Security data sheet



Product: 6020

Manufacturer: **DOWSIL**

Product group: **KLEBSTOFF**

Article group: 2-K SILIKON

Download: 07.06.2025

DOWSIL™ TC-6020 PART B

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SAFETY DATA SHEET

DOW DEUTSCHLAND ANLAGENGESELLSCHAFT MBH

Safety Data Sheet according to Reg. (EU) 2020/878

Product name: DOWSIL™ TC-6020 Thermally Conductive

Encapsulant Part B

Version: 3.0

Revision Date: 16.06.2022

Date of last issue: 24.06.2021

Print Date: 17.06.2022

DOW DEUTSCHLAND ANLAGENGESELLSCHAFT MBH encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name: DOWSIL™ TC-6020 Thermally Conductive Encapsulant Part B

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

Identified uses: Electrical industry and electronics

1.3 Details of the supplier of the safety data sheet COMPANY IDENTIFICATION

DOW DEUTSCHLAND ANLAGENGESELLSCHAFT MBH RHEINGAUSTR. 34 65201 WIESBADEN GERMANY

Customer Information Number: (31) 115 67 2626

SDSQuestion@dow.com

1.4 EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 00 49 4146 91 2333 **Local Emergency Contact:** 0049 4141 3679

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 according to Regulation (EC) No. 1272/2008.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008:

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

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

Product name: DOWSIL™ TC-6020 Thermally Conductive

Revision Date: 16.06.2022 Encapsulant Part B Version: 3.0

No smoking.

P234 Keep only in original packaging. P403 Store in a well-ventilated place.

2.3 Other hazards

May generate flammable hydrogen gas. Avoid contact with water, alcohols, acidic, basic, or oxidizing materials.

This product contains no substances assessed to be PBT or vPvB at levels of 0.1% or higher.

Endocrine disrupting properties

Environment: The substance/mixture does not contain components considered to have

> endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

at levels of 0.1% or higher.

Human Health: The substance/mixture does not contain components considered to have

> endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

at levels of 0.1% or higher.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Silicone compound

3.2 Mixtures

This product is a mixture.

| | CASRN / EC-No. / Index-No. | REACH Registration Number | Concentration | Component | Classification: REGULATION (EC) No 1272/2008 |
|--|----------------------------------|---------------------------------|---------------|-----------|--|
|--|----------------------------------|---------------------------------|---------------|-----------|--|

Substances with a workplace exposure limit

| CASRN | _ | >= 81,0 - <= 98,0 % | Methoxy, | Not classified |
|---------------|---|---------------------|----------------------|-------------------------|
| Not available | | | VinylSiloxane and | |
| EC-No. | | | alkoxysilane treated | Acute toxicity estimate |
| Not available | | | Alumina | Acute oral toxicity: |
| Index-No. | | | | > 5 000 mg/kg |
| _ | | | | Acute dermal toxicity: |
| | | | | > 2 000 mg/kg |

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice:

If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air and keep comfortable for breathing; consult a physician.

Skin contact: Wash off with plenty of water.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: Rinse mouth with water. No emergency medical treatment necessary.

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

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

4.3 Indication of any immediate medical attention and special treatment needed Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam. Carbon dioxide (CO2). Water spray.

Unsuitable extinguishing media: Dry chemical.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: Silicon oxides. Metal oxides. Carbon oxides.

Unusual Fire and Explosion Hazards: Applying foam will release significant amounts of hydrogen gas that can be trapped under the foam blanket.. Exposure to combustion products may be a hazard to health..

5.3 Advice for firefighters

Fire Fighting Procedures: Use water spray to cool unopened containers. Evacuate area.. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations..

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Do not allow extinguishing medium to contact container contents. Most fire extinguishing media will cause hydrogen evolution, and once the fire is put out, may accumulate in poorly ventilated or confined areas and result in flash fire or explosion if ignited. Remove undamaged containers from fire area if it is safe to do so.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.. Use personal protective equipment..

