1. Identification of the Substance/Mixture and of the Company/Undertaking

1.1. Product identifier

Form of the product	Mixture/Fibre
Product name	**Wiking® Fibre**
Customs Tariff No.	55.03.40.00
Chemical name	Polypropylene: $(C_3H_6)_x$
Product type	Polypropylene Homopolymer – PPH

1.2. Relevant, identified uses of the substance or mixture and uses advised.

1.2.1 Relevant identified uses

Main use category	Commercial use
Relevant identified uses of the substance	For more detailed information, see product data sheet

1.2.2 Uses that are advised against

Main	Food products

1.3. Details of the supplier of the safety data sheet

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2. Hazards Identification

2.1. Classification of the substance or mixture

The product in the form of granules is not classified as hazardous pursuant to provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements), nor it requires an SDS according to Article 31 of Regulation (EC) 1907/2006 (REACH).

The product marketed in the form of film is considered "article" under REACH (Reg. (EC) 1907/2006), therefore it is not subject to the obligation of the safety data sheet (Article 31 of the REACH Reg.), neither classification and labelling in accordance with Regulation 1272/2008 (CLP).

2.2. Label elements

Hazard pictograms:	None
Signal words:	None
Hazard statements:	None
Precautionary statements:	None

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

Physical-chemical, health and environmental effects	To the best of Danish Fibres A/S's knowledge, this product does not present any particular risk, provided that general rules for occupational hygiene are observed.
Other hazards which do not contribute to classification	Contact with hot product - risk of serious burns. Vapours or fumes may form at temperatures exceeding 160°C; these can irritate the respiratory tract, resulting in coughing and shortness of breath. Handling the product can generate build-up of static electricity. Use appropriate earthing methods.
Physical-chemical hazards	Flammable in the presence of flames.
Ecological Information	The substance/Mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commision Delegated regulation. (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1 % or higher.

3. Composition/Information on Ingredients

3.1. Substances

Information not relevant.

3.2. Mixtures

Propylene homopolymers (Cas no. 9003-07-0) >98%	Not classified
Spin oil <2% Symptoms the respiratory associated with inhalation	If the product is heated to more than 235°C, vapours can form and they can irritate tract, resulting in coughing and a feeling of breathlessness.
Additives	Polypropylene antioxidants and stabilizers: max 20%

The Wrap film used on Polypucks products is mainly made of fully- and/or partially-hydrolyzed polyvinyl alcohol (CAS 9002-89-5; 25213-24-5); other components fall within the category of polyol plasticizers and process additives of organic and inorganic nature.

4. First Aid Measures

Inhalation	Fresh air.
Contact with skin	Wash the affected areas with cold water. Consult a dermatologist if necessary.
Contact with eyes	If there is any irritation, wash with plenty of water until the irritation resolves (at least 10 minutes). Consult an ophthalmologist if necessary.
Ingestion	Ingestion during handling is unlikely. Ingestion of small quantities has no significant effects. Ingestion of large amounts can cause abdominal pain and diarrhoea. Consult a physician if necessary.

4.1. Description of first aid measures on PVA Film

Not specifically necessary. Observance of good industrial hygiene is recommended.

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

No episodes of damage to health ascribable to the product have been reported.

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

None

5. Firefighting Measures

Technical Measures	Stop the fire spreading. Call the fire brigade immediately. Evacuate nonessential personnel. Protective clothing, goggles, and self-contained breathing equipment should be made available for firemen.
Extinguishing Media	For minor fires: carbon dioxide or powder for more extensive fires: foam.
Suitable	Water spray (mist) to cool the surfaces exposed to the fire. **Not to be used:** Do not use water jets (stick jets) in the early stages of extinguishing fire since they could help to spread the flames.
Combustion Products	Complete combustion, with an excess of oxygen forms: carbon dioxide and water vapour. Partial combustion also forms carbon monoxide, soot, and segregated products: aldehydes, ketones, hydrocarbons and volatile fatty acids.

