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

- 1.1 Product identifier
  - Trade name: Release agent for Integral PU Type 83
  - Article number: 8650/64

- 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: Release Agent
  - Uses advised against: homeworker (DIY) applications

- 1.3 Details of the supplier of the safety data sheet
  - Manufacturer/Supplier:
    - Jakob Keck Chemie GmbH
    - Zweibrückerstr. 189
    - 66954 Pirmasens
    - Tel.: 06331 537-0
    - Fax.: 06331 537-211
  - Informing department:
    - Product safety department.
    - e-mail: sdb@keck-chemie.com
  - 1.4 Emergency telephone number:
    - Monday - Friday 9 a.m. - 4 p.m.,
    - Mr. Eric Zimmer
    - Tel.: +49 6331 537 170
    - Fax.: +49 6331 537 211

**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.
    - Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.
  - Classification according to Directive 67/548/EEC or Directive 1999/45/EC
    - Xn; Harmful
    - R62-65: Possible risk of impaired fertility. Harmful: may cause lung damage if swallowed.
    - R10-52/53: Flammable. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- Information concerning particular hazards for human and environment:
  - 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.
  - Has a narcotising effect.
  - Protect against electrostatic charges.
  - Vapours of the product are heavier than air and may accumulate on the ground, in mines, drains or cellars with higher concentration.
  - In the gas volume of sealed packages vapours of flammable solvents, especially at action of heat, may accumulate. Keep away fire and ignition sources.

- Classification system:
  - The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

(Contd. on page 2)
Section 3: Composition/information on ingredients

Table 3.2 Mixtures

| CAS: 556-67-2 | octamethylcyclotetrasiloxane | Xn R62 | 50 - 100% |
| EINECS: 209-136-7 | R53 | Repr. Cat. 3 |
| Index number: 014-018-00-1 | Flam. Liq. 3, H226; | Aquatic Chronic 4, H413 |
| Reg.nr.: 01-2119529238-36-XXXX | Rep. 2, H361f; | |

| EC number: 927-285-2 | Hydrocarbons, C11 - C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics | Xn R65 |
| Reg.nr.: 01-2119480162-45-xxxx | R66 | Asp. Tox. 1, H304 |
| | polydimethylsiloxane, modified | 10-<25% |

Description:
- Mixture consisting of the following components.
- Mixture of the substances listed below with harmless additions.

Dangerous components:
**SECTION 4: First aid measures**

4.1 Description of first aid measures

- General information
  - Instantly remove any clothing soiled by the product.
  - Take affected persons into the open air.
  - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - Personal protection for the First Aider.
  - In case of irregular breathing or respiratory arrest provide artificial respiration.
  - Launder contaminated clothing before reuse.
  - Seek immediate medical advice

- After inhalation
  - Take affected persons into the open air and position comfortably.
  - Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
  - In case of unconsciousness bring patient into stable side position for transport.

- After skin contact
  - Instantly 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. If symptoms persist, consult doctor.

- After swallowing
  - Rinse out mouth.
  - Do NOT induce vomiting!
  - If swallowed or in case of vomiting, danger of entering the lungs
  - May be fatal if swallowed and enters airways.
  - Immediately call a POISON CENTER/doctor.
  - A person vomiting while lying on their back should be turned onto their side.
  - Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

- Disizziness
- Headache
- Dazed
- Unconsciousness
- Suspected of damaging fertility.

**Information for doctor** treat symptomatically
4.3 Indication of any immediate medical attention and special treatment needed
If swallowed or in case of vomiting, danger of entering the lungs
Subsequent observation for pneumonia and pulmonary oedema

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents
CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.
For safety reasons unsuitable extinguishing agents Water with a full water jet.

5.2 Special hazards arising from the substance or mixture
Fumes are heavier than air
Vapour may travel across the ground and reach remote ignition sources, causing a flashback fire danger.
Formation of toxic gases is possible during heating or in case of fire.
Can be released in case of fire
Carbon monoxide and carbon dioxide
Products of incomplete combustion.
Can form explosive gas-air mixtures.
Hydrocarbons
Aldehyde
silicon dioxide
The product is insoluble or has a low solubility in water and floats on water.

5.3 Advice for firefighters
Protective equipment:
Do not inhale explosion gases or combustion gases.
Wear self-contained breathing apparatus.
Wear full protective suit.

Additional information
Cool endangered containers with water spray jet.
Dispose of fire debris and contaminated firefighting water in accordance with official regulations.

