



Windscreen Antifreeze Concentrate - 70°C

Print date: 18.10.2011

Product code: 79

Page 1 of 8

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

Product identifier

Windscreen Antifreeze Concentrate - 70°C

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

Details of the supplier of the safety data sheet

Company name:	CTP-GmbH	
Street:	Saalfelder Straße 35	
Place:	D-07338 Leutenberg	
Telephone:	+4936734/230-0	Telefax: +4936734/230-22
e-mail:	hotline@ctp-gmbh.de	
Contact person:	Jens Moeller, Dipl.-Chem.	Telephone: +4936734/230-19
Internet:	www.ctp-gmbh.de	

Further Information

Article Number 11250, 11251, 11252, 11253, 11254, 11255, 11256

SECTION 2: Hazards identification

Classification of the substance or mixture

Indications of danger : Highly flammable

R-phrases:
Highly flammable.

Label elements

Danger symbols: F - Highly flammable



F - Highly flammable

R phrases

11 Highly flammable.

S phrases

02 Keep out of the reach of children.
07 Keep container tightly closed.
16 Keep away from sources of ignition - No smoking.

SECTION 3: Composition/information on ingredients

Mixtures



Windscreen Antifreeze Concentrate - 70°C

Print date: 18.10.2011

Product code: 79

Page 2 of 8

Hazardous components

EC No.	Chemical name	Quantity
CAS No.	Classification	
Index No.	GHS classification	
REACH No.		
200-578-6	ethanol, ethyl alcohol	75 - 80 %
64-17-5	F R11	
603-002-00-5	Flam. Liq. 2; H225	
203-473-3	ethanediol, ethylene glycol	10 - 15 %
107-21-1	Xn R22	
603-027-00-1	Acute Tox. 4; H302	

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.
Following inhalation: Move victim to fresh air. Consult physician.
Immediately remove any wetted clothing, shoes or stockings.

After inhalation

If victim is at risk of losing consciousness, position and transport on their side.
Following inhalation: Move victim to fresh air. Consult physician.

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

Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart.
Consult an ophthalmologist.

After ingestion

Do not induce vomiting.
Let water be swallowed in little sips (dilution effect).
Put victim at rest, cover with a blanket and keep warm. Consult physician.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂). Extinguishing powder. Water fog.
alcohol resistant foam.

Special hazards arising from the substance or mixture

Concentrated vapors are heavier than air. Vapours may form explosive mixtures with air.
Reignition possible at long range.
Releases: Carbon dioxide (CO₂). Carbon monoxide (CO).

Advice for firefighters

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

Additional information

Contaminated fire-fighting water must be collected separately.
Contaminated fire-fighting water must not get into the sewerage network.



Windscreen Antifreeze Concentrate - 70°C

Print date: 18.10.2011

Product code: 79

Page 3 of 8

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

- Wear personal protection equipment.
- Keep away from unprotected people. Keep upwind.
- Provide adequate ventilation.
- Remove all sources of ignition.
- 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).
- Provide adequate ventilation.
- Treat the assimilated material according to the section on waste disposal.

SECTION 7: Handling and storage

Precautions for safe handling

Advice on safe handling

- Keep container tightly closed and in a well-ventilated place.
- Provide a suction section for room air on ground-level.

Advice on protection against fire and explosion

- Use explosion-protected machinery, apparatus, suction equipment, appliances etc.
- Only use anti-static equipped (spark-free) tools.
- Concentrated vapors are heavier than air. Vapours may form explosive mixtures with air.
- Keep away from sources of ignition. No smoking.
- Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

- The floor should be leak tight, jointless and not absorbent.

Advice on storage compatibility

- Should be stored separately from oxidizing agents.
- Do not store together with highly flammable solids.

Further information on storage conditions

- Keep container tightly closed in a cool and dry place.
- Keep container tightly closed and in a well-ventilated place.
- Keep in a cool place, heating causes rise in pressure with risk of bursting.

SECTION 8: Exposure controls/personal protection

Control parameters



Windscreen Antifreeze Concentrate - 70°C

Print date: 18.10.2011

Product code: 79

Page 4 of 8

Exposure limits (EH40)

CAS No.	Chemical name	ml/m ³	mg/m ³	F/ml	Category	Origin
107-21-1	Ethane-1,2-diol, vapour	20	52		TWA (8 h)	WEL
		40	104		STEL (15 min)	WEL
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

Exposure controls

Protective and hygiene measures

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

Respiratory protection

Respiratory protection required in case of: Insufficient ventilation.

