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

1.1 Product identifier

Trade name: DPF cleaner

This safety data sheet pertains to the following products:
243617 = DPF cleaner
409833 = DPF cleaner

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

General use: Cleaning agent.
Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

Company name: Berner Produkten b.v.
Street/POB-No.: Vogelzankweg 175
Postal Code, city: 6374 AC Landgraaf
Netherlands
WWW: www.berner.nl
E-mail: info@berner.nl
Telephone: +31 45 53 39 133

Department responsible for information:
E-mail: Productsafety.Chemicals@berner-group.com

1.4 Emergency telephone number

Poisons information service:
National Poisons Information Service (Birmingham Unit): 844 892 0111

Transport:
CONSULTANK Lutz Harder GmbH (Contract Qualisys/Berner)
Telephone: +49 (178) 4337434 (from USA: 01149 178 4337434)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)

Aerosol 3; H229 Pressurised container: May burst if heated.
Skin Irrit. 2; H315 Causes skin irritation.
Eye Irrit. 2; H319 Causes serious eye irritation.

2.2 Label elements

Labelling (CLP)

Signal word: **Warning**

Hazard statements:
H229 Pressurised container: May burst if heated.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements:	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P251	Do not pierce or burn, even after use.
	P264	Wash hands and face thoroughly after handling.
	P280	Wear protective gloves/protective clothing/eye 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.
	P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

2.3 Other hazards

Potentially explosive mixtures may form if adequate ventilation is not provided.
Inhaling can lead to irritations of the respiratory tract and mucous membrane.
Higher doses may lead to a narcotic effect.

Endocrine disrupting properties, Results of PBT and vPvB assessment:

No data available

SECTION 3: Composition/information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Chemical characterisation: Blend of active ingredients with propellant (nitrogen):

Hazardous ingredients:

Identifiers	Designation Classification	Content
REACH 01-2119486455-28-xxxx EC No. 205-483-3 CAS 141-43-5	2-Aminoethanol Acute Tox. 4; H302. Acute Tox. 4; H312. Acute Tox. 4; H332. Skin Corr. 1B; H314. STOT SE 3; H335. Aquatic Chronic 3; H412. Specific concentration limits (SCL): STOT SE 3; H335: C ≥ 5 %	< 3 %

Full text of H- and EUH-statements: see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: First aider: Pay attention to self-protection! Remove persons to safety.
If medical advice is needed, have product container or label at hand. Take off contaminated clothing and wash it before reuse.

In case of inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek medical attention if problems persist.

Following skin contact: Immediately clean with water and soap followed by thorough rinsing. In case of skin reactions, consult a physician.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently consult an ophthalmologist.

After swallowing: Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person.
Do not induce vomiting. Caution if victim vomits: Risk of aspiration! Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Causes skin irritation. Causes serious eye irritation.
Headache, Nausea, Dizziness, fatigue.
Inhaling can lead to irritations of the respiratory tract and mucous membrane.
Higher doses may lead to a narcotic effect.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Symptoms can occur only after several hours.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Water spray jet, Extinguishing powder, foam, carbon dioxide.

Extinguishing media which must not be used for safety reasons:
Full water jet

5.2 Special hazards arising from the substance or mixture

Pressurised container: May burst if heated.
May form dangerous gases and vapours in case of fire.
Furthermore, there may develop: Aldehydes, carbon black, nitrogen oxides (NOx), carbon monoxide and carbon dioxide.

5.3 Advice for firefighters

Special protective equipment for firefighters:
Wear self-contained positive pressure breathing apparatus and full firefighting protective clothing.

Additional information: Hazchem-Code: -

Do not inhale explosion and combustion gases. Heating will lead to pressure increase: Danger of bursting and explosion. Use fine water spray to cool endangered containers.
In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
Do not allow water used to extinguish fire to enter drains, ground or waterways.
Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing spray. Avoid contact with the substance.
In case of leakage, eliminate all ignition sources. Provide adequate ventilation.
Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse. Keep unprotected people away.
Cordon off downwind area at risk and warn inhabitants.

6.2 Environmental precautions

Do not allow to enter into ground-water, surface water or drains. Danger of explosion!
In case of release, notify competent authorities.

6.3 Methods and material for containment and cleaning up

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13).
In case of greater quantities: Collect mechanically (use only explosion-proof equipment when pumping out). Prevent spread over a wide area (e.g. by containment or oil barriers). Never return spills in original containers for re-use. Thoroughly clean surrounding area.

6.4 Reference to other sections

Refer additionally to section 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Avoid breathing spray. Do not get in eyes, on skin, or on clothing. Wear appropriate protective equipment.
Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
Take off contaminated clothing and wash it before reuse.
Guarantee sufficient ventilation during and after use, in order to prevent vapour accumulation.
Have eye wash bottle or eye rinse ready at work place. When handling large quantities, supply emergency spray.

Precautions against fire and explosion:
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:
Keep container tightly closed and in a well-ventilated place.
Store in a cool dry place. Keep only in the original container.
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
Store containers in upright position. Protect from frost.

