

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.07.2018

Version number 5

Revision: 24.07.2018

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

1.1 Product identifier

Trade name: **Protector**

Article number: 11937, 11938, 11939, 11940, 11941

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

No further relevant information available.

Application of the substance / the mixture

Protective impregnation

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: AKEMI chemisch technische Spezialfabrik GmbH
Lechstrasse 28
D 90451 Nürnberg

Tel. +49(0)911-642960
Fax. +49(0)911-644456
e-mail info@akemi.de

Further information obtainable from:

Laboratory

1.4 Emergency telephone number:

Product Safety Department AKEMI chemisch technische Spezialfabrik GmbH
Tel. +49(0)911-64296-59
Reachable during the following office hours:
Monday – Thursday from 07:30 a.m. to 16:30 p.m.
Friday from 07:30 a.m. to 13:30 p.m.
+44 (171) 635 91 91
National Poison Inform. Centre
Medical Toxicology Unit
Avalonley Road
London SE14 5ER

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 health hazard

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

The product is classified and labelled according to the CLP regulation.



GHS02 GHS08 GHS09

Signal word

Danger

Hazard-determining components of labelling:

2,2,4,6,6-pentamethylheptan
Hydrocarbons, C10-C12, Isoalkanes, <2% aromatics

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.07.2018

Version number 5

Revision: 24.07.2018

Trade name: Protector

(Contd. of page 1)

- Hazard statements H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H411 Toxic to aquatic life with long lasting effects.
- Precautionary statements P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P302+P352 IF ON SKIN: Wash with plenty of water.
P304+P312 IF INHALED: Call a POISON CENTER/doctor if you feel unwell.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- Additional information: EUH066 Repeated exposure may cause skin dryness or cracking.
- **2.3 Other hazards**
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

SECTION 3: Composition/information on ingredients**3.2 Chemical characterisation: Mixtures**

- Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 13475-82-6 EINECS: 236-757-0 Reg.nr.: 01-2119490725-29	2,2,4,6,6-pentamethylheptan  Flam. Liq. 3, H226  Asp. Tox. 1, H304 Aquatic Chronic 4, H413	25-50%
EC number: 923-037-2 Reg.nr.: 01-2119471991-29-xxxx	Hydrocarbons, C10-C12, Isoalkanes, <2% aromatics  Flam. Liq. 3, H226  Asp. Tox. 1, H304  Aquatic Chronic 2, H411	25-50%

- Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures**4.1 Description of first aid measures**

- General information: Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Take affected persons out into the fresh air.
Position and transport stably in side position.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: Do not induce vomiting; call for medical help immediately.
Drink plenty of water and provide fresh air. Call for a doctor immediately.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.07.2018

Version number 5

Revision: 24.07.2018

Trade name: Protector

(Contd. of page 2)

· **4.2 Most important symptoms and effects, both acute and delayed**

Headache
Dizziness
Dizziness
Nausea
Breathing difficulty
Coughing
Profuse sweating

· **Information for doctor:**

Symptoms in intoxication with (aromatic) hydrocarbons (dosis letalis about 30 g)
a) In acute intoxication: headache, dizziness, euphoria, gastro-intestinal dysfunction, state of excitement, coma.
b) In chronic intoxication: myelotoxic damage, fatigue, dizziness, emaciation, cardiac palpitation after physical exercise, leucopenia, anemia, leukosis.
Therapy in hydrocarbons intoxication: In case of inhalation provision of fresh air; in case of peroral intake administration of Carbo medicinalis; only after intubation conduct of gastrolavage in application of Carbo medicinalis; in case of cramps administration of Diazepam 20 mg intravenously.
Danger of impaired breathing.

· **Hazards**

· **4.3 Indication of any immediate medical attention and special treatment needed**

If swallowed, gastric irrigation with added, activated carbon.
If swallowed or in case of vomiting, danger of entering the lungs.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents:**

Water with full jet

· **5.2 Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be released:
Carbon monoxide (CO)
Under certain fire conditions, traces of other toxic gases cannot be excluded.

· **5.3 Advice for firefighters**

· **Protective equipment:**

Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
Wear fully protective suit.

· **Additional information**

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

* SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources.

· **6.2 Environmental precautions:**

Use respiratory protective device against the effects of fumes/dust/aerosol.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow product to reach sewage system or any water course.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.07.2018

Version number 5

Revision: 24.07.2018

Trade name: Protector

(Contd. of page 3)

· **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

Store in cool, dry place in tightly closed receptacles.

Keep away from heat and direct sunlight.

Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

Use only in well ventilated areas.

· **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Protect from heat.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

Store in a cool location.

Store only in the original receptacle.

Prevent any seepage into the ground.

· **Information about storage in one common storage facility:**

Store away from oxidising agents.

Store away from foodstuffs.

· **Further information about storage conditions:**

Store in cool, dry conditions in well sealed receptacles.

Keep container tightly sealed.