Fire class:
Class B: Flammable liquid

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Particular danger of slipping on leaked/spilled product.
Ensure adequate ventilation
Bring persons out of danger.
Keep away from ignition sources
Avoid contact with the eyes and skin.

6.2 Environmental precautions:
Prevent from spreading (e.g. by damming-in or oil barriers).
Do not allow to enter drainage system, surface or ground water.
Inform respective authorities in case product reaches water or sewage system.
Prevent material from reaching sewage system, holes and cellars.
Do not allow to enter the ground/soil.
If material reaches soil inform authorities responsible for such cases.

6.3 Methods and material for containment and cleaning up:
Stop leak if you can do so without risk.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
For large amounts: Pump off product.
Collect mechanically.
Remove from the surface of water (e.g. skim or vacuum off)
Send for recovery or disposal in suitable containers.
Ensure adequate ventilation.
Dispose of contaminated material as waste according to item 13.
**SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling**
  Do not eat, drink or smoke while working.
  The usual precautionary measures should be adhered to general rules for handling chemicals.
  Store in cool, dry place in tightly closed containers.
  Keep away from heat and direct sunlight.
  Open and handle container with care.
  Work only in fume cupboard.
  Carry out filling operations only at sites with extractors available.
  Extractor required on object.
  Ensure good ventilation/exhaustion at the workplace.
  Particular danger of slipping on leaked/spilled product.
  Prevent formation of aerosols.
  Keep away from ignition sources
  Do not inhale gases / fumes / aerosols.
  Avoid contact with the skin.
  Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

- **Information about protection against explosions and fires:**
  Protect from heat.
  Protect against electrostatic charges.
  Wear shoes with insulated soles.
  Fumes can combine with air to form an explosive mixture.
  Flammable mixtures may be formed in empty containers.
  Keep ignition sources away - Do not smoke.

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

- **Storage**
  - **Requirements to be met by storerooms and containers:**
    Provide floor trough without outlet.
    Prevent any penetration into the ground.
    Store in cool location.
    Store only in the original container.
    Provide solvent resistant, sealed floor.
    Additional advices: 'American Petroleum Institute 2003' (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or in 'National Fire Protection Agency 77' (Recommended Practice on Static Electricity) or in 'CENELEC CLC/TR 50404' (Electrostatics - Code of practice for the avoidance of hazards due to static electricity)
    EPDM rubber
  - **Information about storage in one common storage facility:**
    Store away from foodstuffs.
    Store away from oxidising agents.
  - **Further information about storage conditions:**
    Keep container tightly sealed.
    Store container in a well ventilated position.
    Store in a cool place.
  - **Recommended storage temperature:** 5 - 30 °C
  - **Storage class**
    6.1C (Combustible substance of acute toxicity category 3 or combustible substance that produces chronic effects)
  - **7.3 Specific end use(s)** No further relevant information available.
SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **8.1 Control parameters**

| Components with limit values that require monitoring at the workplace: |
| Hydrocarbons, C11 - C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics (10-<25%) |
| AGW (RCP) (European Union) | Long-term value: 600 mg/m³ |

- **DNELs** No further relevant information available.

- **PNECs**

| Hydrocarbons, C11 - C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics |
| PNEC (Predicted No Effect Concentration) |
| nb (soil (dry matter)) |
| nb (sewage treatment plant) |
| nb (marine water) |
| nb (marine sediment (dry matter)) |
| nb (fresh water sediment (dry matter)) |
| nb (fresh water) |
| nb (intermittent release) |

- **Additional information:**

  The lists that were valid during the compilation were used as basis.
  http://www.sehsc.com/science.asp

  Note: Information about recommended monitoring procedures can be obtained from the relevant agency(ies)/institute(s): for the United Kingdom: UK Health and Safety Executive (HSE)

- **8.2 Exposure controls**

- **Personal protective equipment**

  - **General protective and hygienic measures**

    The usual precautionary measures should be adhered to general rules for handling chemicals.
    Keep away from foodstuffs, beverages and food.
    Take off immediately all contaminated clothing.
    Wash hands during breaks and at the end of the work.
    Store protective clothing separately.
    Pregnant women must strictly avoid inhalation or contact with the skin.
    Do not eat, drink or smoke while working.
    Avoid contact with the eyes and skin.
    Do not inhale gases/ fumes/ aerosols.

  - **Breathing equipment:**

    Filter A/P2.
    In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.
    Not necessary if room is well-ventilated.

  - **Protection of hands:**

    Protective gloves.
    Only use chemical-protective gloves with CE-labelling of category III.
    Check protective gloves prior to each use for their proper condition.
    The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
    After use of gloves apply skin-cleaning agents and skin cosmetics.
    Protective gloves should be replaced at first signs of wear.