Hand protection

Before starting work, apply solvent-cleaner-proof skin protection products.
In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer of the gloves.

Eye protection

Tightly sealed safety glasses.

Skin protection

Wear suitable protective clothing.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state: liquid
Colour: green
Odour: alcoholic

Test method

Changes in the physical state

Boiling point: not determined
Flash point: 20 °C

Explosive properties

not Explosive.
In use, may form flammable/explosive vapour-air mixture.

Density (at 20 °C): 0,899 g/cm³
Solubility in other solvents: Solubility in water: (g/l) complete miscible
Viscosity / kinematic: < 20 mm²/s
(at 20 °C)

SECTION 10: Stability and reactivity

Incompatible materials

Oxidizing agents, strong.
acid, concentrated.



Windscreen Antifreeze Concentrate - 70°C

Print date: 18.10.2011

Product code: 79

Page 5 of 8

Hazardous decomposition products

No decomposition by proper handling and storage.
Hazardous decomposition products:
In case of fire may form: Carbon dioxide. Carbon monoxide.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

CAS No.	Chemical name				
	Exposure routes	Method	Dose	Species	h
64-17-5	ethanol, ethyl alcohol				
	Acute oral toxicity	LD50	6200 mg/kg	Ratte	
	Acute inhalation toxicity	LC50	95,6 mg/l	Ratte	4
107-21-1	ethanediol, ethylene glycol				
	Acute oral toxicity	ATE	500 mg/kg		
	Acute dermal toxicity	LD50	10600 mg/kg	Kaninchen	

Irritation and corrosivity

Irritant effect on the skin:
Prolonged/repetitive skin contact may cause skin defatting or dermatitis.

Irritant effect on the eye: irritant.

Sensitizing effects

no danger of sensitization.

Additional information on tests

Additional information:
Because of its solubility in water and fats, ethanol, depending on concentration, can have a toxic effect to whole organism.

SECTION 12: Ecological information

Toxicity

CAS No.	Chemical name				
	Aquatic toxicity	Method	Dose	Species	h
64-17-5	ethanol, ethyl alcohol				
	Acute crustacea toxicity	EC50	9268 - 14221 mg/l	Daphnia magna	48

Persistence and degradability

Good biological eliminationability.

Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No.	Chemical name	Log Pow
64-17-5	ethanol, ethyl alcohol	-0,31
107-21-1	ethanediol, ethylene glycol	-1,36

Further information

Do not empty into drains or the aquatic environment.



Windscreen Antifreeze Concentrate - 70°C

Print date: 18.10.2011

Product code: 79

Page 6 of 8

SECTION 13: Disposal considerations

Waste treatment methods

Advice on disposal

Do not dispose with household waste. Do not empty into drains or the aquatic environment.
Have to add a Special treatment in compliance with official regulations in contact with approved waste disposal companies and with authorities in charge.

Arrange about the exact waste code with the local waste disposal expert.

Contaminated packaging

Container must be completely emptied.
Do not pierce, cut up or weld unclean container.
Residues can constitute potential danger.
Dispose of this container at recycle or recondition waste collection points.
Packing which cannot be properly cleaned must be thrown away.

Cleaning agent.
Water (with cleaning agent).

SECTION 14: Transport information

Land transport (ADR/RID)

UN number: UN1170
UN proper shipping name: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
Transport hazard class(es): 3
Packing group: II
Hazard label: 3



Classification code: F1
Special Provisions: 144 601
Limited quantity: 1 L
Transport category: 2
Hazard-no.: 33
Tunnel restriction code: D/E

Inland waterways transport

UN number: UN1170
UN proper shipping name: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
Transport hazard class(es): 3
Packing group: II
Hazard label: 3



Classification code: F1
Special Provisions: 144 601
Limited quantity: 1 L

Windscreen Antifreeze Concentrate - 70°C

Print date: 18.10.2011

Product code: 79

Page 7 of 8

Marine transport

UN number: UN1170
UN proper shipping name: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
Transport hazard class(es): 3
Packing group: II
Hazard label: 3



Marine pollutant: -
Special Provisions: 144
Limited quantity: 3 L
EmS: F-E, S-D

Air transport

UN/ID number: UN1170
UN proper shipping name: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
Transport hazard class(es): 3
Packing group: II
Hazard label: 3



Special Provisions: A3 A58 A180
Limited quantity Passenger: 1 L
IATA-packing instructions - Passenger: 353
IATA-max. quantity - Passenger: 5 L
IATA-packing instructions - Cargo: 364
IATA-max. quantity - Cargo: 60 L

Environmental hazards

Dangerous for the environment: no

SECTION 15: Regulatory information

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

National regulatory information

Water contaminating class (D): 1 - slightly water contaminating

SECTION 16: Other information

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

11 Highly flammable.
22 Harmful if swallowed.

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

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.

