

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

1.1. Product identifier

<i>Form of the product</i>	Mixture/Fibre
<i>Product name</i>	Wiking® Fibre
<i>Customs Tariff No.</i>	55.03.40.00
<i>Chemical name</i>	Polypropylene: (C ₃ H ₆) _x
<i>Product type</i>	Polypropylene Homopolymer – PPH

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

1.2.1 Relevant identified uses

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

1.2.2 Uses that are advised against

<i>Main</i>	Food products
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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 labeling in accordance with Regulation 1272/2008 (CLP).

2.2. Label elements

<i>Hazard pictograms:</i>	None
<i>Signal words:</i>	None
<i>Hazard statements:</i>	None
<i>Precautionary statements:</i>	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.

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 2.0%

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.

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.

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.

7.3. 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 $20 \pm 10^\circ\text{C}$ and the relative humidity is kept at $40 \pm 10\%$. 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 $40 \pm 5\%$ of relative humidity and with a film temperature of $23 \pm 2^\circ\text{C}$. 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.

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 vapors can be condensed through water traps or dispersed outdoor if the local regulations permit. The amount of the emitted vapors may reach 3% of the weight of the extruded product.

<i>Hand protection</i>	None required.
<i>Skin protection</i>	None required.
<i>Eye protection</i>	None required.
<i>Respiratory protection</i>	None required, unless indicated otherwise in the chemical risk assessment.
<i>Environmental exposure controls</i>	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

<i>Appearance</i>	Long monofilament or fibrillated fibre strands.
<i>Physical State at 20°C</i>	Solid.
<i>Colour</i>	Translucent or white opaque odourless.
<i>Odour</i>	Odourless.

Change in Physical State at 1013 hPa

<i>Melting Range (°C):</i>	From 160 to 165
<i>Flash Point (ASTM D 1929) (°C):</i>	± 350.
<i>Auto-ignition Temperature (°C):</i>	> 380.

Explosion Limits (kg/m³)

<i>Lower:</i>	0.020 (for polymer dust < 63 µm)
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Min. ignition Energy at 20°C (mJ)

<i>Density, mass at 20°C (kg/m³):</i>	905 (ISO1183)
<i>Solubility in Water (%weight):</i>	Insoluble.
<i>Viscosity (mm²/s):</i>	Non-applicable.
<i>Content of Chloride:</i>	< 0.001%
<i>Density:</i>	0.905 g/m³.

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

<i>Appearance</i>	Solid (film or granules)
<i>Colour</i>	White to light yellow; colored on request
<i>Odour</i>	Slight acetic acid odor
<i>Odour threshold</i>	Not available
<i>pH</i>	Not available
<i>Melting point / freezing point</i>	Not available
<i>Initial boiling point</i>	Not applicable
<i>Boiling range</i>	Not available
<i>Flash point</i>	Not applicable
<i>Evaporation rate</i>	Not available
<i>Flammability of solids and gases</i>	Not available

<i>Lower inflammability limit</i>	Not available
<i>Upper inflammability limit</i>	Not available
<i>Lower explosive limit</i>	Not available
<i>Upper explosive limit</i>	Not available
<i>Vapour pressure</i>	Not available
<i>Vapour density</i>	Not available
<i>Relative density</i>	1,15 – 1,35 g/cm ³
<i>Solubility</i>	Soluble in water
<i>Partition coefficient: n-octanol/water</i>	Not available
<i>Auto-ignition temperature</i>	Not available
<i>Decomposition temperature</i>	Not available
<i>Viscosity</i>	Not available
<i>Explosive properties</i>	Not explosive

9.2. Reference to other sections

Information not available.

10. Stability and Reactivity

<i>Stability</i>	Stable under normal operating conditions.
<i>Conditions to avoid</i>	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.

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; Triphosphates, 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.

11. Toxicological Information

Acute toxicity

Symptoms related to Use:

<i>Inhalation</i>	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.
<i>Skin Contact</i>	No risk for temperatures below 40°C. Contact with hot material may cause severe thermal burns.
<i>Eye Contact</i>	Fine dust may cause irritation to ocular mucous, splashing of molten droplets causes ocular tissue injury.
<i>Ingestion</i>	Minimal toxicity.
<i>Carcinogenicity (mg/kg)</i>	IARC (International Agency on Research on Cancer): Category 3: The agent is not classifiable as to its carcinogenicity to humans
<i>Mutagenicity</i>	This product has been found to be non-mutagenic as well as non-genotoxic.
<i>Other</i>	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.

12. Ecological Information

<i>Information on Ecological Effects</i>	Avoid losses to the environment whenever possible.
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Mobility:

<i>Air</i>	There is a slow loss by evaporation.
<i>Soil</i>	Because of its physicochemical properties, the product generally has low soil mobility.
<i>Water</i>	Because of its low solubility the product should not be dangerous for aquatic life.
<i>Persistence and Degradability</i>	Persistent in the environment.
<i>Biodegradation</i>	This substance is slowly biodegradable.
<i>Bio accumulative Potential</i>	Potential bioaccumulation of the product in environment is very low.

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%.

12.6. Other adverse effects

Information not available.

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.

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.



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Data Sheet

Material Safety - Polypucks TR

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 consultancy 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.

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