5.1. Special hazards arising from the PVA Film or mixture.

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

5.2. Special hazards arising from the substance or mixture.

Hazardous combustion products:	Carbon oxides Hazardous decomposition products due to incomplete combustion

6. Accidental Release Measures

Fibres spilled on the floor should be recovered by sweeping or suction and put in containers to facilitate its disposal.

6.1. Personal precautions, protective equipment, and emergency procedures

Use breathing equipment if fumes or powders are released into the air. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Confine using earth or inert material. Collect as much material as possible and eliminate the rest using jets of water. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

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7. Handling and Storage

7.1. Do not store near highly flammable materials. Store away from heating source. Store in dry area to avoid degradation of the boxes and bags.

Storage Temperature	< 100°C, > - 40°C.
Shelf Life	One year.

7.2. Precautions for safe handling While using the PVA Film

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink, or smoke during use.

Make sure that the operator's hands are dry when handling. The product tends to reach the hygrometric balance with the surrounding environment, or to absorb the humidity of the environment where it is located. The product characteristics are strongly influenced by the amount of moisture absorbed.

7.2.1. Precautions for safe handling While using the Calcium Carbonate

Requirements for storage areas and containers	Keep container tightly closed in a dry and well-ventilated place.
Advice on common storage	Do not store near acids
Further information on storage stability	No decomposition if stored and applied as directed.

7.3. Conditions for safe storage, including any incompatibilities

Keep the product in clearly labelled containers. Keep containers away from any incompatible materials, see section 10 for details.

PVA Film products must be stored in dry, ventilated places where the temperature is kept at 20±10°C and the relative humidity is kept at 40±10%. Temperature and humidity variations should be minimized to prevent shrinkage/deformation; the products must not get in contact with water or wet items as well as with any dissolving or reacting substance. The products must be used within 6 months from the delivery date.

The supplied product packaging must be kept intact until use. The best product performances are guaranteed with 40 ± 5 % of relative humidity and with a film temperature of 23 ± 2 °C. If some film is leftover on the reel, or not in use during the operation, it should be repacked with the original packaging to maintain intact the product properties.

7.4. Specific end use(s)

Polypucks for Concrete giving a better environmental.

8. Exposure Controls and Personal Protection

Occupational Exposure Limit Restorable dust particles not considered to be a hazard.

Personal Protection - Respiratory Protection

In case of risk of overexposure to dust, vapour, or fumes, it is recommended that a local exhaust system is placed above the conversion equipment, and the working area must be properly ventilated.

8.1. Control parameters By using PVA Film

Information not available.

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8.2. Exposure controls

Comply with the safety measures usually applied when handling chemical substances.

General industrial hygiene practice. Because of the significant hygroscopic characteristic of the material, when brought to the plasticizing temperature (about 130°), it releases a certain amount of water vapor that can also develop at the exit of the machines such as the extrusion die as well as the packaging machine. The water vapor can also drag with it small amounts of plasticizers polyol contained in the material. In order to avoid condensation of fumes and vapors in the work environment, in compliance with the environmental hygiene standards, it is recommended the use of appropriate aspirators placed close to the emission source. Aspirated fumes and vapours can be condensed through water traps or dispersed outdoor if the local regulations permit. The amount of the emitted vapours may reach 3% of the weight of the extruded product.

