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

1. Product identifier

   Commercial product name: VINNOLIT E 67 FF
   Product identifier: Polyvinylchloride
   CAS No.: 9002-86-2

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

   Use of substance / preparation: Industrial.
   Raw material for: PVC processing.
   This product is a polymer, which is exempted from registration according to (EC) regulation 1907/2006, article 2.

1.3 Details of the supplier of the safety data sheet

   Manufacturer/distributor: Vinnolit GmbH & Co. KG
   Street/POB-No.: Carl-Zeiss-Ring 25
   Postal code/city: 85737 Ismaning
   Country: Germany
   Telephone: +49 89 96-103-0
   Telefax: +49 89 96-103-103
   Information about the Safety Data Sheet: Telephone +49 8679 7-5680
                                           Telefax +49 8679 7-4002
                                           eMail sdb@vinnolit.com

1.4 Emergency telephone number

   Emergency Information (German): Plant fire brigade +49 8677 83-2222
   Emergency Information (Internat.): National Response Center +49 621 60-43333

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

   Classification according to Regulation (EC) No. 1272/2008: Not a hazardous substance or mixture.

2.2 Label elements

   Labelling according to Regulation (EC) No. 1272/2008: No labeling according to GHS required.

2.3 Other hazards

   Risk of dust explosion.

SECTION 3: Composition/information on ingredients

3.1 Substances

3.1.1 Chemical characteristics

   CAS No.: 9002-86-2
   Polyvinyl chloride

3.1.2 Hazardous ingredients

   This material does not contain any ingredients above the permitted limit(s).
3.2 Mixtures
   not applicable

SECTION 4: First aid measures

4.1 Description of first aid measures
   General information:
   In case of accident or if you feel unwell seek medical advice (show label or SDS where possible).
   After contact with the eyes:
   Rinse immediately with plenty of water. Seek medical advice in case of continuous irritation.
   After contact with the skin:
   No special measures required.
   After inhalation:
   Provide fresh air.
   After swallowing:
   No special measures required. In cases of sickness seek medical advice (show label if possible).

4.2 Most important symptoms and effects, both acute and delayed
   Any relevant information can be found in other parts of this section.

4.3 Indication of any immediate medical attention and special treatment needed
   Further toxicology information in section 11 must be observed.

SECTION 5: Firefighting measures

5.1 Extinguishing media
   Suitable extinguishing media:
   water spray, foam, extinguishing powder, carbon dioxide.
   Extinguishing media which must not be used for safety reasons:
   not applicable.

5.2 Special hazards arising from the substance or mixture
   Hazardous combustion products: carbon monoxide and hydrogen chloride.

5.3 Advice for firefighters
   Special protective equipment for fire fighting:
   Use respiratory protection independent of recirculated air.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
   No special measures required.

6.2 Environmental precautions
   No special measures required.

6.3 Methods and material for containment and cleaning up
   Damp down, absorb mechanically and dispose according to local/state/federal regulations.

6.4 Reference to other sections
   Relevant information in other sections has to be considered. This applies in particular for information given on personal protective equipment (section 8) and on disposal (section 13).
SECTION 7: Handling and storage

7.1 Precautions for safe handling

General information:
No special protective measures required.

Precautions for safe handling:
Avoid dust formation. Ensure adequate ventilation.

Precautions against fire and explosion:
Observe the general rules of preventive industrial fire protection and dust explosion protection.

7.2 Conditions for safe storage, including any incompatibilities

Conditions for storage rooms and vessels:
Observe precautionary measures against dust explosion.

Advice for storage of incompatible materials:
Do not store together with combustible substances.

Further information for storage:
not applicable

7.3 Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Maximum airborne concentrations at the workplace:

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Material</th>
<th>Type</th>
<th>mg/m³</th>
<th>ppm</th>
<th>Dust fract.</th>
<th>Fibre/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Polyvinyl chloride</td>
<td>OEL</td>
<td>4,0</td>
<td></td>
<td>Respirable dust/mist</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Polyvinyl chloride</td>
<td>OEL</td>
<td>10,0</td>
<td></td>
<td>Inhalable dust/mist</td>
<td></td>
</tr>
</tbody>
</table>

8.2 Exposure controls

8.2.1 Exposure in the work place limited and controlled

General protection and hygiene measures:
Observe standard industrial hygiene practices for the handling of chemical substances. Do not eat, drink or smoke when handling.

