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

1.1 Product identifier
· Trade name: Perlschutz Special Protection
· Article number: 11931-999

1.2 Relevant identified uses of the substance or mixture and uses advised against
· Application of the substance / the mixture: Perlschutz
· No further relevant information available.

1.3 Details of the supplier of the safety data sheet
· Manufacturer/Supplier: R&D GmbH
· Boschstraße 12
  53359 Rheinbach
  Phone: +49 (0)2226 - 8957757
  http://www.slate-lite.com

1.4 Emergency telephone number:
· Laboratory
· siehe Hersteller / Lieferant

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
· Classification according to Regulation (EC) No 1272/2008
  GHS08 health hazard
  Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.
  Aquatic Chronic 4 H413 May cause long lasting harmful effects to aquatic life.

· Response:
  IF SWALLOWED: Immediately call a POISON CENTER/doctor.
  IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  IF exposed or concerned: Get medical advice/attention.

· Storage:
  Store in a well-ventilated place. Keep cool.
  Store locked up.

· Classification according to Directive 67/548/EEC or Directive 1999/45/EC
  Xn; Harmful
  R65: Harmful: may cause lung damage if swallowed.
  R66: Repeated exposure may cause skin dryness or cracking.

· Information concerning particular hazards for human and environment:
  Contact with skin and inhalation of aerosols/vapours of the preparation should be avoided.
  The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
  At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.
  Has a narcotising effect.

· Classification system:
  The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

(Contd. on page 2)
Safety data sheet
according to 1907/2006/EC, Article 31
Version number 7
Revision: 27.04.2015

Trade name: Slate-Lite Special Protection

2.2 Label elements
- Labelling according to Regulation (EC) No 1272/2008
- The product is classified and labelled according to the CLP regulation.

GHS08

- Signal word
  Danger

- Hazard-determining components of labelling:
  Hydrocarbons, C11-C12, Isoalkanes, <2% aromatics
  Hydrocarbons, C11-C13, Isoalkanes, <2% aromatics
  Hydrocarbons, C11-C14 isoalkanes, cycloalkanes, <2% aromatics

- Hazard statements
  H304 May be fatal if swallowed and enters airways.
  H413 May cause long lasting harmful effects to aquatic life.

- 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.
  P260 Do not breathe mist/vapours/spray.
  P280 Wear protective gloves.
  P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
  P331 Do NOT induce vomiting.
  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
- The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

3.2 Chemical characterisation: Mixtures
- Description:
  Mixture of substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>EC number</th>
<th>Chemicals</th>
<th>Hazard classification</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>918-167-1</td>
<td>Hydrocarbons, C11-C12, Isoalkanes, &lt;2% aromatics</td>
<td>Xn R65; R53-66; Asph. Tox. 1, H304; Aquatic Chronic 4, H413</td>
<td>25-50%</td>
</tr>
<tr>
<td>920-901-0</td>
<td>Hydrocarbons, C11-C13, Isoalkanes, &lt;2% aromatics</td>
<td>Xn R65; R66; Asph. Tox. 1, H304</td>
<td>12.5-25%</td>
</tr>
<tr>
<td>927-285-2</td>
<td>Hydrocarbons, C11-C14 isoalkanes, cycloalkanes, &lt;2% aromatics</td>
<td>Xn R65; R66; Asph. Tox. 1, H304</td>
<td>12.5-25%</td>
</tr>
</tbody>
</table>
**Trade name:** Slate-Lite Special Protection

<table>
<thead>
<tr>
<th>CAS: 123-86-4</th>
<th>n-butyl acetate</th>
<th>&lt;12.5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index number: 607-025-00-1</td>
<td>STOT SE 3, H336</td>
<td></td>
</tr>
<tr>
<td>Reg.nr.: 01-2119485493-29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS: 90622-58-5</th>
<th>Alkanes, C11-C15, iso</th>
<th>1-5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 292-460-6</td>
<td>Xn R65</td>
<td>R66-67</td>
</tr>
<tr>
<td>Reg.nr.: 01-2119456810-40</td>
<td>Asp. Tox. 1, H304</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS: 34590-94-8</th>
<th>(2-methoxymethylethoxy)propanol</th>
<th>1-5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 252-104-2</td>
<td>Substance with a Community workplace exposure limit</td>
<td></td>
</tr>
<tr>
<td>Reg.nr.: 01-2119450011-60-xxxx</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS: 64741-65-7</th>
<th>Naphtha (petroleum), heavy alkylate</th>
<th>1-5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 265-067-2</td>
<td>Flam. Liq. 3, H226</td>
<td>R53-66</td>
</tr>
<tr>
<td>Index number: 649-275-00-4</td>
<td>Asp. Tox. 1, H304</td>
<td></td>
</tr>
<tr>
<td>Reg.nr.: 01-2119472146-39</td>
<td>Aquatic Chronic 4, H413</td>
<td></td>
</tr>
</tbody>
</table>

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

- **General information:**
  - Take affected persons out into the fresh air.
  - Position and transport stably in side position.
  - Immediately remove any clothing soiled by the product.