Hand protection	None required While using PVA Film. Protective gloves while using Calcium Carbonate.
Skin protection	None required while using PVA Film. Protective suit while using Calcium carbonate.
Eye protection	None required while using PVA Film. Safety Glasses while using Calcium Carbonate.
Respiratory protection	None required, unless indicated otherwise in the chemical risk assessment while using PVA Film. When workers are facing concentrations above the exposure limit while using Calsium carbonate, they must use appropriate certified respirators. Half mask with a particle filter P2 (EN 143)
Environmental	The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

9. Physical and Chemical Properties

Appearance	Long monofilament or fibrillated fibre strands.
Physical State at 20°C	Solid.
Color	Translucent or white opaque odorless.
Oduor	Odorless.
Change in Physical State at 1013 hPa	
Melting Range (°C):	From 160 to 165
Flash Point (ASTM D 1929) (°C):	± 350.
Auto-ignition Temperature (°C):	> 380.
Explosion Limits (kg/m³)	
Lower:	0.020 (for polymer dust < 63 pm)
Min. ignition Energy at 20°C (mJ)	
Density, mass at 20°C (kg/m3):	905 (ISOI183)
Solubility in Water (%weight):	Insoluble.
Viscosity (mm2/s):	Non-applicable.
Content of Chloride:	< 0.001%
Density:	0.905 g/cm3 for PP and 2.1-2,2 g/cm3 for Calcium carbonate

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9.1. Information on basic physical and chemical properties using PVA Film

Appearance	Solid (film or granules)
Colour	White to light yellow; coloured on request.
Odour	Slight acetic acid Odor
Odour threshold	Not available
pH	Not available
Melting point / freezing point	Not available
Initial boiling point	Not applicable
Boiling range	Not available
Flash point	Not applicable
Evaporation rate	Not available
Flammability of solids and gases	Not available
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	1,15 – 1,35 g/cm3
Solubility	Soluble in water
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not explosive

9.2. Reference to other sections

Information not available.

10. Stability and Reactivity

Stability	Stable under normal operating conditions.
Conditions to avoid	Avoid proximity or contact with flames or sparks. Do not heat to temperatures exceeding 300°C.

10.1. Conditions to avoid while using PVA Film

Contact with flames and strong oxidizing agents. Exposure to direct sunlight can affect the quality of the product.

Temperature and humidity variations should be minimized in order to prevent shrinkage/deformation; the products must not get in contact with water or wet items as well as with any dissolving or reacting substance.

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10.2. Incompatible materials while using PVA Film

Strong oxidizing agents. Avoid contact with components that may negatively affect the product's solubility: Borates; Cupric salts; Aluminium and Zinc salts; Titanium salts and Esters; Chromates, Dichromates, Vanadates; Germanates; Tripolyphosphates, Sodium phosphate; Sodium metasilicates; Isocyanuric acid ; Sodium sulfate ; Sodium hypochlorite ; Dicarboxylic acids; isocyanates; Anhydrides (e.g. Tetrahydrophthalic anhydride); Aromatic aldehydes; Acetaldehyde, Butyraldehyde, Benzaldehyde, Glyoxal and Glutaraldehyde; Chloroaldehydic acids; Formamide and Dimethylformamide; Catechol, Resorcinol and derivatives.

10.3. Possibility of hazardous reactions while using Calcium Carbonate

Hazardous reactions	Stable under recommended storage conditions. No decomposition if used as directed. React with acids. It forms carbon dioxide (CO_2). This displaces the oxygen in the air in closed spaces. (Danger of suffocation).

10.4. Conditions to avoid

Conditions to avoid	No data available.

10.5. Incompatible materials

Incompatible materials	No data available.

10.6. Hazardous decomposition products

Hazardous decomposition products : Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke)

11. Toxicological Information

Acute toxicity
Symptoms related to Use:

Inhalation	Low risk for temperatures below 40°C. If heated to more than 235°C the product may form vapours or fumes which may cause irritation of respiratory tract and cause coughing and sensation of shortness of breath. By using the calcium carbonate: LD50 Oral (Rat):>5.000 mg/kg
Skin Contact	No risk for temperatures below 40°C. Contact with hot material may cause severe thermal burns. Regarding Calcium Carbonate is not considered as being a skin irritant.
Eye Contact	Fine dust may cause irritation to ocular mucous, splashing of molten droplets causes ocular tissue injury. Regarding Calcium Carbonate is not considered as being eye irritant.
Ingestion	Minimal toxicity.
Carcinogenicity (mg/kg)	IARC (International Agency on Research on Cancer): Category 3: The agent is not classifiable as to its carcinogenicity to humans
Mutagenicity	This product has been found to be non-mutagenic as well as non-genotoxic.
Other	Polyolefins are biologically inert.