  - **Material of gloves**

    Butyl rubber, BR
    Recommended thickness of the material: >0.5 mm
    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
The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.

As protection from splashes gloves made of the following materials are suitable: Butyl rubber, BR

Not suitable are gloves made of the following materials:
Leather gloves

Eye protection: Tightly sealed safety glasses.

Body protection: Protective work clothing.

Limitation and supervision of exposure into the environment
Do not allow to enter drainage system, surface or ground water.
Do not allow to enter the ground/soil.
Prevent from spreading (e.g. by damming-in or oil barriers).

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

- Appearance:
  Form: Fluid
  Colour: Whitish
  Odour: Light
  Odour threshold: Not determined.

- pH-value: Not determined.

- Change in condition
  Melting point/Melting range: Not determined
  Boiling point/Boiling range: 175 °C

- Flash point: 50 °C

- Ignition temperature: 228 °C

- Decomposition temperature: Not determined.

- Self-inflammability: No self ignition was observed up to the specified temperature.

- Danger of explosion: Product is not explosive. However, formation of explosive air/steam mixtures is possible.

- Critical values for explosion:
  Lower: 0.5 Vol %
  Upper: 7.9 Vol %

- Vapour pressure at 20 °C: 0.6 hPa

- Density at 20 °C: 0.913 g/cm³
  Relative density: Not determined.
  Vapour density: Not determined.
  Evaporation rate: Not determined.

- Solubility in / Miscibility with Water: Not miscible or difficult to mix

- Partition coefficient (n-octanol/water): Not determined.

- Viscosity:
  dynamic: Not determined.
  kinematic at 20 °C: 12 s (DIN 53211/4)

- Solvent content:
  Organic solvents: 22.0 %
  Water: 0.0 %

- Solids content: 23.6 %

(Contd. of page 6)
**SECTION 10: Stability and reactivity**

- **10.1 Reactivity**
- **10.2 Chemical stability**
  - Thermal decomposition / conditions to be avoided:
    - Protect against electrostatic charges.
    - Can decompose slowly with localised heating above 150 °C
    - To avoid thermal decomposition do not overheat.
    - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

- **10.3 Possibility of hazardous reactions**
  - Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised
  - Forms explosive gas mixture with air
  - Used empty containers may contain product gases which form explosive mixtures with air
  - Can form explosive vapour-air mixture if stored in large containers at temperatures > 35 °C
  - Reacts with fabric soaked in the product (e.g. cleaning wool): self ignition is possible.

**SECTION 11: Toxicological information**

- **11.1 Information on toxicological effects**
  - **Acute toxicity:**
    - **556-67-2 octamethylcyclotetrasiloxane**
      - Oral: \( \text{LD}_{50} \) Acute toxicity, oral: > 2000 - > 5000 mg/kg (rat) no mortality
      - Dermal: \( \text{LD}_{50} \) Acute toxicity, dermal: > 4640 mg/kg (canine) (source: Bayer AG)
      - Inhalative: \( \text{LC}_{50}(4 \text{ h}) \) Acute toxicity, inhalative: 12.17 - 36 mg/l (rat)
    - **Hydrocarbons, C11 - C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics**
      - Oral: \( \text{LD}_{50} \) Acute toxicity, oral: > 5000 mg/kg (rat)
      - Dermal: \( \text{LD}_{50} \) Acute toxicity, dermal: 15400 mg/kg (canine)
      - Inhalative: \( \text{LC}_{50}(4 \text{ h}) \) Acute toxicity, inhalative: > 1200 mg/l (rat)
    - **77-58-7 dibutyltin dilaurate**
      - Oral: \( \text{LD}_{50} \) Acute toxicity, oral: 500 mg/kg (rat)
      - Dermal: \( \text{LD}_{50} \) Acute toxicity, dermal: > 1000 mg/kg (canine)

- **Primary irritant effect:**
  - **on the skin:**
    - At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.

