Handling and storage

- 7.1 Handling:**
- Observe normal hygiene standards
 - In case of insufficient ventilation: keep naked flames/sparks away
 - Clean contaminated clothing

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7.2 Storage:

- Keep out of direct sunlight
- Keep away from: heat sources, ignition sources, oxidizing agents, acids, bases

Storage temperature	: < 50	°C
Quantity limit	: N.D.	kg
Storage life	: 365	days
Materials for packaging	:	
- suitable	: aerosol dispenser	

7.3 Specific uses:

- See information supplied by the manufacturer

8. Exposure controls/Personal protection

8.1 Exposure limit values:

ACETONE:

TLV-TWA	: -	mg/m ³	500	ppm
TLV-STEL	: -	mg/m ³	750	ppm
TLV-Ceiling	: -	mg/m ³	-	ppm
OES-LTEL	: 1810	mg/m ³	750	ppm
OES-STEL	: 3620	mg/m ³	1500	ppm
MAK	: 1200	mg/m ³	500	ppm
TRK	: -	mg/m ³	-	ppm
MAC-TGG 8 h	: 1780	mg/m ³		
MAC-TGG 15 min.	: -	mg/m ³		
MAC-Ceiling	: -	mg/m ³		
VME-8 h	: 1800	mg/m ³	750	ppm
VLE-15 min.	: -	mg/m ³	-	ppm
GWBB-8 h	: 1806	mg/m ³	750	ppm
GWK-15 min.	: 2415	mg/m ³	1000	ppm
Momentary value	: -	mg/m ³	-	ppm
EC	: 1210	mg/m ³	500	ppm
EC-STEL	: -	mg/m ³	-	ppm

BUTANE:

TLV-TWA	: -	mg/m ³	800	ppm
TLV-STEL	: -	mg/m ³	-	ppm
TLV-Ceiling	: -	mg/m ³	-	ppm
OES-LTEL	: 1450	mg/m ³	600	ppm
OES-STEL	: 1810	mg/m ³	750	ppm
MAK	: 2400	mg/m ³	1000	ppm
TRK	: -	mg/m ³	-	ppm
MAC-TGG 8 h	: 1430	mg/m ³		
MAC-TGG 15 min.	: -	mg/m ³		
MAC-Ceiling	: -	mg/m ³		
VME-8 h	: 1900	mg/m ³	800	ppm
VLE-15 min.	: -	mg/m ³	-	ppm
GWBB-8 h	: 1928	mg/m ³	800	ppm
GWK-15 min.	: -	mg/m ³	-	ppm
Momentary value	: -	mg/m ³	-	ppm
EC	: -	mg/m ³	-	ppm
EC-STEL	: -	mg/m ³	-	ppm

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ISOBUTANE :

TLV-TWA	: -	mg/m ³	-	ppm
TLV-STEL	: -	mg/m ³	-	ppm
TLV-Ceiling	: -	mg/m ³	-	ppm
OES-LTEL	: -	mg/m ³	-	ppm
OES-STEL	: -	mg/m ³	-	ppm
MAK	: 2400	mg/m ³	1000	ppm
TRK	: -	mg/m ³	-	ppm
MAC-TGG 8 h	: -	mg/m ³		
MAC-TGG 15 min.	: -	mg/m ³		
MAC-Ceiling	: -	mg/m ³		
VME-8 h	: -	mg/m ³	-	ppm
VLE-15 min.	: -	mg/m ³	-	ppm
GWBB-8 h	: -	mg/m ³	-	ppm
GWK-15 min.	: -	mg/m ³	-	ppm
Momentary value	: -	mg/m ³	-	ppm
EC	: -	mg/m ³	-	ppm
EC-STEL	: -	mg/m ³	-	ppm

PROPANE :

TLV-TWA	: -	mg/m ³	2500	ppm
TLV-STEL	: -	mg/m ³	-	ppm
TLV-Ceiling	: -	mg/m ³	-	ppm
OES-LTEL	: -	mg/m ³	-	ppm
OES-STEL	: -	mg/m ³	-	ppm
MAK	: 1800	mg/m ³	1000	ppm
TRK	: -	mg/m ³	-	ppm
MAC-TGG 8 h	: -	mg/m ³		
MAC-TGG 15 min.	: -	mg/m ³		
MAC-Ceiling	: -	mg/m ³		
VME-8 h	: -	mg/m ³	-	ppm
VLE-15 min.	: -	mg/m ³	-	ppm
GWBB-8 h	: -	mg/m ³	-	ppm
GWK-15 min.	: -	mg/m ³	-	ppm
Momentary value	: -	mg/m ³	-	ppm
EC	: -	mg/m ³	-	ppm
EC-STEL	: -	mg/m ³	-	ppm

8.2 Exposure controls:

8.2.1 Occupational exposure controls:

- Use only in well ventilated area

8.2.2 Environmental exposure controls: see heading 13

8.3 Personal protection:

8.3.1 respiratory protection:

- In case of insufficient ventilation: respiratory protection with filter type A

8.3.2 hand protection:

- Chemically resistant gloves

8.3.3 eye protection:

- Safety glasses

8.3.4 skin protection:

- Suitable protective clothing

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9. Physical and chemical properties

9.1 General information:

Appearance (at 20°C)	: Aerosol
Odour	: Acetone
Colour	: Colourless

9.2 Important health, safety and environmental information:

pH value	: N.D.	
Boiling point/boiling range	: N.D.	°C
Flashpoint	: Contains (highly) flammable component	
Explosion limits	: 1.5 - 12.8	Vol%
Vapour pressure (at 20°C)	: N.D.	hPa
Vapour pressure (at 50°C)	: N.D.	hPa
Relative density (at 20°C)	: N.D.	
Water solubility	: N.D.	g/100 ml
Soluble in	: ethanol, ether	
Relative vapour density	: N.D.	
Viscosity (at 20°C)	: N.D.	Pa.s
Partition coefficient n-octanol/water	: N.D.	
Evaporation rate		
ratio to butyl acetate	: N.D.	
ratio to ether	: N.D.	

9.3 Other information:

Melting point/melting range	: N.D.	°C
Auto-ignition point	: N.D.	°C
Saturation concentration	: N.D.	g/m ³

10. Stability and reactivity

10.1 Conditions to avoid/reactivity:

- Unstable on exposure to heat

10.2 Materials to avoid:

- Keep away from: heat sources, ignition sources, oxidizing agents, acids, bases

10.3 Hazardous decomposition products:

- On burning: release of carbon monoxide and carbon dioxide

11. Toxicological information

11.1 Acute toxicity:

ACETONE:

LD50 oral rat	: 5800	mg/kg
LD50 dermal rabbit	: 20000	mg/kg
LD50 dermal rabbit	: N.D.	mg/kg
LC50 inhalation rat	: 71	mg/l/4 h
LC50 inhalation rat	: 30000	ppm/4 h

BUTANE and ISOBUTANE:

LD50 oral rat	: N.D.	mg/kg
LD50 dermal rabbit	: N.D.	mg/kg
LD50 dermal rabbit	: N.D.	mg/kg
LC50 inhalation rat	: 658	mg/l/4 h
LC50 inhalation rat	: N.D.	ppm/4 h

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PROPANE:

LD50 oral rat	: N.D.	mg/kg
LD50 dermal rabbit	: N.D.	mg/kg
LD50 dermal rabbit	: N.D.	mg/kg
LC50 inhalation rat	: 513	mg/l/4 h
LC50 inhalation rat	: 280000	ppm/4 h

11.2 Chronic toxicity:

ACETONE:

EC carc. cat.	: not listed
EC muta. cat.	: not listed
EC repr. cat.	: not listed
Carcinogenicity (TLV)	: A4
Carcinogenicity (MAC)	: not listed
Carcinogenicity (VME)	: not listed
Carcinogenicity (GWBB)	: not listed
Carcinogenicity (MAK)	: not listed
Mutagenicity (MAK)	: not listed
Teratogenicity (MAK)	: Group -
IARC classification	: not listed

11.3 Routes of exposure: inhalation, eyes and skin

11.4 Acute effects/symptoms (upon overexposure):

AFTER INHALATION:

EXPOSURE TO HIGH CONCENTRATIONS:

- Feeling of weakness
- CNS depression
- Dizziness
- Narcosis
- Excited/restless
- Drunkenness
- Disturbed motor response
- Headache
- Respiratory difficulties
- Disturbances of consciousness

AFTER EYE CONTACT:

- Irritation of the eye tissue

AFTER SKIN CONTACT:

ON CONTINUOUS EXPOSURE/CONTACT:

- Dry skin
- Cracking of the skin

11.5 Chronic effects:

ON CONTINUOUS EXPOSURE/CONTACT:

- Red skin
- Skin rash/inflammation
- Dry/sore throat
- Headache
- Nausea
- Feeling of weakness
- Loss of weight
- Inflammation of the respiratory tract

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12. Ecological information

12.1 Ecotoxicity:

ACETONE:

- LC50 (96 h) : 5540 mg/l (SALMO GAIIRDNERI/ONCORHYNCHUS MYKISS)
- EC50 (48 h) : 39 mg/l (DAPHNIA MAGNA)
- EC50 (96 h) : 7000 mg/l (SELENASTRUM CAPRICORNUTUM)

12.2 Mobility:

- Volatile organic compounds (VOC): 100 %

For other physicochemical properties see section 9

12.3 Persistence and degradability:

- biodegradation BOD₅ : N.D. % ThOD
- water : No data available
- soil : T ½ N.D. days

12.4 Bioaccumulative potential:

- log P_{ow} : N.D.
- BCF : N.D.