SECTION 6: ACCIDENTAL RELEASE MEASURES

- **6.1 Personal precautions, protective equipment and emergency procedures:** Follow safe handling advice and personal protective equipment recommendations.
- **6.2 Environmental precautions:** Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
- **6.3 Methods and materials for containment and cleaning up:** Soak up with inert absorbent material. Clean up remaining materials from spill with suitable absorbant. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Materials in contact with water, moisture, acids or bases have the potential to generate hydrogen gas. Recovered material should be stored in a vented container. The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to overpressurization of the container.

6.4 Reference to other sections:

See sections: 7, 8, 11, 12 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling: Keep away from water. Protect from moisture. Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice.

Use only with adequate ventilation. See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

7.2 Conditions for safe storage, including any incompatibilities: Keep in properly labelled containers. Store in original container. Product may evolve minute quantities of flammable hydrogen gas which can accumulate. Adequately ventilate to maintain vapors well below flammability limits and exposure guidelines. Do not repackage. Clogged container vents may increase pressure build up. Store in accordance with the particular national regulations. Store in a closed container.

Do not store with the following product types: Strong oxidizing agents. Unsuitable materials for containers: Do not store in or use containers except the original product package.

Storage class according to TRGS 510: Combustible liquids

7.3 Specific end use(s): See the technical data sheet on this product for further information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

| Component | Regulation | Type of listing | Value | |
|------------------------------|---|--------------------------------|--------------------------------|--|
| Methoxy, VinylSiloxane and | ACGIH | TWA Respirable | 1 mg/m3 , Aluminium | |
| alkoxysilane treated Alumina | | particulate matter | | |
| | Further information: A4: No | t classifiable as a human care | cinogen | |
| | DE TRGS 900 | AGW Inhalable | 10 mg/m3 | |
| | | fraction | | |
| | Further information: Y: Whe values, there is no risk of h | | e OEL and biological tolerance | |
| | DE TRGS 900 | AGW Alveolate | 1,25 mg/m3 | |
| | | fraction | | |
| | Further information: Y: When there is compliance with the OEL and biological toleral values, there is no risk of harming the unborn child | | | |

Recommended monitoring procedures

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with the Occupational Exposure Limits and the adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples should be analysed by an accredited laboratory.

Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy); European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents); European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods. Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods. Health and Safety Executive (HSE), United Kingdom: Methods for the Determination of Hazardous Substances.

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany. L'Institut National de Recherche et de Securité, (INRS), France.

Derived No Effect Level

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

Workers

| Acute systemic effects | | cal effects | ffects Long-term systemic effects | | Long-term local effects | | |
|------------------------|------------|-------------|-----------------------------------|--------|-------------------------|--------|------------|
| Dermal | Inhalation | Dermal | Inhalation | Dermal | Inhalation | Dermal | Inhalation |
| n.a. | n.a. | n.a. | n.a. | n.a. | 3,0 mg/m3 | n.a. | 3,0 mg/m3 |

Consumers

| Acute systemic effects | Acute local effects | Long-term systemic effects | Long-term local |
|------------------------|---------------------|----------------------------|-----------------|
| | | | effects |

Product name: DOWSIL™ TC-6020 Thermally Conductive

Revision Date: 16.06.2022 Encapsulant Part B Version: 3.0

| Dermal | Inhalation | Oral | Dermal | Inhalation | Dermal | Inhalation | Oral | Dermal | Inhalation |
|--------|------------|------|--------|------------|--------|------------|------|--------|------------|
| n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | 0,750 | n.a. | n.a. | 0,750 |
| | | | | | | mg/m3 | | | mg/m3 |

Predicted No Effect Concentration

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

| Compartment | PNEC | |
|------------------------|---------|--|
| Sewage treatment plant | 20 mg/l | |

8.2 Exposure controls

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent.

Skin protection

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended. Glove thickness alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from. The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Wear clean, body-covering clothing.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or quidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions, no respiratory protection should be needed: however, if handling at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator.

Use the following CE approved air-purifying respirator: Organic vapor cartridge, type A (boiling point >65 °C, meeting standard EN 14387).