Personal protection equipment:

Respiratory protection
Respirator must be worn if exposed to dust. Filtering half-face mask, according to acknowledged standards such as EN 149. Recommended Filter type: FFP1 or equivalent filter, according to acknowledged standards such as EN 149.

Eye protection
Recommendation: protective goggles.

Hand protection
Protective gloves are not normally required for handling the product.

Skin protection
not required.
8.2.2 Exposure to the environment limited and controlled

Prevent material from entering surface waters and soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical state / form</td>
<td>solid - powder</td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td>white</td>
<td></td>
</tr>
<tr>
<td>Odour</td>
<td>odourless</td>
<td></td>
</tr>
<tr>
<td>Odour limit</td>
<td></td>
<td>not applicable</td>
</tr>
<tr>
<td>pH-Value</td>
<td></td>
<td>not applicable</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td></td>
<td>not applicable</td>
</tr>
<tr>
<td>Melting point / melting range</td>
<td></td>
<td>not applicable</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td></td>
<td>not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td></td>
<td>not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td></td>
<td>not applicable</td>
</tr>
<tr>
<td>Flammability (deposited dust)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td></td>
<td>not determined</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower explosion limit (LEL)</td>
<td></td>
<td>no data available</td>
</tr>
<tr>
<td>Upper explosion limit (UEL)</td>
<td></td>
<td>no data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td></td>
<td>not applicable</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td></td>
<td>not applicable</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water solubility / miscibility</td>
<td>virtually insoluble</td>
<td></td>
</tr>
<tr>
<td>Vapour density</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative gas/vapour density</td>
<td>No data known.</td>
<td></td>
</tr>
<tr>
<td>Relative Density</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative Density</td>
<td>approx. 1,4 (23 °C)</td>
<td>(DIN 53479)</td>
</tr>
<tr>
<td>(Water / 4 °C = 1,00)</td>
<td>approx. 1,4 g/cm³ (23 °C)</td>
<td>(DIN 53479)</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>no data available</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>100 °C</td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viscosity (dynamic)</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Explosive properties (disturbed dust)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dust explosion class</td>
<td>St1</td>
<td></td>
</tr>
<tr>
<td>Molecular mass</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molecular mass</td>
<td>not applicable</td>
<td></td>
</tr>
</tbody>
</table>

9.2 Other information

No data available.
SECTION 10: Stability and reactivity

10.1 – 10.3 Reactivity; Chemical stability; Possibility of hazardous reactions

If stored and handled in accordance with standard industrial practices no hazardous reactions are known.

Relevant information can possibly be found in other parts of this section.

10.4 Conditions to avoid

not applicable

10.5 Incompatible materials

not applicable

10.6 Hazardous decomposition products

If stored and handled properly: none known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

11.1.1 Acute toxicity

Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.2 Skin corrosion/irritation

Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.3 Serious eye damage / eye irritation

Product details:

<table>
<thead>
<tr>
<th>Result/Effect</th>
<th>Species/Test system</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>not irritating</td>
<td>rabbit</td>
<td>Conclusion by analogy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OECD 405</td>
</tr>
</tbody>
</table>

11.1.4 Respiratory or skin sensitization

Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.5 Germ cell mutagenicity

Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.6 Carcinogenicity

Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.7 Reproductive toxicity

Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.8 Specific target organ toxicity (single exposure)

Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.9 Specific target organ toxicity (repeated exposure)
Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.10 Aspiration hazard
Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.11 Further toxicological information
By handling the product for many years no damage to health was observed.

SECTION 12: Ecological information

12.1 Toxicity
Assessment:
Evaluation on basis of physical-chemical properties: No expected damaging effects to aquatic organisms.

