S76 Penetrant Remover

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

1.1 Product identifier

Trade name	:	S76 Penetrant Remover

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

Use of the Substance/Mixture	:	Cleaning agent
Recommended restrictions on use	:	None known.

1.3 Details of the supplier of the safety data sheet

Company	:	Chemetall Ltd Denbigh Road Bletchley Milton Keynes MK1 1PB
Telephone	:	01908 649333
Telefax	:	01908 373939
Contact person product safety		
Telephone	:	+49(0)6971652832
E-mail address	:	msds.de@chemetall.com

1.4 Emergency telephone number

Emergency telephone number	:	01908 649333

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 2	H225: Highly flammable liquid and vapour.
Skin irritation, Category 2	H315: Causes skin irritation.
Specific target organ toxicity - single exposure, Category 3, Central nervous system	H336: May cause drowsiness or dizziness.
Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters airways.
Chronic aquatic toxicity, Category 2	H411: Toxic to aquatic life with long lasting effects.

Classification (67/548/EEC, 1999/45/EC)

Highly flammable	R11: Highly flammable.
Harmful	R65: Harmful: may cause lung damage if swallowed.

Irritant	R38: Irritating to skin.
Dangerous for the environment	R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R67: Vapours may cause drowsiness and dizziness.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements :

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P243	Take precautionary measures against static discharge.
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P262	Do not get in eyes, on skin, or on clothing.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.

Disposal:

P501	Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

- Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Labelling according to EC Directives (1999/45/EC)

Hazard pictograms :



Highly flammable



Harmful



Dangerous for the environment

R-phrase(s) :	R11	Highly flammable.
	R38	Irritating to skin.
	R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
	R65	Harmful: may cause lung damage if swallowed.
	R67	Vapours may cause drowsiness and dizziness.
S-phrase(s) :	S 9	Keep container in a well-ventilated place.
	S16	Keep away from sources of ignition - No smoking.
	S23	Do not breathe gas/fumes/vapour/spray.
	S33	Take precautionary measures against static discharges.
	S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
	S61	Avoid release to the environment. Refer to special instructions/ Safety data sheets.
	S62	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Hazardous components which must be listed on the label:

- Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
- 110-82-7 Cyclohexane

Detergents Regulation EC 907/2006 : Aliphatic hydrocarbons 30 % and more

2.3 Other hazards

The information required is contained in this Material Safety Data Sheet.

SECTION 3: Composition/information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

Chemical nature : Mixture of organic solvents.

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4 01-2119475515-33	F; R11 Xn; R65 Xi; R38 R67 N; R51/53	Flam. Liq. 2; H225 Skin Irrit. 2; H315 STOT SE 3; H336 Asp. Tox. 1; H304 Aquatic Chronic 2; H411	>= 80 - <= 100
Cyclohexane	110-82-7 203-806-2 01-2119463273-41	F; R11 Xn; R65 Xi; R38 R67 N; R50-R53	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Skin Irrit. 2; H315 STOT SE 3; H336 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 1 - < 2.5

For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-Statements mentioned in this Section, see Section 16.
For the full text of the Notas mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	:	First-aid crew: Ensure self-protection. Move out of dangerous area. Take off contaminated clothing and shoes immediately.
If inhaled	:	Move to fresh air. If symptoms persist, call a physician.
In case of skin contact	:	Wash off with soap and plenty of water. If symptoms persist, call a physician.
In case of eye contact	:	Rinse immediately with plenty of water, also under the eyelids. Consult a physician.
If swallowed	:	Rinse mouth with water. Do NOT induce vomiting. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	:	May cause drowsiness or dizziness.
Risks	:	irritant effects Risk of serious damage to the lungs (by aspiration).

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	:	Treat symptomatically. For specialist advice physicians should contact the Poisons Information Service.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Carbon dioxide (CO2) Dry powder Alcohol-resistant foam Water spray
Unsuitable extinguishing media	:	High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting	:	May form toxic gases on heating or in case of fire. Carbon monoxide Carbon dioxide (CO2)

5.3 Advice for firefighters

Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.
Further information	:	Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Ensure adequate ventilation. Remove all sources of ignition.

