OBSAH:

Príloha obsahuje bezpečnostné údaje vstupného (str. 1 až str. 3) a výstupného materiálu (označenie PAGE 1/1 až 1/8 (Page = str.) v originálnom anglickom texte.

1. Vstupný materiál **„Borclean“** - ide o tuhý polypropylénový vstupný materiál (základná surovina) pre priemysel plastov. Materiál nie je z hľadiska zdravia klasifikovaný ako nebezpečný a taktiež nie je nebezpečný pre životné prostredie. Nie je toxický. Má bod tavenia 130 – 170 °C a bod vzplanutia > 320 °C. Je vo vode nerozpustný. Produkt nie je klasifikovaný ako nebezpečný materiál v zmysle smernice EU 1999/45/EC, avšak vdýchnutie spalín môže podráždiť dýchacie cesty. Pri preprave tohto materiálu nie sú určené žiadne obmedzenia z hľadiska rizík prepravy v zmysle predpisov ADR/RID, IMDG alebo IATA.

2. Výstupný materiál **„Tervakoski film“** (BOPP fólia) – ide o polypropylénovú priehľadnú fóliu bez zápachu. Produkt neobsahuje žiadne nebezpečné látky, ktoré by podliehali kontrole v zmysle EU alebo národných predpisov. Nemá žiadne rizikové vlastnosti, nie je toxický. Materiál je nehorľavý, v kontakte s ohňom môže horieť a spaliny jeho horenia môžu byť škodlivé. Má bod vzplanutia > 340 °C. Teplota samovznietenia je > 340 °C. Produkt je vo vode nerozpustný. Pri preprave tohto materiálu nie sú určené žiadne obmedzenia z hľadiska rizík prepravy v zmysle predpisov ADR/RID, ADN/ADNR, IMDG alebo ICAO/IATA.

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Identifikaction of produkt	identifikácia produktu
Composition	stav, stavba, zloženie
Hazard identification	identifikácia rizík
Helth	zdravie
Fire-fightig measures	protipožiarne opatrenia
Handling and strorage	manipulácia a uskladnenie
Exposure controls	kontrola ožiarenia
Toxicological information	informácie o toxických vplyvoch
Transport informatin	informácie o preprave
Regulatory information	Regulatórne informácie.. (či sa to riadi nejakými smernicami...)
Physical and chemical properties	fyzikálno – chemické vlastnosti
▪ Physical state	skupenstvo
▪ Form/color	forma/farba
▪ Odor	zápach
▪ Softening point	bod mäknutia
▪ Density	hustota
▪ Vapor pressure	tlak pár
▪ Viscosity	viskozita
▪ Solubility in water	rozpustnosť vo vode
▪ ph – value	hodnota pH
▪ Autoignition temperature	teplota samovznietenia
▪ Hydroscopic	hydroscopický
n.a = non applicable	neaplikovateľný
Stability and reactivity	stabilita a reaktivita
Disposal consideration	zneškodnenie/nakladanie s odpadom
Other informatin	iné údaje

Polypropylene Borclean

1. Identification of the substance/mixture and of the company/undertaking

Material use: Raw material for plastics industry

Supplier: Borealis AG
E-mail address: product.safety@borealisgroup.com

2. Hazards identification

Classification of the substance or mixture

The product is not classified as hazardous according to Regulation (EC) No 1272/2008 and its amendments.

Label elements

Not a hazardous substance or mixture.

Other hazards

The product burns, but is not classified as flammable. Dust from the product gives a potential risk for dust explosion.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.

3. Composition/information on ingredients

The product is a polypropylene polymer.

Contains no substance classified as hazardous in concentrations, which should be taken into account according to EU regulations.

4. First aid measures

If inhaled: Move to fresh air in case of accidental inhalation of vapours or decomposition products.

In case of skin contact: If molten material comes in contact with the skin, cool with plenty of water. DO NOT remove solidified product, as removal could result in severe tissue damage. Obtain medical attention.

Most important symptoms and effects, both acute and delayed:

Inhalation of dust may irritate the respiratory tract. Prolonged inhalation of high doses of decomposition products may give headache or irritation of the respiratory tract.

5. Firefighting measures

Suitable extinguishing media: Water in spread jet, dry chemicals, foam or carbon dioxide.
Specific hazards during firefighting: Principal toxicant in the smoke is carbon monoxide.