12.2 Persistence and degradability
Assessment:
Insoluble in water. Biologically not degradable.

12.3 Bioaccumulative potential
Assessment:
No adverse effects expected.

12.4 Mobility in soil
Assessment:
Insoluble in water.

12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects
none known

SECTION 13: Disposal considerations

13.1 Waste treatment methods

13.1.1 Material
Recommendation:
Observe local/state/federal regulations.

13.1.2 Uncleaned packaging
Recommendation:
Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations.

13.1.3 Waste Disposal Legislation Ref.No.(EC)
It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison
with the waste-disposal operator.

SECTION 14: Transport information

14.1 – 14.4 UN number; UN proper shipping name; Transport hazard class(es); Packing group

Road ADR:
Valuation ..............................................: Not regulated for transport

Railway RID:
Valuation ..............................................: Not regulated for transport

Transport by sea IMDG-Code:
Valuation ..............................................: Not regulated for transport

Air transport ICAO-TI/IATA-DGR:
Valuation ..............................................: Not regulated for transport

14.5 Environmental hazards
Hazardous to the environment: no

14.6 Special precautions for user
Relevant information in other sections has to be considered.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
Bulk transport in tankers is not intended.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
National and local regulations must be observed.
For information on labelling please refer to section 2 of this document.

Not applicable

Relevant regulations:
SI 2002/1689: CHIP Regulations 2002
SI 2002/2677: COSHH Regulations 2002
SI 1999/3242: Management of Health & Safety at Work Regulations 1999
Health & Safety at Work Act 1974
SI 1993/1643: Environmental Protection Act 1993 & Subsidiary Regulations.
Other national and local measures relating to the workplace, pollution control, environmental protection and waste control.

Other specifications, restrictions and prohibitions:
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals: Not applicable

15.2 Chemical safety assessment
A chemical safety assessment according to (EC) regulation 1907/2006 (REACH) has not been carried out for this product.

15.3 Details of international registration status
Relevant information about individual substance inventories, where available, is given below.

South Korea (Republic of Korea) .............: ECL (Existing Chemicals List):
This product is listed in, or complies with, the substance inventory.

Japan ..............................................: ENCS (Handbook of Existing and New Chemical Substances):
This product is listed in, or complies with, the substance inventory.
Australia ........................................ :**AICS** (Australian Inventory of Chemical Substances):

This product is listed in, or complies with, the substance inventory.

People's Republic of China ................. :**IECSC** (Inventory of Existing Chemical Substances in China):

This product is listed in, or complies with, the substance inventory.

Canada ......................................... :**DSL** (Domestic Substance List):

This product is listed in, or complies with, the substance inventory.

Philippines .................................... :**PICCS** (Philippine Inventory of Chemicals and Chemical Substances):

This product is listed in, or complies with, the substance inventory.

United States of America (USA) .......... :**TSCA** (Toxic Substance Control Act Chemical Substance Inventory):

All components of this product are listed as active or are in compliance with the substance inventory.

European Economic Area (EEA) ............ :**REACH** (Regulation (EC) No 1907/2006):

General note: the registration obligations for substances imported into the EEA or manufactured within the EEA by the supplier mentioned in section 1 are fulfilled by the said supplier. The registration obligations for substances imported into the EEA by customers or other downstream users must be fulfilled by the latter.

### SECTION 16: Other information

#### 16.1 Material

The details in this document are based on the state of our knowledge at the time of revision. They do not constitute an assurance of the described product properties in terms of statutory warranty requirements.

The providing of this document to a recipient does not relieve the recipient of his or her responsibility toward compliance with all laws and stipulations applicable to the product. This applies in particular to the further sale or distribution of the product or substances or items containing the product, in other jurisdictions and with regard to the protection of third-party intellectual property rights. If the described product is processed or mixed with other substances or materials, the details stated in this document cannot be conferred to the resultant new product unless this has been expressly mentioned. If the product is repackaged, the recipient is obligated to additionally provide the required safety-related information.

#### 16.2 Further information:

Commas appearing in numerical data denote a decimal point. Vertical lines in the left-hand margin indicate changes compared with the previous version. This version supersedes all previous versions.

- End of Safety Data Sheet -