- **556-67-2 octamethylcyclotetrasiloxane**

  - **Irritation of skin** - (canine)
  - **Hydrocarbons, C11 - C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics**

  - **Irritation of skin** - neg. (canine) (OECD 404)

- **on the eye:**

  - **556-67-2 octamethylcyclotetrasiloxane**

  - **Irritation of eyes** + (canine)
### SECTION 12: Ecological information

**12.1 Toxicity**
- **Aquatic toxicity:**
  May cause long-term adverse effects in the aquatic environment.

**Studies of a comparable product.**

### 556-67-2 octamethycyclotetrasiloxane

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Concentration (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC₅₀ -Toxicity for algae</td>
<td>&gt; 2000 (source: Bayer AG)</td>
</tr>
<tr>
<td>EC₅₀ -Toxicity for daphnia</td>
<td>&gt; 5000 (source: Bayer AG)</td>
</tr>
<tr>
<td>EC₅₀ -Toxicity for shrimp</td>
<td>&gt; 1000 (source: Bayer AG)</td>
</tr>
<tr>
<td>EC₅₀ -Toxicity for rainbowfish</td>
<td>&gt; 25.2 (source: Bayer AG)</td>
</tr>
</tbody>
</table>
39.6.6 LC₅₀ Fish toxicity (96h) > 500 mg/l (zebrafish (Brachidion rerio)) (source: Bayer AG)
(96h) > 1000 mg/l (Fundulus heteroclitus) (source: Bayer AG)
(96h) > 1000 mg/l (bluegill (Lepomis macrochirus)) (source: Bayer AG)
(96h) > 1000 mg/l (rainbow trout (Salmo gairdneri)) (source: Bayer AG)

Hydrocarbons, C11 - C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics

EC₅₀ Toxicity for algae (72h) > 1000 mg/l (algae)

LC₅₀ Fish toxicity (96h) ~100 mg/l (not specified)

* 77-58-7 dibutyltin dilaurate

EC₅₀ Toxicity for daphnia 2.28 mg/l (daphnia (Daphnia magna))

Fish toxicity 2 mg/l (fish (not specified))

12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential May be accumulated in organism

12.4 Mobility in soil No further relevant information available.

12.5 Ecotoxicological effects:

Remark: Harmful to fish

Respiratory inhibition of communal activated sludge EC 20 (mg/l according to ISO 8192 B):

556-67-2 octamethylcyclotetrasiloxane

EC₅₀ Bacterial toxicity (3h) > 10000 mg/l (activated sludge) (ISO 8192)

Additional ecological information:

According to recipe contains the following heavy metals and compounds according to EC guideline NO. 76/464 EC:

- General notes:
  Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.
  Avoid transfer into the environment.
  Do not allow product to reach ground water, water bodies or sewage system.
  Harmful to aquatic organisms
  May cause long-term adverse effects in the aquatic environment.
  Danger to drinking water if even small quantities leak into soil.

12.6 Other adverse effects No further relevant information available.

13.1 Waste treatment methods

Recommendation
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Disposal must be made according to official regulations.
None disposal into waste water.

Waste disposal key number:
For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

Uncleaned packagings:
Recommendation:
Disposal must be made according to official regulations.
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.
Packagings that cannot be cleaned are to be disposed of in the same manner as the product.
### SECTION 14: Transport information

<table>
<thead>
<tr>
<th>14.1 UN-Number</th>
<th>UN1993</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2 UN proper shipping name</td>
<td>ADR 1993 FLAMMABLE LIQUID, N.O.S. (octamethylcyclotetrasiloxane, hydrocarbons, liquid) IMDG, IATA FLAMMABLE LIQUID, N.O.S. (octamethylcyclotetrasiloxane, hydrocarbons, liquid)</td>
</tr>
<tr>
<td>14.3 Transport hazard class(es)</td>
<td>ADR Class 3 (F1) Flammable liquids. Label 3</td>
</tr>
<tr>
<td>- IMDG, IATA</td>
<td>Class 3 Flammable liquids. Label 3</td>
</tr>
<tr>
<td>14.4 Packing group</td>
<td>ADR, IMDG, IATA III</td>
</tr>
<tr>
<td>14.5 Environmental hazards:</td>
<td>Marine pollutant: No</td>
</tr>
<tr>
<td>14.6 Special precautions for user</td>
<td>Warning: Flammable liquids. Kemler Number: 30 EMS Number: F-E,S,E</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>
<tr>
<td>- Transport/Additional information:</td>
<td>ADR Limited quantities (LQ) 5L Exempted quantities (EQ) Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml Transport category 3 Tunnel restriction code (D/E) IMDG Limited quantities (LQ) 5L</td>
</tr>
</tbody>
</table>
SECTION 15: Regulatory information

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

Labelling according to Regulation (EC) No 1272/2008

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

Hazard pictograms
GHS02, GHS08

Signal word Danger

Hazard-determining components of labelling:
octamethylcyclotetrasiloxane
Hydrocarbons, C11 - C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Hazard statements
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations

Information about limitation of use:
Employment restrictions concerning young persons must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.