- **After inhalation:**
  - Supply fresh air; consult doctor in case of complaints.

- **After skin contact:**
  - If skin irritation continues, consult a doctor.
  - Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:**
  - Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:**
  - A person vomiting while laying on their back should be turned onto their side.

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

- **Headache**
- **Dizziness**
- **Nausea**
- **Gastric or intestinal disorders**
- **Cramp**

**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.

**Hazard**

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

If swallowed or in case of vomiting, danger of entering the lungs.

If swallowed, gastric irrigation with added, activated carbon. Monitor circulation.
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.

5.2 Special hazards arising from the substance or mixture
- Formation of toxic gases is possible during heating or in case of fire.
  Under certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:
  Carbon monoxide (CO)

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
- Ensure adequate ventilation
- Use respiratory protective device against the effects of fumes/dust/aerosol.
- Keep away from ignition sources.

6.2 Environmental precautions:
- Do not allow product to reach sewage system or any water course.
- Inform respective authorities in case of seepage into water course or sewage system.

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.
- Store in cool, dry place in tightly closed receptacles.
- Keep away from heat and direct sunlight.
- Ensure good ventilation/exhaustion at the workplace.

- Information about fire - and explosion protection:
  Highly volatile, flammable constituents are released during processing.

7.2 Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles:
    Prevent any seepage into the ground.
    Provide solvent resistant, sealed floor.
    Store only in the original receptacle.

  - Information about storage in one common storage facility:
    Store away from oxidising agents.
    Store away from foodstuffs.
 SECTION 8: Exposure controls/personal protection

8.1 Control parameters

· Additional information about design of technical facilities: No further data; see item 7.

8.2 Exposure controls

· Personal protective equipment:
  · General protective and hygienic measures:
    Do not eat or drink while working.
    Apply solvent resistant skin cream before starting work.
    Keep away from foodstuffs, beverages and feed.
    Immediately remove all soiled and contaminated clothing
    Wash hands before breaks and at the end of work.
    Do not inhale gases / fumes / aerosols.

  · Respiratory protection:
    Short term filter device:
    Filter AX
    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.

  · Protection of hands:
    After use of gloves apply skin-cleaning agents and skin cosmetics.
    Preventive skin protection by use of skin-protecting agents is recommended.
    After each cleaning use treatment creams, for very dry skin greasy ointments.
    Akemi skin protection agent recommendation for preventive skin shelter without use of protective gloves:
    STOKODERM (http://www.stoko.com)
    Akemi skin protection agent recommendation for preventive skin shelter in application and combination of protective gloves:

Protective gloves

STOKO EMULSION (http://www.stoko.com)
Akemi skin protection recommendation for skin cleaning after product handling:
FRAPANTOL (http://www.stoko.com)
Akemi skin protection agent recommendation for skin aftercare:
STOKO VITAN (http://www.stoko.com)
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
**Trade name:** Slate-Lite Special Protection

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).

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

- **Material of gloves**
  - Nitrile rubber, NBR
  - Fluorocarbon rubber (Viton)
  - Butyl rubber, BR

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.

As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**
  - Value for the permeation: Level ≤ 1, 30 min

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **For the permanent contact gloves made of the following materials are suitable:**
  - Nitrile rubber, NBR
  - Camatril (KCL, Art No. 730, 731, 732, 733)
  - Fluorocarbon rubber (Viton)
  - Vitoject (KCL, Art No. 890)
  - Butyl rubber, BR
  - Butoject (KCL, Art No. 897, 898)

- **As protection from splashes gloves made of the following materials are suitable:**
  - Nitrile rubber, NBR
  - Camatril (KCL, 730, 731, 732, 733)

- **Not suitable are gloves made of the following materials:**
  - Chloroprene rubber, CR
  - Strong material gloves
  - Leather gloves
  - Natural rubber, NR