6.2 Environmental precautions

Environmental precautions	:	Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. Inform the relevant authorities if it enters sewers, aquatic environment or soil.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	:	Ensure adequate ventilation. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

See chapter 8 and 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	Provide sufficient air exchange and/or exhaust in work rooms. Have eye wash bottle or eye rinse ready at the work place.
Advice on protection against fire and explosion	:	Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Use only explosion-proof equipment. Vapours may form explosive mixtures with air. Keep product and empty container away from heat and sources of ignition. Electrical equipment should be protected to the appropriate

standard.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat. Keep in an area equipped with solvent resistant flooring. Protect from direct sunlight.
Storage period	:	60 month
Storage temperature	:	< 40 °C

7.3 Specific end uses

Specific use(s)	:	Cleaning agent

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
Cyclohexane	110-82-7	TWA	200 ppm 700 mg/m3	2006-02-09	2006/15/EC
Further information	: Indicative				
	110-82-7	TWA	100 ppm 350 mg/m3	2005-04-06	GB EH40
	110-82-7	STEL	300 ppm 1,050 mg/m3	2005-04-06	GB EH40

DNEL/DMEL

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	:	End Use: DNEL, Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 2085 mg/m3
		End Use: DNEL, Workers

Exposure routes: Skin contact
Potential health effects: Long-term systemic effects
Value: 300 mg/kg bw/d

Cyclohexane : End Use: DNEL, Industrial use, Workers
Exposure routes: Inhalation
Potential health effects: Short-term exposure, Systemic effects
Value: 700 mg/m3

End Use: DNEL, Industrial use, Workers
Exposure routes: Inhalation
Potential health effects: Short-term exposure, Local effects
Value: 700 mg/m3

End Use: DNEL, Industrial use, Workers
Exposure routes: Inhalation
Potential health effects: Long-term systemic effects
Value: 700 mg/m3

End Use: DNEL, Industrial use, Workers
Exposure routes: Inhalation
Potential health effects: Long-term local effects
Value: 700 mg/m3

End Use: DNEL, Industrial use, Workers
Exposure routes: Skin contact
Potential health effects: Long-term systemic effects
Value: 2016 mg/kg

PNEC
Cyclohexane : Water
Value: 0.207 mg/l

Sediment
Value: 3.627 mg/kg

Soil
Value: 2.99 mg/kg

Behaviour in waste water treatment plants
Value: 3.24 mg/l

8.2 Exposure controls

Engineering measures

Ensure adequate ventilation, especially in confined areas.
Electrical equipment should be protected to the appropriate standard.
Keep only in the original container.

Personal protective equipment

Respiratory protection	:	In case of insufficient ventilation wear suitable respiratory equipment. Recommended Filter type: A-P2
Hand protection	:	Nitrile rubber butyl-rubber Protective gloves complying with EN 374. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
Eye protection	:	Eye protection (EN 166) Tightly fitting safety goggles
Skin and body protection	:	Chemical resistant protective clothing according to DIN EN 13034 (Type 6)
Hygiene measures	:	Take off contaminated clothing and shoes immediately. Keep away from food, drink and animal feedingstuffs. Wash hands before breaks and immediately after handling the product. Avoid contact with skin and eyes. Do not breathe vapour. Do not breathe spray.

Environmental exposure controls

General advice	:	Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. Inform the relevant authorities if it enters sewers, aquatic environment or soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	liquid
Colour	:	colourless
Odour	:	hydrocarbon-like
Flash point	:	-4 °C Method: ASTM D 56
Ignition temperature	:	> 200 °C
Lower explosion limit	:	1.1 %(V)

Upper explosion limit	:	7 %(V)
Melting point/range	:	< -60 °C
Boiling point/boiling range	:	> 94 °C
Density	:	0.71 g/cm3 at 20 °C
Water solubility	:	practically insoluble
Viscosity, kinematic	:	0.42 mm2/S at 40 °C

9.2 Other information

Explosivity	:	Vapours may form explosive mixture with air.
Directive 1999/13/EC on the limitation of emissions of volatile organic compounds	:	Value: 713 g/l

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	Vapours may form explosive mixture with air.

10.4 Conditions to avoid

Conditions to avoid	:	Heat, flames and sparks. Use only explosion-proof equipment. Take precautionary measures against static discharges.

10.5 Incompatible materials

Materials to avoid : Strong oxidizing agents

10.6 Hazardous decomposition products

Risk of decomposition. : No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity		
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	:	LD50: > 5,840 mg/kg Species: rat Method: OECD Test Guideline 401
Cyclohexane	:	LD50: > 5,000 mg/kg Species: rat
Acute inhalation toxicity		
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	:	LC50: > 23.3 mg/l Exposure time: 4 h Species: rat Method: OECD Test Guideline 403
Cyclohexane	:	LC50: 14 mg/l Exposure time: 4 h Species: rat
Acute dermal toxicity		
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	:	LD50: > 2,920 mg/kg Species: rat Method: OECD Test Guideline 402
Cyclohexane	:	LD50: > 2,000 mg/kg Species: rabbit

Skin corrosion/irritation

Skin irritation : Causes skin irritation.