Protect from heat and direct sunlight.

Store receptacle in a well ventilated area.

Store in a cool place.

· **7.3 Specific end use(s)**

No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:**

No further data; see item 7.

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

The lists valid during the making were used as basis.

· **Additional information:**

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.07.2018

Version number 5

Revision: 24.07.2018

Trade name: Protector

(Contd. of page 4)

- Respiratory protection: Wash hands before breaks and at the end of work.
Immediately remove all soiled and contaminated clothing
Avoid contact with the eyes and skin.
Do not inhale gases / fumes / aerosols.
Do not eat, drink, smoke or sniff while working.
Apply solvent resistant skin cream before starting work.
Use skin protection cream for skin protection.
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Use suitable respiratory protective device in case of insufficient ventilation.
Filter AX
- Protection of hands: Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
Skin protection agent recommendation for preventive skin shelter without use of protective gloves:
STOKODERM (<http://www.stoko.com>)
Skin protection agent recommendation for preventive skin shelter in application and combination of protective gloves:
STOKO EMULSION (<http://www.stoko.com>)
Skin protection recommendation for skin cleaning after product handling:
FRAPANTOL (<http://www.stoko.com>)
Skin protection agent recommendation for skin aftercare:
STOKO VITAN (<http://www.stoko.com>)



Protective gloves

- Material of gloves The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
The protection gloves to be used have to comply with the specifications of the directive 89/686/EC and the directive derived decree EN374, respectively, e.g. the above listed protection glove type. The mentioned permeation times' data were generated and verified with material samples of the recommended protection glove type in the scope of laboratory analyses of the company KCL GmbH in compliance with EN374.
This recommendation refers exclusively to the material safety data sheet referenced product delivered by Akemi and the indicated field of application. In case of product dilution or in case of mixture with different substances or chemicals, and in condition of EN374 deviation the producer of CE-approved protection gloves must be contacted for detailed information (e.g., KCL GmbH, Germany, 36124 Eichenzell, internet: <http://www.kcl.de>).
- Penetration time of glove material Fluorocarbon rubber (Viton)
Nitrile rubber, NBR
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- For the permanent contact gloves made of the following materials are suitable: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Value for the permeation: Level ≤ 6 , 480 min
Fluorocarbon rubber (Viton)
Vitoject (KCL, Art_No. 890)
Nitrile rubber, NBR

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.07.2018

Version number 5

Revision: 24.07.2018

Trade name: Protector

(Contd. of page 5)

- Camatril (KCL, Art_No. 730, 731, 732, 733)
- As protection from splashes gloves made of the following materials are suitable:
 - Fluorocarbon rubber (Viton)
 - Vitoject (KCL, Art_No. 890)
 - Nitrile rubber, NBR
 - Camatril (KCL, 730, 731, 732, 733)
 - Not suitable are gloves made of the following materials:
 - Natural rubber, NR
 - Rubber gloves
 - Leather gloves
 - Strong material gloves
 - Neoprene gloves
 - Eye protection:



Tightly sealed goggles
 - Body protection: Protective work clothing

SECTION 9: Physical and chemical properties**· 9.1 Information on basic physical and chemical properties****· General Information****· Appearance:**

- | | |
|---------|----------------|
| Form: | Fluid |
| Colour: | Colourless |
| Odour: | Characteristic |

- | | |
|-----------|----------------|
| pH-value: | Not applicable |
|-----------|----------------|

· Change in condition

- | | |
|--|---------------|
| Melting point/freezing point: | Undetermined. |
| Initial boiling point and boiling range: | 180 °C |

- | | |
|--------------|---------|
| Flash point: | > 40 °C |
|--------------|---------|

- | | |
|-----------------------|--------|
| Ignition temperature: | 240 °C |
|-----------------------|--------|

- | | |
|----------------------------|------------------------------|
| Auto-ignition temperature: | Product is not selfigniting. |
|----------------------------|------------------------------|

- | | |
|-----------------------|---|
| Explosive properties: | Product is not explosive. However, formation of explosive air/vapour mixtures are possible. |
|-----------------------|---|

· Explosion limits:

- | | |
|--------|-----------|
| Lower: | 0.6 Vol % |
| Upper: | 7 Vol % |

- | | |
|---------------------------|-------|
| Vapour pressure at 20 °C: | 1 hPa |
|---------------------------|-------|

- | | |
|-------------------|------------------------|
| Density at 20 °C: | 0.75 g/cm ³ |
|-------------------|------------------------|

- | | |
|--|----------|
| Solubility in / Miscibility with water at 20 °C: | 0.04 g/l |
|--|----------|

· Viscosity:

- | | |
|---------------------|--------------------|
| Dynamic: | Not determined. |
| Kinematic at 20 °C: | 10 s (DIN 53211/4) |

· Solvent content:

- | | |
|-------------------|--------|
| Organic solvents: | 97.8 % |
|-------------------|--------|

- | | |
|-----------------|-------|
| Solids content: | 2.0 % |
|-----------------|-------|

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.07.2018

Version number 5

Revision: 24.07.2018

Trade name: Protector

(Contd. of page 6)

9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions** Reacts with strong oxidising agents.
Forms flammable gases/fumes.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:****13475-82-6 2,2,4,6,6-pentamethylheptan**

Oral	LD50	>5,000 mg/kg (rat)
Inhalative	LC50/8h	>5 ppm (rat)

Hydrocarbons, C10-C12, Isoalkanes, <2% aromatics

Oral	LD50	>5,000 mg/kg (rat)
Inhalative	LC50/8h	>5 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** 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.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** May be fatal if swallowed and enters airways.