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.



Safety Data Sheet
according to Regulation (EU) No. 1907/2006
wash
max



Windscreen Antifreeze Concentrate - 70°C

Print date: 18.10.2011

Product code: 79

Page 8 of 8

The receiver of our product is singularly 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.)



Lock Defroster

Print date: 08.03.2012

Product code: 486

Page 1 of 7

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

Product identifier

Lock Defroster

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

Details of the supplier of the safety data sheet

Company name:	CTP-GmbH	
Street:	Saalfelder Straße 35	
Place:	D-07338 Leutenberg	
Telephone:	+4936734/230-0	Telefax: +4936734/230-22
e-mail:	hotline@ctp-gmbh.de	
Contact person:	Jens Moeller, Dipl.-Chem.	Telephone: +4936734/230-19
Internet:	www.ctp-gmbh.de	

Further Information

Article Number: 23011

SECTION 2: Hazards identification

Classification of the substance or mixture

Indications of danger : Highly flammable, Irritant
R-phrases:
Highly flammable.
Irritating to eyes.
Vapours may cause drowsiness and dizziness.

Label elements

Danger symbols: F - Highly flammable; Xi - Irritant



F - Highly flammable

Xi - Irritant

R phrases

11	Highly flammable.
36	Irritating to eyes.
67	Vapours may cause drowsiness and dizziness.

S phrases

02	Keep out of the reach of children.
26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
24/25	Avoid contact with skin and eyes.

SECTION 3: Composition/information on ingredients

Mixtures



Lock Defroster

Print date: 08.03.2012

Product code: 486

Page 2 of 7

Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification	
Index No	GHS classification	
REACH No		
200-661-7	propan-2-ol; isopropyl alcohol; isopropanol	50 - 55 %
67-63-0	F, Xi R11-36-67	
603-117-00-0	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336	
200-578-6	ethanol, ethyl alcohol	35 - 40 %
64-17-5	F R11	
603-002-00-5	Flam. Liq. 2; H225	
203-473-3	ethanediol, ethylene glycol	15 - 20 %
107-21-1	Xn R22	
603-027-00-1	Acute Tox. 4; H302	

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

SECTION 4: First aid measures

Description of first aid measures

General information

Take off immediately all contaminated clothing

After inhalation

Following inhalation: Move victim to fresh air. Consult physician.

After contact with skin

After contact with skin, wash immediately with plenty of Water and soap.
Consult physician.

After contact with eyes

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

After ingestion

Rinse mouth thoroughly with water. Let water be swallowed in little sips (dilution effect).
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.

: Vapours may cause drowsiness and dizziness.

Indication of any immediate medical attention and special treatment needed

After ingestion of absorption substances:

Give activated carbon, in order to reduce the resorption in the gastro-enteric tract.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

Water fog. alcohol resistant foam. Carbon dioxide (CO₂). Extinguishing powder.

Extinguishing media which must not be used for safety reasons

High power water jet.



Lock Defroster

Print date: 08.03.2012

Product code: 486

Page 3 of 7

Special hazards arising from the substance or mixture

Cool endangered container in case of fire.
Heating causes rise in pressure with risk of bursting.

Advice for firefighters

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

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.
Provide adequate ventilation.

Environmental precautions

Do not empty into drains or the aquatic environment.

Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Collect in closed containers for disposal.

SECTION 7: Handling and storage

Precautions for safe handling

Advice on safe handling

Provide adequate ventilation.
Avoid contact with skin and eyes.

Advice on protection against fire and explosion

Take precautionary measures against static discharges. Keep away from sources of ignition. No smoking.
Use explosion-protected machinery, apparatus, suction equipment, appliances etc.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place. Keep away from moisture.