Hints on joint storage: Keep away from food, drink and animal feedingstuffs.
keep away from: Oxidising agent. Pyrophoric or self-heating substances.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
141-43-5	2-Aminoethanol	Great Britain: WEL-STEL	7.6 mg/m³; 3 ppm (may be absorbed through the skin)
		Great Britain: WEL-TWA	2.5 mg/m³; 1 ppm (may be absorbed through the skin)

DNEL/DMEL: Information about 2-Aminoethanol:
DNEL Long-term, workers, dermal, systemic: 3 mg/kg bw/d
DNEL Long-term, workers, inhalative, systemic: 1 mg/m³
DNEL Long-term, workers, inhalative, local: 0.51 mg/m³
DNEL Long-term, consumers, oral, systemic: 1.5 mg/kg bw/d
DNEL Long-term, consumers, dermal, systemic: 1.5 mg/kg bw/d
DNEL Long-term, consumers, inhalative, systemic: 0.18 mg/m³
DNEL Long-term, consumers, inhalative, local: 0.28 mg/m³

PNEC: Information about 2-Aminoethanol:
PNEC water (freshwater): 0.07 mg/L
PNEC water (marine water): 0.007 mg/L
PNEC sewage treatment plant: 100 mg/L
PNEC sediment (freshwater): 0.357 mg/kg dw
PNEC sediment (marine water): 0.036 mg/kg dw
PNEC soil: 1.29 mg/kg dw

8.2 Exposure controls

Provide good ventilation and/or an exhaust system in the work area.

Personal protection equipment

Occupational exposure controls

Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded.
In case of inadequate ventilation wear respiratory protection. Recommendation: Use filter type A (= against vapours of organic substances) according to BS EN 14387.
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product.

Hand protection: Protective gloves according to EN 374.
Glove material: Nitrile rubber
Breakthrough time: 480 min
Layer thickness: 0.45 mm
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to BS EN ISO 16321-1:2022.

Body protection: Flame retardant, antistatic and chemical resistant protective clothing.

General protection and hygiene measures:
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source.
Avoid breathing spray. Do not get in eyes, on skin, or on clothing.
When using do not eat or drink. Contaminated work clothing should not be allowed out of the workplace. Wash hands thoroughly after handling. Take off contaminated clothing and wash it before reuse.
Have eye wash bottle or eye rinse ready at work place. When handling large quantities, supply emergency spray.

Environmental exposure controls

See subsection 6.2

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Physical state at 20 °C and 101.3 kPa: liquid Form: Aerosol Colour: Pink
Odour:	Amine-like
Odour threshold:	No data available
pH:	at 20 °C: 10.76 (DIN 19268)
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	100 °C
Flash point/flash point range:	> 100 °C
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	No data available
Vapour pressure:	No data available
Vapour density:	No data available
Density:	at 20 °C: 1.01 g/mL (DIN 51757)
Water solubility:	Easily soluble
Partition coefficient: n-octanol/water:	-2.3 log P(o/w) (2-Aminoethanol) Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.

Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity, kinematic:	No data available
Explosive properties:	Pressurised container: May burst if heated.
Oxidizing characteristics:	Not oxidising.

9.2 Other information

Additional information:	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Vapours can form explosive mixtures with air.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Pressurised container: May burst if heated.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

10.5 Incompatible materials

Oxidising agent. Pyrophoric or self-heating substances.

10.6 Hazardous decomposition products

Aldehydes

Thermal decomposition:	No data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Toxicological effects:

The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

Acute toxicity (oral): Based on available data, the classification criteria are not met.

Acute toxicity (dermal): Based on available data, the classification criteria are not met.

Acute toxicity (inhalative): Based on available data, the classification criteria are not met.

Skin corrosion/irritation: Skin Irrit. 2; H315 = Causes skin irritation.

Serious eye damage/irritation: Eye Irrit. 2; H319 = Causes serious eye irritation.

Sensitisation to the respiratory tract: Based on available data, the classification criteria are not met.

Skin sensitisation: Based on available data, the classification criteria are not met.

Germ cell mutagenicity/Genotoxicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure): Based on available data, the classification criteria are not met.

Aspiration hazard: Based on available data, the classification criteria are not met.

Other information:

Information about Ethanolamine:
LD50 Rat, oral: 1,089 mg/kg (OECD 401)
LD50 Rabbit, dermal: 2,504 mg/kg (OECD 402)
LC50 Rat, inhalative: > 1.3 mg/L/4h (Aerosol)
ATE, inhalative: 11 mg/L (vapour)

Symptoms

Headache, Nausea, Dizziness, fatigue.
Inhaling can lead to irritations of the respiratory tract and mucous membrane.
Higher doses may lead to a narcotic effect.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

Information about 2-Aminoethanol:
Fish toxicity:
LC50 Cyprinus carpio (Common Carp): 349 mg/L/96h
Daphnia toxicity:
EC50 Daphnia magna (Big water flea): 65 mg/L/48h
algae toxicity:
EC50 Pseudokirchneriella subcapitata (green algae): 2.8 mg/L/72h (OECD 201)

12.2 Persistence and degradability

Further details:

No data available

12.3 Bioaccumulative potential

Information about 2-Aminoethanol:
BCF 2.3

Partition coefficient: n-octanol/water:

-2.3 log P(o/w) (2-Aminoethanol)
Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

General information: Do not allow to enter into ground-water, surface water or drains.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 16 05 04* = Gases in pressure containers (including halons) containing hazardous substances/Aerosol
* = Evidence for disposal must be provided.