- **Eye protection:**
  - Goggles recommended during refilling

- **Body protection:**
  - Solvent resistant protective clothing

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Form</strong></td>
<td>Fluid</td>
</tr>
<tr>
<td><strong>Colour</strong></td>
<td>Colourless</td>
</tr>
<tr>
<td><strong>Odour</strong></td>
<td>Characteristic</td>
</tr>
<tr>
<td><strong>pH-value</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Melting point/Melting range</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Boiling point/Boiling range</strong></td>
<td>124 °C</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>62 °C</td>
</tr>
<tr>
<td><strong>Flammability (solid, gaseous)</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Ignition temperature</strong></td>
<td>370 °C</td>
</tr>
</tbody>
</table>
**Trade name:** Slate-Lite Special Protection

- **Self-igniting:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - **Lower:** 3.0 Vol %
  - **Upper:** 10.4 Vol %
- **Vapour pressure at 20 °C:** 10.7 hPa
- **Density at 20 °C:** 0.79 g/cm³
- **Solubility in / Miscibility with water:** Not miscible or difficult to mix.
- **Viscosity:**
  - **Dynamic:** Not determined.
  - **Kinematic at 20 °C:** 11 s (DIN 53211/4)
- **Solvent content:**
  - **Organic solvents:** 93.8 %

**SECTION 10: Stability and reactivity**

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
  - Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised.
  - Reacts with strong oxidising agents.
  - Reacts with acids.
  - Forms flammable gases/fumes.
- **10.4 Conditions to avoid**
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide
  - Hydrogen fluoride

**SECTION 11: Toxicological information**

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
  - **LD/LC50 values relevant for classification:**
  - **ATE (Acute Toxicity Estimates)**
    - **Inhalative LC50/4 h:** 60.7 mg/l (rat)
  - **Primary irritant effect:**
    - **on the skin:** No irritant effect.
    - **on the eye:** No irritating effect.
    - **Sensitisation:** No sensitising effects known.
  - **Additional toxicological information:**
    - The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
      - Harmful

(Contd. on page 8)
SECTION 12: Ecological information

12.1 Toxicity
- Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability
- Other information: No further relevant information available. The product is difficultly biodegradable.

12.3 Bioaccumulative potential
- No further relevant information available.

12.4 Mobility in soil
- Additional ecological information:
- General notes: Do not allow product to reach groundwater, water course or sewage system. Water hazard class 1 (German Regulation) (Self-assessment): slightly 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
  - 07 00 00 WASTES FROM ORGANIC CHEMICAL PROCESSES
  - 07 07 00 wastes from the MFSU of fine chemicals and chemical products not otherwise specified
  - 07 07 04* other organic solvents, washing liquids and mother liquors

- Uncleaned packaging:
  - Recommendation: 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, ADN, IMDG, IATA: Void

14.2 UN proper shipping name
- ADR, ADN, IMDG, IATA: Void

14.3 Transport hazard class(es)
- ADR, ADN, IMDG, IATA: Void
- Class: Void

14.4 Packing group
- ADR, IMDG, IATA: Void

14.5 Environmental hazards:
- Marine pollutant: No
**Trade name:** Slate-Lite Special Protection

<table>
<thead>
<tr>
<th>Section</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.6 Special precautions for user</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

**SECTION 15: Regulatory information**

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

- **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:**
  - Water hazard class 1 (Self-assessment): slightly hazardous for water.

- **VOC EU**
  - 740.8 g/l

- **15.2 Chemical safety assessment:**
  - A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

- **Relevant phrases**
  - H226 Flammable liquid and vapour.
  - H304 May be fatal if swallowed and enters airways.
  - H336 May cause drowsiness or dizziness.
  - H413 May cause long lasting harmful effects to aquatic life.
  - R10 Flammable.
  - R53 May cause long-term adverse effects in the aquatic environment.
  - R65 Harmful: may cause lung damage if swallowed.
  - R66 Repeated exposure may cause skin dryness or cracking.
  - R67 Vapours may cause drowsiness and dizziness.

- **Recommended restriction of use**
  - refer to Technical Data Sheet (TDS)

- **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
  - Flam. Liq. 3: Flammable liquids, Hazard Category 3
  - STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
  - Asp. Tox. 1: Aspiration hazard, Hazard Category 1
  - Aquatic Chronic 4: Hazardous to the aquatic environment - Chronic Hazard, Category 4
<table>
<thead>
<tr>
<th>Trade name: Slate-Lite Special Protection</th>
</tr>
</thead>
</table>

- * Data compared to the previous version altered.
- International Product Registration Status

Adaptation in accordance with REACH directive 1907/2006/EC
- USA (Toxic Substances Control Act, TSCA)
- J (Existing and New Chemical Substance List, ENCS)