SECTION 8: Exposure controls/personal protection

Control parameters

Exposure limits (EH40)

CAS No	Chemical name	ml/m ³	mg/m ³	F/ml	Category	Origin
107-21-1	Ethane-1,2-diol, vapour	20	52		TWA (8 h)	WEL
		40	104		STEL (15 min)	WEL
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL
67-63-0	Propan-2-ol	400	999		TWA (8 h)	WEL
		500	1250		STEL (15 min)	WEL

Exposure controls

Protective and hygiene measures

Provide adequate ventilation.
Do not breathe gas/fumes/vapour/spray.
Avoid contact with skin and eyes.
Take off immediately all contaminated clothing
When using do not eat, drink or smoke.



Lock Defroster

Print date: 08.03.2012

Product code: 486

Page 4 of 7

Protect skin by using skin protective cream.

Respiratory protection

Wear suitable respiratory equipment when: exceeding exposure limits, formation of fumes/aerosols.
Wear suitable breathing apparatus (filter typ ABEK).

Hand protection

Suitable material: Butyl rubber, FKM (Fluoroelastomer (Viton)).
Material thickness: 0.4 – 0.5 mm
penetration time \geq 480 min In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer of the gloves.

Eye protection

Tightly sealed safety glasses.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state: liquid
Colour: blue
Odour: alcoholic

pH-Value (at 20 °C):

6,5 - 7,5

Test method

Changes in the physical state

Flash point: < 21 °C DIN 51755
Lower explosion limits: 2 vol. %
Upper explosion limits: 15 vol. %
Ignition temperature: DIN 51794
Density (at 20 °C): ca. 0,8 g/cm³ DIN 51757
Water solubility: miscible.
Viscosity / dynamic: DIN 53015

SECTION 10: Stability and reactivity

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

none
thermal decomposition: standard pressure decomposition distillable
Reacts violently with: Oxidizing agents, strong.

SECTION 11: Toxicological information

Information on toxicological effects



Lock Defroster

Print date: 08.03.2012

Product code: 486

Page 5 of 7

Acute toxicity

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	h
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
64-17-5	ethanol, ethyl alcohol				
	Acute oral toxicity	LD50	6200 mg/kg	Ratte	
	Acute inhalation toxicity	LC50	95,6 mg/l	Ratte	4
107-21-1	ethanediol, ethylene glycol				
	Acute oral toxicity	ATE	500 mg/kg		
	Acute dermal toxicity	LD50	10600 mg/kg	Kaninchen	

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
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
64-17-5	ethanol, ethyl alcohol				
	Acute crustacea toxicity	EC50	9268 - 14221 mg/l	Daphnia magna	48

Persistence and degradability

Some of the components are biodegradable. (alcoholes)

Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
64-17-5	ethanol, ethyl alcohol	-0,31
107-21-1	ethanediol, ethylene glycol	-1,36

SECTION 13: Disposal considerations

Waste treatment methods

Advice on disposal

Carry out a burning of hazardous waste according to official regulations .

Arrange about the exact waste code with the local waste disposal expert.

Waste disposal number of waste from residues/unused products

Lock Defroster

Print date: 08.03.2012

Product code: 486

Page 6 of 7

070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors
Classified as hazardous waste.

Waste disposal number of used product

070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors
Classified as hazardous waste.

SECTION 14: Transport information

Land transport (ADR/RID)

UN number: UN1987
UN proper shipping name: ALCOHOLS, N.O.S.
Transport hazard class(es): 3
Packing group: II
Hazard label: 3



Classification code: F1
Special Provisions: 274 601 640C
Limited quantity: 1 L
Transport category: 2
Hazard No: 33
Tunnel restriction code: D/E

Inland waterways transport

UN number: UN1987
UN proper shipping name: ALCOHOLS, N.O.S.
Transport hazard class(es): 3
Packing group: II
Hazard label: 3



Classification code: F1
Special Provisions: 274 601 640C
Limited quantity: 1 L

Marine transport

UN number: UN1987
UN proper shipping name: ALCOHOLS, N.O.S.
Transport hazard class(es): 3
Packing group: II
Hazard label: 3



Marine pollutant: -



Lock Defroster

Print date: 08.03.2012

Product code: 486

Page 7 of 7

Special Provisions: 274
Limited quantity: 1 L
EmS: F-E, S-D

Air transport

UN/ID number: UN1987
UN proper shipping name: ALCOHOLS, N.O.S.
Transport hazard class(es): 3
Packing group: II
Hazard label: 3



Special Provisions: A3 A180
Limited quantity Passenger: 1 L
IATA-packing instructions - Passenger: 353
IATA-max. quantity - Passenger: 5 L
IATA-packing instructions - Cargo: 364
IATA-max. quantity - Cargo: 60 L

Environmental hazards

Dangerous for the environment: no

SECTION 15: Regulatory information

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

National regulatory information

Water contaminating class (D): 1 - slightly water contaminating

SECTION 16: Other information

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

11 Highly flammable.
22 Harmful if swallowed.
36 Irritating to eyes.
67 Vapours may cause drowsiness and dizziness.

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

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

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 singularly 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.)