6. Accidental release measures

Vacuum or sweep up spill. All spill of material must be removed immediately to prevent slipping accidents. Prevent product from entering environment and drains.

Borclean is a trademark of the Borealis group.

Borealis AG | Wagramerstrasse 17-19 | 1220 Vienna | Austria
Telephone +43 1 224 00 0 | Fax +43 1 22 400 333
FN 269858a | CCC Commercial Court of Vienna | Website www.borealisgroup.com

Polypropylene
Borclean

7. Handling and storage

Advice on safe handling: During processing and thermal treatment of the product, small amounts of volatile hydrocarbons may be released. Avoid inhalation of dust and decomposition fumes. Provide adequate ventilation. Local exhaust ventilation or additional personal protective equipment (PPE) may be necessary.

Advice on protection against fire and explosion: Dust from the product represents a risk for dust explosions when dispersed with air in a sufficient concentration and with the presence of an ignition source. All equipment shall be grounded. Routine housekeeping will also contribute in preventing risks of dust explosions.

Storage: Safety aspects do not require any special precautions in terms of storage.

8. Exposure controls/personal protection

Do not eat, drink or smoke when using this product. Wash hands before breaks and at the end of workday. Appropriate personal protective equipment (PPE) shall be worn in accordance with Regulation (EU) 2016/425.

Provide adequate ventilation. Local exhaust ventilation may be necessary.

9. Physical and chemical properties

Appearance: pellets, natural colour
Odour: odourless

Melting point/range: 130 - 170 °C
Density: 0,9 - 1,0 g/cm³
Ignition temperature: > 320 °C
Solubility(ies): insoluble in water

10. Stability and reactivity

The product is a stable thermoplastic, with no chemical reactivity.

11. Toxicological information

The product is not classified as hazardous to human health.

12. Ecological information

The product is not considered hazardous for the environment. Not readily biodegradable. Does not accumulate in organisms. Avoid release to the environment.

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Polypropylene
Borclean

13. Disposal considerations

Reuse or recycle if not contaminated. The product may be safely used as fuel. Proper combustion does not require any special flue gas control. Check with local regulations.

14. Transport information

The product is not regulated by ADR/RID, IMDG or IATA.

15. Regulatory information

None known to apply.

16. Other information

Product does not require Safety Data Sheet in accordance with Article 31 of Regulation (EC) No 1907/2006, and its amendments.

Issuer: Borealis, Group Product Stewardship / Niina Kerttula

Disclaimer

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication; however we do not assume any liability whatsoever for the accuracy and completeness of such information.

Borealis makes no warranties which extend beyond the description contained herein. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose.

It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products.

No liability can be accepted in respect of the use of Borealis' products in conjunction with other materials. The information contained herein relates exclusively to our products when not used in conjunction with any third party materials.

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Material Safety Data Sheet

in accordance with Commission Regulation (EU) no. 2015/830

TERVAKOSKI FILM ECT

Date: 28.05.2019 Revision No. 02

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier

Trade name **TERVAKOSKI FILM ECT**

Base PP-film is produced by tenter process with super clean electrical grade high temperature resin. Tervakoski film ECT is a low shrinkage film with controlled smooth surface on both sides and corona treatment on one side.

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

Base film for metallisation with Aluminium, Zinc or Alloy for applications ranging from power factor correction, DC-link, heavy duty application capacitors as well as for traditional metallized film capacitors. ECT is designed for high ambient temperatures to meet the needs of high dielectric strengths and long durability. It is dedicated also for thin films applications AC & DC in automotive industry(i.e. HEV/EV).

1.3 Details of the supplier of the safety data sheet

Manufacturer / Distributor:	Terichem Tervakoski. a.s. Štúrova 101 059 21 Svit Slovak Republic
Telephone number:	+421 52 715 3195
Fax number:	+421 52 715 3520
e-mail :	info@sk.tervakoskifilm.com

1.4 Emergency telephone number

Terichem Tervakoski, a.s., Štúrová 101, 059 21 Svit, Slovak Republic

Company dispatching 1(24 hours): Tel. +421 52 715 2441
Company dispatching 2(24 hours): Tel. +421 52 715 2442

2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

No specific danger is associated to the normal industrial utilization of the product. Product is not classified as dangerous, according to regulation (EC) no. 1272/2008 (see section 15).
Classification / symbol: Not regulated

2.2 Label elements

Hazard classification:

Symbol of danger:

H – phrases: not applicable

P 210 - Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P 232 - Protect from moisture.