Environmental exposure controls

See SECTION 7: Handling and storage and SECTION 13: Disposal considerations for measures to prevent excessive environmental exposure during use and waste disposal.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

Physical state liquid
Color grey
Odor slight

Odor Threshold No data available PH No data available

Melting point/freezing point

Melting point/range No data available
Freezing point not determined
Boiling point or initial boiling point and boiling range

Boiling point (760 mmHg) > 35 °C

Flash point closed cup >100 °C

Flammability (solid, gas) Not applicable

Flammability (liquids) Ignitable (see flash point)

Lower explosion limitNo data availableUpper explosion limitNo data availableVapor PressureNo data availableRelative Vapor Density (air = 1)No data available

Relative Density (water = 1) 2,93

Solubility(ies)

Water solubility not determined Partition coefficient: n- not determined

octanol/water

Auto-ignition temperatureNo data availableDecomposition temperatureNo data availableKinematic ViscosityNo data available

Particle characteristics

Particle size Not applicable

9.2 Other information

Molecular weightNo data availableDynamic Viscosity8 000 mPa.sExplosive propertiesNot explosive

Oxidizing properties The substance or mixture is not classified as oxidizing.

Self-heating substances The substance or mixture is not classified as self heating.

Metal corrosion rate Not corrosive to metals

Evaporation Rate (Butyl Acetate No data available

= 1)

NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10: STABILITY AND REACTIVITY

- 10.1 Reactivity: Not classified as a reactivity hazard.
- 10.2 Chemical stability: Stable under normal conditions.
- **10.3 Possibility of hazardous reactions:** Can react with strong oxidizing agents. When heated to temperatures above 150 °C (300 °F) in the presence of air, product can form formaldehyde vapours. Safe handling conditions may be maintained by keeping vapour concentrations within the occupational exposure limit for formaldehyde. Product may evolve flammable hydrogen gas on contact with water, alcohols, acidic or basic materials, many metals or metallic compounds and can form explosive mixtures in air. Hazardous decomposition products will be formed at elevated temperatures.
- 10.4 Conditions to avoid: Exposure to moisture
- **10.5 Incompatible materials:** Avoid contact with oxidizing materials.
- 10.6 Hazardous decomposition products:

Decomposition products can include and are not limited to: Formaldehyde.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure

Inhalation, Eye contact, Skin contact, Ingestion.

Acute toxicity (represents short term exposures with immediate effects - no chronic/delayed effects known unless otherwise noted)

Acute Toxicity Endpoints:

Acute oral toxicity

Information for the Product:

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: Single dose oral LD50 has not been determined.

Product name: DOWSIL™ TC-6020 Thermally Conductive

Revision Date: 16.06.2022 Encapsulant Part B Version: 3.0

Based on information for component(s): LD50, > 5 000 mg/kg Estimated.

Information for components:

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

For similar material(s): LD50, > 5 000 mg/kg Estimated.

Acute dermal toxicity

Information for the Product:

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.

Based on information for component(s): LD50, > 2 000 mg/kg Estimated.

Information for components:

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

For similar material(s): LD50, > 2 000 mg/kg Estimated.

Acute inhalation toxicity

Information for the Product:

Brief exposure (minutes) is not likely to cause adverse effects. Vapor from heated material may cause respiratory irritation.

As product: The LC50 has not been determined.

Information for components:

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

The LC50 has not been determined.

Skin corrosion/irritation

Information for the Product:

Based on information for component(s): Brief contact is essentially nonirritating to skin.

Information for components:

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

For similar material(s):

Brief contact is essentially nonirritating to skin.

Serious eye damage/eye irritation

Information for the Product:

Based on information for component(s): May cause slight temporary eye irritation. May cause mild eye discomfort.

Information for components:

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

Solid or dust may cause irritation or corneal injury due to mechanical action.

Sensitization

Information for the Product:

For skin sensitization: No relevant data found.

For respiratory sensitization: No relevant data found.

Information for components:

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

For skin sensitization: No relevant data found.

For respiratory sensitization: No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Information for the Product:

Product test data not available.

Information for components:

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Aspiration Hazard

Information for the Product:

Based on physical properties, not likely to be an aspiration hazard.

Information for components:

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

Based on physical properties, not likely to be an aspiration hazard.

Chronic toxicity (represents longer term exposures with repeated dose resulting in chronic/delayed effects - no immediate effects known unless otherwise noted)

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Information for the Product:

Product test data not available.

Information for components:

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

No relevant data found.