Defroster Spray

Print date: 08.03.2012

Product code: 490

Page 1 of 7

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

Product identifier

Defroster Spray

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

Details of the supplier of the safety data sheet

Company name:	CTP-GmbH	
Street:	Saalfelder Straße 35	
Place:	D-07338 Leutenberg	
Telephone:	+4936734/230-0	Telefax: +4936734/230-22
e-mail:	hotline@ctp-gmbh.de	
Contact person:	Jens Moeller, Dipl.-Chem.	Telephone: +4936734/230-19
Internet:	www.ctp-gmbh.de	

Further Information

Article Number: 23012

SECTION 2: Hazards identification

Classification of the substance or mixture

Indications of danger : Highly flammable, Irritant
R-phrases:
Highly flammable.
Irritating to eyes.
Vapours may cause drowsiness and dizziness.

Label elements

Danger symbols: F - Highly flammable; Xi - Irritant



F - Highly flammable

Xi - Irritant

R phrases

11	Highly flammable.
36	Irritating to eyes.
67	Vapours may cause drowsiness and dizziness.

S phrases

02	Keep out of the reach of children.
16	Keep away from sources of ignition - No smoking.
23	Do not breathe vapour/aerosole .
46	If swallowed, seek medical advice immediately and show this container or label.
51	Use only in well-ventilated areas.

SECTION 3: Composition/information on ingredients

Mixtures



Defroster Spray

Print date: 08.03.2012

Product code: 490

Page 2 of 7

Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification	
Index No	GHS classification	
REACH No		
200-661-7	propan-2-ol; isopropyl alcohol; isopropanol	70 - 75 %
67-63-0	F, Xi R11-36-67	
603-117-00-0	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336	
203-473-3	ethanediol, ethylene glycol	20 - 25 %
107-21-1	Xn R22	
603-027-00-1	Acute Tox. 4; H302	

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

SECTION 4: First aid measures

Description of first aid measures

General information

Take off immediately all contaminated clothing

After inhalation

Following inhalation: Move victim to fresh air. Consult physician.

After contact with skin

After contact with skin, wash immediately with plenty of Water and soap.
Consult physician.

After contact with eyes

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

After ingestion

Rinse mouth thoroughly with water. Let water be swallowed in little sips (dilution effect).
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.
: Vapours may cause drowsiness and dizziness.

Indication of any immediate medical attention and special treatment needed

After ingestion of absorption substances:
Give activated carbon, in order to reduce the resorption in the gastro-enteric tract.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

Water fog, alcohol resistant foam, Carbon dioxide (CO₂). Extinguishing powder.

Extinguishing media which must not be used for safety reasons

High power water jet.

Special hazards arising from the substance or mixture

Cool endangered container in case of fire.
Heating causes rise in pressure with risk of bursting.

Advice for firefighters

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



Defroster Spray

Print date: 08.03.2012

Product code: 490

Page 3 of 7

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.
Provide adequate ventilation.

Environmental precautions

Do not empty into drains or the aquatic environment.

Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Collect in closed containers for disposal.

SECTION 7: Handling and storage

Precautions for safe handling

Advice on safe handling

Provide adequate ventilation.
Avoid contact with skin and eyes.

Advice on protection against fire and explosion

Take precautionary measures against static discharges. Keep away from sources of ignition. No smoking.
Use explosion-protected machinery, apparatus, suction equipment, appliances etc.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place. Keep away from moisture.

SECTION 8: Exposure controls/personal protection

Control parameters

Exposure limits (EH40)

CAS No	Chemical name	ml/m ³	mg/m ³	F/ml	Category	Origin
107-21-1	Ethane-1,2-diol, vapour	20	52		TWA (8 h)	WEL
		40	104		STEL (15 min)	WEL
67-63-0	Propan-2-ol	400	999		TWA (8 h)	WEL
		500	1250		STEL (15 min)	WEL

Exposure controls

Protective and hygiene measures

Provide adequate ventilation.
Do not breathe gas/fumes/vapour/spray.
Avoid contact with skin and eyes.
Take off immediately all contaminated clothing
When using do not eat, drink or smoke.
Protect skin by using skin protective cream.