12.5 Other adverse effects:

- WGK : 1 (classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999)
- Effect on the ozone layer : Not dangerous for the ozone layer (1999/45/EC)
- Greenhouse effect : No data available
- Effect on waste water purification : No data available

13. Disposal considerations

13.1 Provisions relating to waste:

- Waste material code (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 07 01 04* (other organic solvents, washing liquids and mother liquors)
- Hazardous waste (91/689/EEC)

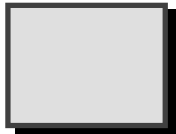
13.2 Disposal methods:

- Specific treatment

13.3 Packaging:

- Waste material code packaging (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 15 01 10* (packaging containing residues of or contaminated by dangerous substances)

14. Transport information



14.1 Classification of the substance in compliance with UN Recommendations
 UN number : 1950
 CLASS : 2.1
 SUB RISKS : -
 PACKING : -
 PROPER SHIPPING NAME : UN 1950, Aerosols

14.2 ADR (transport by road)
 CLASS : 2
 CLASSIFICATION CODE : 5 F
 DANGER LABEL TANKS : -
 DANGER LABEL PACKAGES : 2.1

14.3 RID (transport by rail)
 CLASS : 2
 CLASSIFICATION CODE : 5 F
 DANGER LABEL TANKS : -
 DANGER LABEL PACKAGES : 2.1

14.4 ADNR (transport by inland waterways)
 CLASS : 2
 CLASSIFICATION CODE : 5 F
 DANGER LABEL TANKS : -
 DANGER LABEL PACKAGES : 2.1

14.5 IMDG (maritime transport)
 CLASS : 2.1
 SUB RISKS : -
 PACKING : -
 MFAG : -
 EMS : F-D, S-U
 MARINE POLLUTANT : -

14.6 ICAO (air transport)
 CLASS : 2.1
 SUB RISKS : -
 PACKING : -
 PACKING INSTRUCTIONS PASSENGER AIRCRAFT : 203/Y203
 PACKING INSTRUCTIONS CARGO AIRCRAFT : 203

14.7 Special precautions in connection with transport : None

14.8 Limited quantities (LQ) :

When substances and their packaging meet the conditions established by ADR/RID/ADNR in chapter 3.4, **only** the following prescriptions shall be complied with:
 each package shall display a diamond-shaped figure with the following inscription:
 - 'UN 1950'
 or, in the case of different goods with different identification numbers within a single package:
 - the letters 'LQ'

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15. Regulatory information

Labelling in accordance with EC directives 67/548/EEC and 1999/45/EC



Extremely flammable



Irritant

- R36 : Irritant to the eyes
R66 : Repeated exposure may cause skin dryness or cracking
R67 : Vapours may cause drowsiness and dizziness
- S(02) : (Keep out of reach of children)
S09 : Store in a well-ventilated area
S16 : Keep away from sources of ignition - No smoking
S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

Keep away from sources of ignition - No smoking.
Keep out of the reach of children.
Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C.
Do not pierce or burn after use.
Do not spray on a naked flame or any incandescent material

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16. Other information

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

N.A. = NOT APPLICABLE
N.D. = NOT DETERMINED
***** = INTERNAL CLASSIFICATION

Full text of any R-phrases referred to under heading 2:

R11 : Highly flammable
R12 : Extremely flammable
R36 : Irritant to the eyes
R66 : Repeated exposure may cause skin dryness or cracking
R67 : Vapours may cause drowsiness and dizziness

Exposure limits:

TLV : Threshold Limit Value - ACGIH US 2002
OES : Occupational Exposure Standards - United Kingdom 1999
MEL : Maximum Exposure Limits - United Kingdom 1999
MAK : Maximale Arbeitsplatzkonzentrationen - Germany 2001
TRK : Technische Richtkonzentrationen - Germany 2001
MAC : Maximale aanvaarde concentratie - the Netherlands 2002
VME : Valeurs limites de Moyenne d'Exposition - France 1999
VLE : Valeurs limites d'Exposition à court terme - France 1999
GWBB : Grenswaarde beroepsmatige blootstelling - Belgium 2002
GWK : Grenswaarde kortstondige blootstelling - Belgium 2002
EC : Indicative occupational exposure limit values - directive 2000/39/EC

I : Inhalable fraction = **T** : Total dust = **E** : Einatembarer Aerosolanteil
R : Respirable fraction = **A** : Alveolengängiger Aerosolanteil/Alveolar dust
C : Ceiling limit

a:	aerosol	r:	rook/Rauch	(fume)
d:	damp (vapour)	st:	stof/Staub	(dust)
du:	dust	ve:	vezel	(fibre)
fa:	Faser (fibre)	va:	vapour	
fi:	fibre	om:	oil mist	
fu:	fume	on:	olienevel/Ölnebel	(oil mist)
p:	poussière (dust)	part:	particles	

Chronic toxicity:

K : List of the carcinogenic substances and processes - The Netherlands 2002