Carcinogenicity

Information for the Product:

Product test data not available.

Information for components:

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

No relevant data found.

Teratogenicity

Information for the Product:

Product test data not available.

Information for components:

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

No relevant data found.

Reproductive toxicity

Information for the Product:

Product test data not available.

Information for components:

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

No relevant data found.

Mutagenicity

Information for the Product:

Product test data not available.

Information for components:

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

No relevant data found.

11.2 Information on other hazards

Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Information for components:

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

12.1 Toxicity

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

Acute toxicity to fish

Not expected to be acutely toxic to aquatic organisms.

12.2 Persistence and degradability

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

Biodegradability: No appreciable biodegradation is expected.

12.3 Bioaccumulative potential

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

Bioaccumulation: No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

12.4 Mobility in soil

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

No relevant data found.

12.5 Results of PBT and vPvB assessment

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

12.6 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

12.7 Other adverse effects

Methoxy, VinylSiloxane and alkoxysilane treated Alumina

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Do not dump into any sewers, on the ground, or into any body of water. This product, when being disposed of in its unused and uncontaminated state should be treated as a hazardous waste according to EC Directive 2008/98/EC. Any disposal practices must be in compliance with all national and provincial laws and any municipal or local by-laws governing hazardous waste. For used, contaminated and residual materials additional evaluations may be required.

The definitive assignment of this material to the appropriate EWC group and thus its proper EWC code will depend on the use that is made of this material. Contact the authorized waste disposal services.

SECTION 14: TRANSPORT INFORMATION

Classification for ROAD and Rail transport (ADR/RID):

14.1 UN number or ID number Not applicable

14.2 UN proper shipping name Not regulated for transport

14.3 Transport hazard class(es) Not applicable14.4 Packing group Not applicable

14.5 Environmental hazards Not considered environmentally hazardous based on

available data.

14.6 Special precautions for user No data available.

Classification for INLAND waterways (ADNR/ADN):

Consult your Dow contact before transporting by inland waterway

Classification for SEA transport (IMO-IMDG):

14.1 UN number or ID number Not applicable

14.2 UN proper shipping name Not regulated for transport

14.3 Transport hazard class(es) Not applicable14.4 Packing group Not applicable

14.5 Environmental hazards Not considered as marine pollutant based on available data.

14.6 Special precautions for user No data available.

14.7 Maritime transport in bulk

according to IMO Consult IMO regulations before transporting ocean bulk

instruments

Classification for AIR transport (IATA/ICAO):

14.1 UN number or ID number Not applicable

14.2 UN proper shipping name Not regulated for transport

14.3 Transport hazard class(es) Not applicable
 14.4 Packing group Not applicable
 14.5 Environmental hazards Not applicable
 14.6 Special precautions for user No data available.

Further information:

VENTED PACKAGES ARE FORBIDDEN FOR AIR TRANSPORT.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15: REGULATORY INFORMATION

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

REACh Regulation (EC) No 1907/2006

Revision Date: 16.06.2022 Encapsulant Part B Version: 3.0

This product contains only components that have been either registered, are exempt from registration, are regarded as registered or are not subject to registration according to Regulation (EC) No. 1907/2006 (REACH)., The aforementioned indications of the REACH registration status are provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. It is the buyer's/user's responsibility to ensure that his/her understanding of the regulatory status of this product is correct.

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Listed in Regulation: Not applicable

Wassergefährdungsklasse (Deutschland)

WGK 1: slightly hazardous to water

15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture.

SECTION 16: OTHER INFORMATION

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008

This product is not classified as dangerous according to EC criteria.

Revision

Identification Number: 4127219 / A287 / Issue Date: 16.06.2022 / Version: 3.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

| ACGIH | USA. ACGIH Threshold Limit Values (TLV) |
|-------------|---|
| AGW | Time Weighted Average |
| DE TRGS 900 | Germany. TRGS 900 - Occupational exposure limit values. |
| TWA | 8-hour, time-weighted average |

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - AmericanSociety for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS -Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half

maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships: n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL -No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance: PICCS - Philippines Inventory of Chemicals and Chemical Substances: (Q)SAR -(Quantitative) Structure Activity Relationship: REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals: RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI -Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA-Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

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