SECTION 12: Ecological information**12.1 Toxicity**· **Aquatic toxicity:****13475-82-6 2,2,4,6,6-pentamethylheptan**

IC50/72h	>1,000 mg/l (Pseudokirchneriella subcapitata)
EC50/48h	>1,000 mg/l (daphnia magna)
LC50/96h	>1,000 mg/l (Oncorhynchus mykiss)

Hydrocarbons, C10-C12, Isoalkanes, <2% aromatics

EL0/48h	1,000 mg/l (daphnia magna)
EL0/72h	1,000 mg/l (Pseudokirchneriella subcapitata)

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.07.2018

Version number 5

Revision: 24.07.2018

Trade name: Protector

(Contd. of page 7)

LL0/96h	1,000 mg/l (Oncorhynchus mykiss)
NOELR/72h	1,000 mg/l (Pseudokirchneriella subcapitata)
NOELR/21d	<1 mg/l (daphnia magna)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- Additional ecological information:
- General notes: Do not allow product to reach ground water, water course or sewage system.
Generally not hazardous for water
- **12.5 Results of PBT and vPvB assessment**
- PBT: Not applicable.
- vPvB: Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- Recommendation Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- European waste catalogue

20 00 00	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01 00	separately collected fractions (except 15 01)
20 01 13*	solvents

- Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
- Recommended cleansing agents: Alcohol

SECTION 14: Transport information

- **14.1 UN-Number**
 - ADR, IMDG, IATA UN3295
 - **14.2 UN proper shipping name**
 - ADR 3295 HYDROCARBONS, LIQUID, N.O.S., ENVIRONMENTALLY HAZARDOUS
 - IMDG HYDROCARBONS, LIQUID, N.O.S., MARINE POLLUTANT
 - IATA HYDROCARBONS, LIQUID, N.O.S.
 - **14.3 Transport hazard class(es)**
 - ADR
- 

- Class 3 (F1) Flammable liquids.

(Contd. on page 9)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.07.2018

Version number 5

Revision: 24.07.2018

Trade name: Protector

(Contd. of page 8)

· <u>Label</u>	3
· <u>IMDG</u>	
	
· <u>Class</u>	3 Flammable liquids.
· <u>Label</u>	3
· <u>IATA</u>	
	
· <u>Class</u>	3 Flammable liquids.
· <u>Label</u>	3
· 14.4 Packing group	
· <u>ADR, IMDG, IATA</u>	III
· 14.5 Environmental hazards:	Product contains environmentally hazardous substances:
· <u>Marine pollutant:</u>	Symbol (fish and tree)
· <u>Special marking (ADR):</u>	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Flammable liquids.
· <u>Danger code (Kemler):</u>	30
· <u>EMS Number:</u>	F-E,S-D
· <u>Stowage Category</u>	A
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· <u>Transport/Additional information:</u>	
· <u>ADR</u>	
· <u>Limited quantities (LQ)</u>	5L
· <u>Excepted quantities (EQ)</u>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <u>Transport category</u>	3
· <u>Tunnel restriction code</u>	D/E
· <u>IMDG</u>	
· <u>Limited quantities (LQ)</u>	5L
· <u>Excepted quantities (EQ)</u>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <u>UN "Model Regulation":</u>	UN 3295 HYDROCARBONS, LIQUID, N.O.S., 3, III, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

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

· Directive 2012/18/EU

· Named dangerous substances - ANNEX I

None of the ingredients is listed.

(Contd. on page 10)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.07.2018

Version number 5

Revision: 24.07.2018

Trade name: Protector

(Contd. of page 9)

- Seveso category E2 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 40
- National regulations:
- Information about limitation of use: Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.
- Waterhazard class: Generally not hazardous for water.
- VOC EU 733.3 g/l
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

*

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Relevant phrases H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H411 Toxic to aquatic life with long lasting effects.
H413 May cause long lasting harmful effects to aquatic life.
- Recommended restriction of use refer to Technical Data Sheet (TDS)
- Department issuing SDS: Laboratory
- Contact: Dieter Zimmermann
- Abbreviations and acronyms: RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4
- *** Data compared to the previous version altered.** Adaptation in accordance with REACH directive 1907/2006/EC

GB