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

Product identifier

LPG System Clean & Protect

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

Use of the substance/mixture

Cleaning agent.

Details of the supplier of the safety data sheet

Company name:	PRO-TEC Deutschland	
Street:	Großgeschwenda 51	
Place:	D-07330 Probstzella	
Telephone:	+4936735/444-0	Telefax: +4936735/444-44
e-mail:	info@pro-tec-deutschland.com	
Contact person:	Jens Möller, Dipl.-Chem.	
Internet:	www.pro-tec-deutschland.de	

Further Information

Article Number: 1931

SECTION 2: Hazards identification

Classification of the substance or mixture

Indications of danger : Extremely flammable, Harmful, Irritant
R-phrases:
Possible risk of harm to the unborn child.
Extremely flammable.
Irritating to eyes.

Label elements

Danger symbols: F+ - Extremely flammable; Xn - Harmful

F+ - Extremely flammable

Xn - Harmful

Hazardous components which must be listed on the label

toluene

R phrases

63	Possible risk of harm to the unborn child.
12	Extremely flammable.
36	Irritating to eyes.

S phrases

02	Keep out of the reach of children.
23	Do not breathe aerosole .
51	Use only in well-ventilated areas.
36/37	Wear suitable protective clothing and gloves.

Special labelling of certain mixtures

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

smoking. Keep out of the reach of children.

SECTION 3: Composition/information on ingredients

Mixtures

Chemical characterization

Alcohols.
ketone.
Corrosion inhibitors.
Additives
Organic solvents

Hazardous components

EC No.	Chemical name	Quantity
CAS No.	Classification	
Index No.	GHS classification	
REACH No.		
265-150-3	Low boiling point hydrogen treated naphtha, Naphtha (petroleum, gasoline),hydrotreated heavy	5 - 10 %
64742-48-9	Xn R65-66	
	Asp. Tox. 1; H304	
203-625-9	toluene	1 - 5 %
108-88-3	F, Repr. Cat. 3, Xn, Xi R11-63-48/20-65-38-67	
601-021-00-3	Flam. Liq. 2, Repr. 2, Asp. Tox. 1, STOT RE 2, Skin Irrit. 2, STOT SE 3; H225 H361d *** H304 H373 ** H315 H336	
200-661-7	propan-2-ol; isopropyl alcohol; isopropanol	1 - 5 %
67-63-0	F, Xi R11-36-67	
603-117-00-0	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336	
201-152-2	1,2-dichloropropane, propylene dichloride	1 - 5 %
78-87-5	F, Xn R11-20/22	
602-020-00-0	Flam. Liq. 2, Acute Tox. 4, Acute Tox. 4; H225 H332 H302	
215-535-7	xylene	1 - 5 %
1330-20-7	Xn, Xi R10-20/21-38	
601-022-00-9	Flam. Liq. 3, Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2; H226 H332 H312 H315	
203-905-0	2-butoxyethanol, butyl cellosolve, ethylene glycol monobutyl ether	1 - 5 %
111-76-2	Xn, Xi R20/21/22-36/38	
603-014-00-0	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Eye Irrit. 2, Skin Irrit. 2; H332 H312 H302 H319 H315	
200-662-2	acetone; propan-2-one; propanone	1 - 5 %
67-64-1	F, Xi R11-36-66-67	
606-001-00-8	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336	
265-151-9	Naphtha (petroleum), hydrotreated light	1 - 5 %
64742-49-0	Xn R10-65-66-67	
	Flam. Liq. 1, Asp. Tox. 1, STOT SE 3; H224 H304 H336	

Full text of R- and H-phrases: see section 16.

SECTION 4: First aid measures

Description of first aid measures

General information

Move victim out of danger zone and lay down.
Change contaminated clothing.

After inhalation

Provide fresh air. If victim is at risk of losing consciousness, position and transport on their side.

After contact with skin

After contact with skin, wash immediately with plenty of Water and soap.
In case of skin irritation, seek medical treatment.

After contact with eyes

If product gets into the eye, keep e4yelid open and rinse immediately with large quantities of water, for at least 5 minutes. Subsequently consult an opthalmologist.

After ingestion

Do not induce vomiting. Consult physician.

Most important symptoms and effects, both acute and delayed

Frequently or prolonged contact with skin may cause dermal irritation.
Irritation of eyes: Irritant effect possible.
Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Indication of any immediate medical attention and special treatment needed

Following symptoms can occur:
unconsciousness. Intoxication. vomiting. drowsiness. Headache.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

Extinguishing powder.
Carbon dioxide (CO_2).
Water fog.
alcohol resistant foam.

Extinguishing media which must not be used for safety reasons

High power water jet.

Special hazards arising from the substance or mixture

Swims on the water. Vapours are heavier than air and will spread at floor level.

Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Cool endangered container in case of fire.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Wear suitable solvent-proof protective clothing according to EN 465.
Keep away from sources of ignition. No smoking. Avoid contact with skin and eyes.
Do not breathe gas/fumes/vapour/spray.