Serious eye damage/eye irritation

Eye irritation : May cause eye irritation with susceptible persons.

Respiratory or skin sensitisation

Sensitisation : no data available

Germ cell mutagenicity

Cyclohexane : Ames test
In vitro tests did not show mutagenic effects

Aspiration hazard

Aspiration toxicity : May be fatal if swallowed and enters airways.

Further information : Vapours may cause drowsiness and dizziness.

SECTION 12: Ecological information

12.1 Toxicity

Ecotoxicology studies for the product are not available.

Toxicity to fish

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics : > 13.4 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout)

Cyclohexane : LC50: 4.53 mg/l
Exposure time: 48 h
Species: Fish

Toxicity to daphnia and other aquatic invertebrates

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics : 3 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)

Cyclohexane : EC50: 0.9 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)

Toxicity to algae

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics : 10 - 30 mg/l
Exposure time: 72 h
Species: Pseudokirchneriella subcapitata

Cyclohexane : IC50: > 4 mg/l
Exposure time: 72 h
Species: Selenastrum capricornutum (green algae)

Toxicity to bacteria
Cyclohexane : EC50: 29 mg/l
Exposure time: 24 h
Species: Photobacterium phosphoreum

12.2 Persistence and degradability

Biodegradability : Exposure duration: 28 d
98 %
rapidly biodegradable

12.3 Bioaccumulative potential

Bioaccumulation : Bioaccumulation is unlikely.

12.4 Mobility in soil

Distribution among environmental compartments : no data available

12.5 Results of PBT and vPvB assessment

This mixture does not contain substances considered to be persistent, bioaccumulating and toxic (PBT)., This mixture does not contain substances considered to be very persistent and very bioaccumulating (vPvB).

12.6 Other adverse effects

Additional ecological information : water endangering
Toxic to aquatic life with long lasting effects.
Do not flush into surface water or sanitary sewer system.
Do not allow material to contaminate ground water system.
Even leakage of small amounts in the subsoil can contaminate drinking water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.

Contaminated packaging : Dispose of as unused product.

Waste Code : Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

SECTION 14: Transport information

ADR

UN number	:	1206
UN proper shipping name	:	HEPTANES
Transport hazard class(es)	:	3
Packing group	:	II
Classification Code	:	F1
Hazard identification No	:	33
Limited Quantity (LQ) Inner Packaging	:	1.00 L
Maximum quantity	:	30.00 KG
Labels	:	3
Tunnel restriction code	:	(D/E)
Environmentally hazardous	:	yes

IATA

UN number	:	1206
Description of the goods	:	Heptanes
Class	:	3
Packing group	:	II
Labels	:	3

IATA_C

Packing instruction (cargo aircraft)	:	364
Packing instruction (LQ)	:	Y341
Maximum quantity	:	60.00 L
Environmentally hazardous	:	no

IATA_P

Packing instruction (passenger aircraft)	:	353
Packing instruction (LQ)	:	Y341
Maximum quantity	:	5.00 L
Environmentally hazardous	:	no

IMDG

UN number	:	1206
Description of the goods	:	HEPTANES
Class	:	3
Packing group	:	II
Labels	:	3
EmS Number 1	:	F-E
EmS Number 2	:	S-D
Marine pollutant	:	yes

RID

UN number	:	1206
Description of the goods	:	HEPTANES
Transport hazard class(es)	:	3
Packing group	:	II
Classification Code	:	F1
Hazard identification No	:	33
Labels	:	3
Limited Quantity (LQ) Inner Packaging	:	1.00 L
Maximum quantity	:	30.00 KG
Environmentally hazardous	:	yes

SECTION 15: Regulatory information

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

Candidate List of Substances of Very High Concern for Authorisation	:	This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).
Water contaminating class (Germany)	:	WGK 2 water endangering VWVWS A4
Other regulations	:	The product is classified and labelled in accordance with EC directives or respective national laws. Regional or national implementations of GHS may not implement all hazard classes and categories.

15.2 Chemical Safety Assessment

For the lead substance(s) in the mixture, there is no exposure scenario available.
For a mixture it is not mandatory to include an exposure scenario in the material safety data sheet.
The necessary safety - related information is stated in the first 16 sections.

SECTION 16: Other information

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

R11	Highly flammable.
R38	Irritating to skin.
R50	Very toxic to aquatic organisms.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R53	May cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.
R67	Vapours may cause drowsiness and dizziness.

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

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

Further information

The information provided is based on our current knowledge and experience and apply to the product as delivered. Regarding the product properties, these are not guaranteed. The delivery of this safety datasheet does not free the recipient of the product from his own responsibility to follow the relevant rules and regulations concerning this product.