Respiratory protection

Wear suitable respiratory equipment when: exceeding exposure limits, formation of fumes/aerosols.
Wear suitable breathing apparatus (filter typ ABEK).

Hand protection

Suitable material: Butyl rubber. FKM (Fluoroelastomer (Viton)).
Material thickness: 0.4 – 0.5 mm



Defroster Spray

Print date: 08.03.2012

Product code: 490

Page 4 of 7

penetration time \geq 480 min In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer of the gloves.

Eye protection

Tightly sealed safety glasses.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state: liquid
Colour: colourless
Odour: alcoholic

Test method

Changes in the physical state

Boiling point: $> 70\text{ }^{\circ}\text{C}$
Flash point: $< 21\text{ }^{\circ}\text{C}$ DIN 51755
Lower explosion limits: 0,5 vol. %
Upper explosion limits: 15 vol. %
Ignition temperature: DIN 51794
Density (at 20 $^{\circ}\text{C}$): 0,87 g/cm³ DIN 51757
Water solubility: miscible.
Viscosity / dynamic: DIN 53015

SECTION 10: Stability and reactivity

Conditions to avoid

Heating causes rise in pressure with risk of bursting.

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

Gas / vapours, harmful.
thermal decomposition: standard pressure decomposition distillable
Reacts violently with: Oxidizing agents, strong.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

CAS No	Chemical name	Exposure routes	Method	Dose	Species	h
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
107-21-1	ethanediol, ethylene glycol					
	Acute oral toxicity	ATE		500 mg/kg		
	Acute dermal toxicity	LD50		10600 mg/kg	Kaninchen	

Defroster Spray

Print date: 08.03.2012

Product code: 490

Page 5 of 7

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			Species	h
	Aquatic toxicity	Method	Dose		
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

Persistence and degradability

Some of the components are biodegradable. (alcoholes)

Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
107-21-1	ethanediol, ethylene glycol	-1,36

SECTION 13: Disposal considerations

Waste treatment methods

Advice on disposal

Carry out a burning of hazardous waste according to official regulations.
Arrange about the exact waste code with the local waste disposal expert.

Waste disposal number of waste from residues/unused products

070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors
Classified as hazardous waste.

Waste disposal number of used product

070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors
Classified as hazardous waste.

SECTION 14: Transport information

Land transport (ADR/RID)

UN number: UN1987
UN proper shipping name: ALCOHOLS, N.O.S.
Transport hazard class(es): 3
Packing group: II
 Hazard label: 3



Classification code: F1

Defroster Spray

Print date: 08.03.2012

Product code: 490

Page 6 of 7

Special Provisions: 274 601 640C
 Limited quantity: 1 L
 Transport category: 2
 Hazard No: 33
 Tunnel restriction code: D/E

Inland waterways transport

UN number: UN1987
UN proper shipping name: ALCOHOLS, N.O.S.
Transport hazard class(es): 3
Packing group: II
 Hazard label: 3



Classification code: F1
 Special Provisions: 274 601 640C
 Limited quantity: 1 L

Marine transport

UN number: UN1987
UN proper shipping name: ALCOHOLS, N.O.S.
Transport hazard class(es): 3
Packing group: II
 Hazard label: 3



Marine pollutant: -
 Special Provisions: 274
 Limited quantity: 1 L
 EmS: F-E, S-D

Air transport

UN/ID number: UN1987
UN proper shipping name: ALCOHOLS, N.O.S.
Transport hazard class(es): 3
Packing group: II
 Hazard label: 3



Special Provisions: A3 A180
 Limited quantity Passenger: 1 L
 IATA-packing instructions - Passenger: 353
 IATA-max. quantity - Passenger: 5 L
 IATA-packing instructions - Cargo: 364
 IATA-max. quantity - Cargo: 60 L

Environmental hazards



Defroster Spray

Print date: 08.03.2012

Product code: 490

Page 7 of 7

Dangerous for the environment: no

SECTION 15: Regulatory information

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

National regulatory information

Water contaminating class (D): 1 - slightly water contaminating

SECTION 16: Other information

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

- 11 Highly flammable.
- 22 Harmful if swallowed.
- 36 Irritating to eyes.
- 67 Vapours may cause drowsiness and dizziness.

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

- H225 Highly flammable liquid and vapour.
- H302 Harmful if swallowed.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.

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 singularly 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.)