Recommendation: Do not pierce or burn, even after use.
Special waste. Dispose of waste according to applicable legislation.
Do not dispose of with household waste.

Package

Waste key number: 15 01 04 = metallic packaging

Recommendation: Dispose of waste according to applicable legislation.
Empty carefully and completely, if possible. Handle empty containers with care. Incineration may cause explosion.

SECTION 14: Transport information

14.1 UN number

ADR/RID, IMDG, IATA-DGR: UN 1950

14.2 UN proper shipping name

ADR/RID, IMDG: UN 1950, AEROSOLS
IATA-DGR: UN 1950, AEROSOLS, NON-FLAMMABLE

14.3 Transport hazard class(es)

ADR/RID: Class 2, Code: 5A
IMDG: Class 2.2, Subrisk -
IATA-DGR: Class 2.2

14.4 Packing group

ADR/RID, IATA-DGR: not applicable
IMDG: -

14.5 Environmental hazards

Marine pollutant: no

14.6 Special precautions for user

Land transport (ADR/RID)

Warning board:	RID: Kemmler-number 20, UN number UN 1950
Hazard label:	2.2
Special Provisions:	190 327 344 625
Limited quantities:	1 L
EQ:	E0
Package - Instructions:	P207 LP200
Package - Special Provisions:	PP87 RR6 L2
Special provisions for packing together:	MP9
Tunnel restriction code:	E

Sea transport (IMDG)

EmS:	F-D, S-U
Special Provisions:	63 190 277 327 344 381 959
Limited quantities:	1000 mL
Excepted quantities:	E0
Package - Instructions:	P207, LP200
Package - Provisions:	PP87, L2
IBC - Instructions:	-
IBC - Provisions:	-
Tank instructions - IMO:	-
Tank instructions - UN:	-
Tank instructions - Provisions:	-
Stowage and handling:	SW1 SW22
Segregation:	SG69
Properties and observations:	-
Segregation group:	none

Air transport (IATA)

Hazard label:	Non-flamm. gas
Excepted Quantity Code:	E0
Passenger and Cargo Aircraft: Ltd.Qty.:	Pack.Instr. Y203 - Max. Net Qty/Pkg. 30 kg G
Passenger and Cargo Aircraft:	Pack.Instr. 203 - Max. Net Qty/Pkg. 75 kg
Cargo Aircraft only:	Pack.Instr. 203 - Max. Net Qty/Pkg. 150 kg
Special Provisions:	A98 A145 A167 A802
Emergency Response Guide-Code (ERG):	2L

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

No data available

SECTION 15: Regulatory information

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

National regulations - Great Britain

Hazchem-Code: -

No data available

National regulations - EC member states

Further regulations, limitations and legal requirements:

Use restriction according to REACH annex XVII, no.: 3, 40, 75

15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment is not required.

SECTION 16: Other information

Further information

Wording of the H-phrases under paragraph 2 and 3:

H229 = Pressurised container: May burst if heated.
H302 = Harmful if swallowed.
H312 = Harmful in contact with skin.
H314 = Causes severe skin burns and eye damage.
H315 = Causes skin irritation.
H319 = Causes serious eye irritation.
H332 = Harmful if inhaled.
H335 = May cause respiratory irritation.
H412 = Harmful to aquatic life with long lasting effects.

Abbreviations and acronyms:

Acute Tox.: Acute toxicity
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
Aerosol: Aerosol
Aquatic Chronic: Hazardous to the aquatic environment - chronic
AS/NZS: Australian Standards/New Zealand Standards
BCF: Bioconcentration Factor
CAS: Chemical Abstracts Service
CFR: Code of Federal Regulations
CLP: Classification, Labelling and Packaging
DMEL: Derived minimal effect level
DNEL: Derived no-effect level
EC: European Community
EC50: Effective Concentration 50%
EN: European Standard
EQ: Excepted quantities
Eye Irrit.: Eye irritation
IATA: International Air Transport Association
IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IMDG Code: International Maritime Dangerous Goods Code
LC50: Median lethal concentration
LD50: Lethal dose 50%
log P(o/w): Partition coefficient: octanol/water
MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
OECD: Organisation for Economic Co-operation and Development
OEL: Occupational Exposure Limit Value
OSHA: Occupational Safety and Health Administration
PBT: Persistent, bioaccumulative and toxic
PNEC: Predicted no-effect concentration
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
Skin Corr.: Skin corrosion
Skin Irrit.: Skin irritation
STOT SE: Specific target organ toxicity - single exposure
TLV: Threshold Limit Value
TRGS: Technical Rules for Hazardous Substances
UN: United Nations
vPvB: Very persistent and very bioaccumulative
WEL: Workplace Exposure Limit

Reason of change: General revision

Date of first version: 27/9/2021

Department issuing data sheet

Contact person: see section 1: Department responsible for information

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.