P 402 - Store in a dry place.

P 410 - Protect from sunlight.

P 411 - Store at temperatures not exceeding 40 °C.

2.3 Other hazard

Physical and chemical hazards / Fire and explosion hazards: combustible – product can burn when is ignited. During a fire the product will melt and may generate drops that could propagate the fire.

Toxic gases will form upon combustion (see Section 5 „Fire-fighting measures").
Flammable / toxic gases will form upon decomposition (see Section 10 „Stability and reactivity").
Product can accumulate electrostatic charges when rubbed or chafed. Static discharge in the presence of volatile or flammable mixtures presents a potential fire or explosion hazard.

Environmental hazards: This substance and (or) its components are expected to remain in the water and soil surface and persist. Based on the available data of this product no hazardous properties are known.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Polypropylene

3.2 Mixtures

Does not contain other added components.

4. FIRST - AID MEASURES

4.1 Description of first aid measures

Inhalation/Ingestion: Considering the physical form of the product, inhalation and/or ingestion are not likely to be possible during normal use. First aid is not normally required.

Skin contact: First aid is not normally required. In case of skin injured due to melting material immediately rinse affected area with plenty of cold running water than cover with clean cotton sheet or gauze and seek medical assistance promptly.

Eye contact: First aid is not normally required.

4.2 Most important symptoms and effects, both acute and delayed

Not known.

4.3 Indication of any immediate medical attention and special treatment needed

Not known.

5. FIREFIGHTING MEASURES

Polypropylene film is not a flammable material, but it will burn if exposed to flames, giving off harmful fumes that should not by inhale. Molten droplets of polymer can be produced, which could ignite adjacent flammable and/or combustible materials.

Autoignition temperature: > 340 ^{0}C

5.1 Extinguishing media

For extinguishing use water, foam or dry chemical extinguisher.

5.2 Special hazards arising from the substance or mixture

By direct ignition the product burns with flames, developing H_2O, CO_2 and in case of absence of oxygen can be produced Carbon Monoxide (CO). The fire products are irritant and toxic. At a temperature of combustion between 400 - 700 ^{0}C can generate other fire products and this are Hydrocarbons and Aldehydes.

In case of the inhalation of fumes, the affected person should be taken to fresh air as soon as possible, kept warm and artificial respiration applied if necessary. Seek medical assistance promptly.

5.3 Advice for firefighters

Respiratory and eye protection required for fire fighting personnel.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

The film located on the floor can cause slipping and subsequent fall of personnel.

6.2 Environmental precautions

The product in normal condition does not cause danger for the environment and does not contain additives of heavy metals (cadmium – Cd, lead – Pb, mercury – Hg and chromium – Cr^{VI}).

6.3 Methods and material for containment and cleaning up

Standard cleaning procedures

6.4 Reference to other sections

They are not.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

The product does not require special safety requirements during handling and storage.

7.2 Conditions for safe storage, including any incompatibilities

In order to maintain film properties and to ensure a good processability. The film is wound up to a roll. The rolls should be stored in the original package and in dry place. Temperature exceeding 40°C should be avoided during storage. It is recommended that film is used one year of receipt. A longer storing time increases the risk of metallization problems.
The product should be kept away from direct sunlight and heat sources (steam lines or other). Do not store near open flame , sources of heat . Keep away from hazardous chemicals .

7.3 Specific end use (s)

Do not process near an open flame, sources of the heat , flammable/explosive environment .
Take preventive against electrostatic discharges - the film can accumulate electrostatic charge what could cause an electrical spark (ignition source).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Does not contain ingredients prescribed with a maximum exposure limits according Commission directive 2006/15/ES of 7. february 2006

8.2 Exposure controls

During normal handling are recommended the usual protective equipment.
skin - working clothes
feet - working boots resistant to slip

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

These are indicative values only. It must not be regarded as a specification of product.

Apperance:		solid (plastic film)
Form / color:		transparent
Odour:		none
pH – value:		n.a.
Melting / solidification point	(°C)	158 - 165
Boiling point	(°C)	n.a.