Technical instructions (air):

<table>
<thead>
<tr>
<th>Class</th>
<th>Share in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>50 - 100</td>
</tr>
<tr>
<td>NK</td>
<td>10 - &lt;25</td>
</tr>
</tbody>
</table>

Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.

Other regulations, limitations and prohibitive regulations

ChemVerbotsV (Chemikalienverbotsverordnung)
TRGS 500: “precautions: minimum standards”
TRGS 600 “Substitution”
TRGS 510 “Storage of hazardous substances in non-stationary containers”
TRGS 800 “Fire protection measures”

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

SECTION 16: Other information

These data are based on our present knowledge. However, they 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.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
Trade name: Release agent for Integral PU Type 83

H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H341 Suspected of causing genetic defects.
H360 May damage fertility or the unborn child.
H361f Suspected of damaging fertility.
H372 Causes damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H413 May cause long lasting harmful effects to aquatic life.

R34 Causes burns.
R43 May cause sensitisation by skin contact.
R48/25 Toxic: danger of serious damage to health by prolonged exposure if swallowed.
R50/53 Very toxic to organisms, may cause long-term adverse effects in the aquatic environment.
R53 May cause long-term adverse effects in the aquatic environment.
R60 May impair fertility.
R61 May cause harm to the unborn child.
R62 Possible risk of impaired fertility.
R65 Harmful: may cause lung damage if swallowed.
R66 Repeated exposure may cause skin dryness or cracking.
R68 Possible risk of irreversible effects.

Department issuing data specification sheet: Laboratory

Contact:
Monday - Friday 9 a.m. - 4 p.m.,
Mr. Eric Zimmer            Tel.: +49 6331 537 170
Fax.: +49 6331 537 211

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)
ISO: International Organisation for Standardisation
DNEL: Derived No-Effect Level (REACH)
bw: bodyweight
Langz., Langzeit: chronical exposure,
akut: acute (exposure)
lkal: local effects
system., systemisch: systemic effects
PNEC (Predicted No-Effect Concentration)
LD₅₀ lethal concentration for 50 percent of the animals or plants used for testing
LD₉₅ lethal dose for 50 percent of the animals used for testing
LD₅₀ lethal concentration for 0 percent
LD₉₅ lethal dose for 0 percent
nb / n.b. : not determined
gamete mutagenit.: gamete/germ cell mutageniticity
carcinogen.: carcinogenicity
theoret. O₂-Bedarf: theoretical oxygen demand
AOX: adsorbable organically bound halogens
TRGS: technische Regeln für Gefahrstoffe (technical rules for dealing with dangerous substances)
Merkblatt BG-Chemie: datasheet of the "Berufsgenossenschaft Rohstoffe und chemische Industrie" (former: "Berufsgenossenschaft Chemie") (German insurance in case of accidents at work)
Langz.: Langzeit: Long-term exposure
akut: Acute / short-term exposure
systemisch: systemic
kal: local
n.a.: not applicable
(derived fr.data f.similar substances,intern.rep.) = derived from data from tests with similar substances, internal reports, not published
Vert.koeff.Bod./Wass = Partition Coefficient soil / water

(Contd. on page 14)
## Trade name: Release agent for Integral PU Type 83

(n. v.: not available
Susp.: suspension
H: the product is skin-resorbing
Algentoxizität: toxicity for algae
Bakterientoxizität: toxicity for bacteria
Daphnentoxizität: toxicity for Daphnia
Fischtotoxicität: toxicity for fishes
DOC: dissolved organic carbon
Halbwertszeit: half-life
DIN: Norm des Deutschen Instituts für Normung = standard of the German Institute for Standardization
EN: Europäische Norm = standard of the European Committee for Standardization (CEN)
OECD: OECD Test Guideline
pos.: positive
deg.: negative
inhal.: inhalative
NOEC (No Observed Effect Concentration),
NOEL (No Observed Effect Level),
NOAEL (No Observed Adverse Effect Level): denotes the level of exposure of an organism at which there is no effect in the exposed population.
NOELR (no-observed-effect-loading rate)
ATE (Acute Toxicity Estimates)
Flam. Liq. 3: Flammable liquids, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Muta. 2: Germ cell mutagenicity, Hazard Category 2
Repr. 1A: Reproductive toxicity, Hazard Category 1A
Repr. 2: Reproductive toxicity, Hazard Category 2
STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1
Asp. Tox. 1: Aspiration hazard, Hazard Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3
Aquatic Chronic 4: Hazardous to the aquatic environment - Chronic Hazard, Category 4


* Data compared to the previous version altered.