11.1. Information on toxicological effects While using PVA Film

According to currently available data, this product has not yet produced health damages. Anyway, it must be handled according to good industrial practices.

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12. Ecological Information

Information on Ecological Effects	Avoid losses to the environment whenever possible. Calcium Carbonate (CC)

Mobility:

Air	There is a slow loss by evaporation. CC no data available
Soil	Because of its physicochemical properties, the product generally has low. CC no data available
Soil mobility	CC no data available
Water	Because of its low solubility the product should not be dangerous for aquatic life. CC no data available
Persistence and Degradability	Persistent in the environment.
Biodegradation	This substance is slowly biodegradable. CC not applicable
Bio accumulative Potential	Potential bioaccumulation of the product in environment is very low. CC no data available

Use this product according to good working practices.

While using PVA Film

12.1. Toxicity

Information not available.

12.2. Persistence and degradability

The product tends to degrade (conversion to carbon dioxide, water and cellular biomass) in aqueous environments (industrial and domestic effluent, water from river and sea surface) in a relatively short time.

12.3. Bio accumulative potential

Information not available.

12.4. Mobility in soil

Information not available.

12.5. Results of PBT and vPvB assessment

Based on available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%. CC None

12.6. Other adverse effects

Information not available.

12.6.1. Endocrine disrupting properties CC

Product assessment	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.

12.6.2 Other adverse effects CC

Additional ecological info	In solid state these minerals are a major part of the rocks of the earth´s surface. Negative effects on the environment should therefore be excluded. These minerals are not biodegradable. They are dissolved in a natural state and indispensable part of the natural waters. Restrictions may indicate that concentrated suspensions with these minerals in natural waters. May have unfavorable effect on water organisms. (Disturbance of the micro flora and - fauna inthe sidemen and subsequent detriment to the existence of higher water organisms).

13. Disposal Considerations

Disposal	According to local regulations. Can be disposed of as refuse for reprocessing. Do not dispose of by means of sinks, drains or into the immediate environment. It may be used as fuel in suitably designed installations.
Disposal of CC	Can be disposed of as refuse for reprocessing. Empty containers should be taken to an approved. Waste handling site for recycling or disposal.

14. Transport Information

No restriction on transport by road, water, rail, or flight.

15. Regulatory information

Labelling	No labelling is required in accordance with the EEC directives.

15.1. Safety, health, and environmental regulations/legislation specific for the substance or mixture while using the PVA Film

Seveso category None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006 None

Substances in Candidate List (Art. 59 REACH) None

Substances subject to authorization (Annex XIV REACH) None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012 None

Substances subject to the Rotterdam Convention None

Substances subject to the Stockholm Convention None.

Healthcare controls Information not available

German regulation on the classification of substances hazardous to water (VwVwS 2005). WGK 1: Low hazard to waters

15.2. Chemical safety assessment

No chemical safety assessment has been processed for the mixture and the substances it contains.

15.2.2. Regulatory information on CC

Same as 15.1 and 15.2

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16. Other information

Danish Fibres documents, including all drawings, proposed procedures and specifications are exclusively general information.

Details can be changed without prior warning. Practical application of the information requires independent, professional consul-tansy and verification of its precision, suitability and usability. The user alone shall be liable for the actual application of the products, including the choice of product, the use, the design, the production, or the test of the materials in which our products are used.

Danish Fibres shall not be held liable for the end products or for the use of our products.

Danish Fibres shall in no case be liable for any damage, including direct or indirect losses that might occur as a consequence of wrong application of the information. See also the general sales and delivery terms from Danish Fibres.

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