Flash point	(°C)	350 - 380
Speed of evaporation		n.a.
Ignitability		ignitable
Upper / lower explosive limits		n.a.
Vapor pressure		n.a.
Vapor density		n.a.
Relativ density (g.cm $^{-3}$) (20 °C)		900 – 910
Solubility in water (20 °C)		insoluble
Distributive coefficient n-octanol / water		n.a.
Self-ignition temperature	(°C)	370 – 390
Decomposition temperature	(°C)	> 400
Viscosity:		n.a.
Explosive properties		n.a.
Oxidizing properties		n.a.
Oxygen-index LOI	(%)	(17-19)

n.a. = non applicable

9.2 Other information

Not known.

10. STABILITY AND REACTIVITY

10.1 Reactivity

Not known.

10.2 Chemical stability

The product is stable in compliance with safety and storage conditions, see section 7.2

10.3 Possibility of hazardous reactions

Reaction with materials, see section 10.5

10.4 Conditions to avoid

Avoid high temperatures above 300 °C, strong oxidizing agents and static electricity.

10.5 Incompatible materials

Chlorine, fluorine and other oxidizing agents.

10.6 Hazardous decomposition products

During burning arise Carbon Dioxide (CO2), Carbon Monoxide (CO), Flammable Hydrocarbons and Fumes.

11. TOXICOLOGICAL INFORMATION

Non toxic, and according the current expertise is not classified as dangerous product for humans and has not adverse efect on human health. It does not have provable sensibile CMR effects.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Not known.

12.2 Persistence and degradability

The product has not harmful effects on the environment. For environment is a foreign substance with very slow decomposition. It is decomposed under the influence of UV radiation. It is insoluble in water.

12.3 Bioaccumulative potential

Not known.

12.4 Mobility in soil

Not known.

12.5 Results of PBT and vPvB assessment

Not known.

12.6 Other adverse effects

Not known.

13. DISPOSAL CONSIDERATION

13.1 Waste treatment methods

The waste codes of the components of this product are: 07 02 13
The user must be aware that the conditions of use may affect the waste classification after use. Empty packaging should be taken for recycling, recovery or disposal through a suitably qualified or licensed contractor.
15 01 01 paper
15 01 02 plast
15 01 03 wood
Care should in any case be taken to ensure compliance with EC, national and local regulations.

14. TRANSPORT INFORMATION

		ADR / RID	IMDG	AND / ADNR	ICAO-TI a IATA-DGR
14.1	UN number	This product is not classified according (ARD/RID, IMDG, ICAO-TI/ATA-DGR) regulations as dangerous.			
14.2	UN proper shipping name				
14.3	Transport hazard class (es)				
14.4	Packing group				
14.5	Environmental hazards				
14.6	Special precautions for user				
14.7	Transport in bulk according to Annex II. of MARPOL 73/78 and the IBC Code				

15. REGULATORY INFORMATION

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

- Regulation of the European Parliament and of the Council (EC) No 1907/2006 (REACH)
- Commission Regulation (EU) No 2015/830 of 28 May 2015 amending Regualtion (EC) No 1907/2006 of the European Parliament and of the Council on the (REACH)
- Regulation of the European Parliament and of the Council (EC) No 1272/2008 of 16 December 2008 on classification, labelling and pasking of substaces and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
- European Parliament and Council directive 94/62/EC of 20 December 1994 on packing and packing waste
- Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives
- Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste
- The law of the National Council Slovak Republic No 364/2004 on Waters (Water law)
- The law of the National Council Slovak Republic No 17/1992 on the Environment protection
- The law of the National Council Slovak Republic No 478/2002 on the Air protection
- The law of the National Council Slovak Republic No 67/2010 on the Conditions for placing chemical substances and mixtures on the market (Chemical law)

15.2 Chemical safety assessment

Not known.

16. OTHER INFORMATION' EN

We took maximal care to ensure that information in this document relating to the health, safety and the environment were accurate at the date of issue. This information correspond to the current state of knowledge and experience and do not guarantee specific properties of product. Data and information are valid if the product is used for the purpose for which it was sold. The user is required to use this product safely and to comply with all applicable laws and regulations. User is responsible for ensuring that by use of the product will respect safety precautions. Vendor assumes no responsibility for damage or injury, if the product will be use for other purposes than approved.
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