Environmental precautions

Do not empty into drains or the aquatic environment. In case of gas being released or leakage into waters, ground or the drainage system, the appropriate authorities must be informed.

Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Reference to other sections

Explosive. Vapours may form explosive mixtures with air.

SECTION 7: Handling and storage

Precautions for safe handling

Advice on safe handling

Keep only in the original container in a cool, well ventilated place.
If suction of the immediate vicinity is impossible or insufficient, adequate airing of the working place must be ensured.

Advice on protection against fire and explosion

Vapours may form explosive mixtures with air.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

The floor should be leak tight, jointless and not absorbent. Keep only in the original container in a cool, well ventilated place. Do not store at temperatures over: 50 °C
Heating causes rise in pressure with risk of bursting.

SECTION 8: Exposure controls/personal protection

Control parameters

Exposure limits (EH40)

CAS No.	Chemical name	ml/m³	mg/m³	F/ml	Category	Origin
111-76-2	2-Butoxyethanol	25	123		TWA (8 h)	WEL
		50	246		STEL (15 min)	WEL
67-64-1	Acetone	500	1210		TWA (8 h)	WEL
		1500	3620		STEL (15 min)	WEL
68476-85-7	Liquefied petroleum gas	1000	1750		TWA (8 h)	WEL
		1250	2180		STEL (15 min)	WEL
67-63-0	Propan-2-ol	400	999		TWA (8 h)	WEL
		500	1250		STEL (15 min)	WEL
108-88-3	Toluene	50	191		TWA (8 h)	WEL
		100	384		STEL (15 min)	WEL
1330-20-7	Xylene, o-, m-, p- or mixed isomers	50	220		TWA (8 h)	WEL
		100	441		STEL (15 min)	WEL

Biological Monitoring Guidance Values (EH40)

CAS No.	Chemical name	Parameter	Value	Test material	Sampling time
111-76-2	2-Butoxyethanol	butoxyacetic acid	240 mmol/mol	urine	Post shift
1330-20-7	Xylene, o-, m-, p- or mixed isomers	methyl hippuric acid	650 mmol/mol	urine	Post shift

Exposure controls

Protective and hygiene measures

Keep away from food, drink and animal feeding stuffs.
Take off immediately all contaminated clothing "Wash hands when done working with material; at breaks, lunch, shift changes, etc."
Do not breathe gas/fumes/vapour/spray. Avoid contact with skin and eyes.

Respiratory protection

Have to care for a good Ventilation at workplace.

Hand protection

Tested protective gloves are to be worn: FKM (Fluoroelastomer (Viton)).NBR (Nitrile rubber).

Eye protection

Wear tightly sealed safety glasses against possible splashes into the eyes.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state:	Aerosol
Colour:	colourless
Odour:	characteristic

		Test method
Changes in the physical state		
Flash point:	< 21 °C	
Ignition temperature:	400 °C	
Water solubility: (at 20 °C)	insoluble	

SECTION 10: Stability and reactivity

Conditions to avoid

Do not store at temperatures over: 50 °C
Keep away from heat.

Hazardous decomposition products

No dangerous reactions are known.
No hazardous decomposition products are known.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

CAS No.	Chemical name				
	Exposure routes	Method	Dose	Species	h
108-88-3	toluene				
	Acute dermal toxicity	LD50	12200 mg/kg	Kaninchen	
	Acute inhalation toxicity	LC50	49 mg/l	Ratte	4
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol				
	Acute oral toxicity	LD50	5280 mg/kg	rat.	
	Acute dermal toxicity	LD50	12800 mg/kg	Rabbit.	
	Acute inhalation toxicity	LC50	47,5 mg/l	rat.	4
78-87-5	1,2-dichloropropane, propylene dichloride				
	Acute oral toxicity	ATE	500 mg/kg		
1330-20-7	xylene				
	Acute oral toxicity	LD50	4300 mg/kg	rat.	
	Acute dermal toxicity	LD50	3200 mg/kg	Rabbit.	
111-76-2	2-butoxyethanol, butyl cellosolve, ethylene glycol monobutyl ether				
	Acute oral toxicity	LD50	470 mg/kg	Ratte	
	Acute dermal toxicity	ATE	1100 mg/kg		
	Acute inhalation toxicity	ATE	11 mg/l		
67-64-1	acetone; propan-2-one; propanone				
	Acute oral toxicity	LD50	5800 mg/kg	Ratte	
	Acute dermal toxicity	LD50	20000 mg/kg	Kaninchen	
	Acute inhalation toxicity	LC50	76 mg/l	Ratte	4
64742-49-0	Naphtha (petroleum), hydrotreated light				
	Acute oral toxicity	LD50	>5000 mg/kg	rat.	
	Acute dermal toxicity	LD50	>3160 mg/kg	Rabbit.	
	Acute inhalation toxicity	LC50	>12 mg/l	rat.	4

Irritation and corrosivity

Frequently or prolonged contact with skin may cause dermal irritation.
Irritation of eyes: Irritant effect possible.

SECTION 12: Ecological information

Toxicity

CAS No.	Chemical name			
	Aquatic toxicity	Method Dose	Species	h
108-88-3	toluene			
	Acute fish toxicity	LC50 13 mg/l	Carassius auratus	96
	Acute algae toxicity	ErC50 12,5 mg/l	Algen	72
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol			
	Acute fish toxicity	LC50 9640 mg/l	Pimephales promelas	96
	Acute algae toxicity	ErC50 1000 mg/l	Algae	72
	Acute crustacea toxicity	EC50 13299 mg/l	Daphnia magna	48
1330-20-7	xylene			
	Acute fish toxicity	LC50 26,7 mg/l	Pimephales promelas	96
111-76-2	2-butoxyethanol, butyl cellosolve, ethylene glycol monobutyl ether			
	Acute fish toxicity	LC50 1490 mg/l	Lepomis macrochirus	96
67-64-1	acetone; propan-2-one; propanone			
	Acute fish toxicity	LC50 5540 mg/l	Onchorhynchus mykiss	96
	Acute crustacea toxicity	EC50 6100 mg/l	Daphnia magna	48
64742-49-0	Naphtha (petroleum), hydrotreated light			
	Acute fish toxicity	LC50 1-10 mg/l	Fish	96
	Acute algae toxicity	ErC50 1-10 mg/l	Algae	72

Bioaccumulative potential

Swims on the water.
Low potential of bio-accumulation.

Partition coefficient n-octanol/water

CAS No.	Chemical name	Log Pow
108-88-3	toluene	2,73
111-76-2	2-butoxyethanol, butyl cellosolve, ethylene glycol monobutyl ether	0,81 (25°C)
67-64-1	acetone; propan-2-one; propanone	-0,24

Further information

Do not empty into drains or the aquatic environment.

SECTION 13: Disposal considerations

Waste treatment methods

Advice on disposal

According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.
Arrange about the exact waste code with the local waste disposal expert.

Do not dispose with household waste.

Waste disposal number of used product

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing dangerous substances
Classified as hazardous waste.

Contaminated packaging

Waste disposal according to official state regulations. Contaminated packing must be completely

emptied and can be re-used following appropriate cleaning.

SECTION 14: Transport information

Land transport (ADR/RID)

UN number:	UN1950
UN proper shipping name:	AEROSOLS
Transport hazard class(es):	2
Packing group:	-
Hazard label:	2.1

Classification code:	5F
Special Provisions:	190 327 625
Limited quantity:	1 L
Transport category:	2
Hazard-no.:	-
Tunnel restriction code:	D

Inland waterways transport

UN number:	UN1950
UN proper shipping name:	AEROSOLS
Transport hazard class(es):	2
Packing group:	-
Hazard label:	2.1

Classification code:	5F
Special Provisions:	190 327 344 625
Limited quantity:	1 L

Marine transport

UN number:	UN1950
UN proper shipping name:	AEROSOLS
Transport hazard class(es):	2
Packing group:	-
Hazard label:	2, see SP63
Marine pollutant:	-
Special Provisions:	63, 190, 277, 327, 344, 959
Limited quantity:	See SP277
EmS:	F-D, S-U

Air transport

UN/ID number:	UN1950

UN proper shipping name: AEROSOLS, flammable

Transport hazard class(es): 2.1

Packing group: -

Hazard label: 2.1

Special Provisions: A145 A167
Limited quantity Passenger: 30 kg G

IATA-packing instructions - Passenger:	203
IATA-max. quantity - Passenger:	75 kg
IATA-packing instructions - Cargo:	203
IATA-max. quantity - Cargo:	150 kg

Environmental hazards

Dangerous for the environment: no

SECTION 15: Regulatory information

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

EU regulatory information

Additional information

Contains:
> 30 % aliphatic hydrocarbons
< 5 % aromatic hydrocarbons
< 5 % halogenated hydrocarbons

National regulatory information

Water contaminating class (D): 2 - water contaminating

SECTION 16: Other information

Full text of R-phrases referred to under sections 2 and 3

10	Flammable.
11	Highly flammable.
12	Extremely flammable.
20/21	Harmful by inhalation and in contact with skin.
20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
20/22	Harmful by inhalation and if swallowed.
36	Irritating to eyes.
36/38	Irritating to eyes and skin.
38	Irritating to skin.
48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
63	Possible risk of harm to the unborn child.
65	Harmful: may cause lung damage if swallowed.
66	Repeated exposure may cause skin dryness or cracking.
67	Vapours may cause drowsiness and dizziness.

Full text of H-Statements referred to under sections 2 and 3

H224	Extremely flammable liquid and vapour.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.

H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

Further Information

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights.
The receiver of our product is singulary responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)