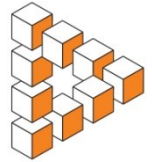


PRODUCT INFORMATION

PAD-FOL® Type 3 & Type 4 ClimaFilm-100® Blauer Engel

100% climate neutral and 100% made from recycled raw materials

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PRODUCT DESCRIPTION:

Our ClimaFilm-100 Blauer Engel is an advanced specialty film that is 100% carbon neutral and made from 100% recycled raw materials (82% of which is post consumer). It has been awarded the *Blauer Engel* label. It guarantees high standards for the protection of the environment and health.



They are designed for creating air-filled pads in conjunction with the APM system. The produced air pads are strong, long-lasting, reusable and environmentally friendly thanks to 100% recyclability.

TECHNICAL INFORMATION PAD-FOL® Type 3 & Type 4 ClimaFilm-100® Blauer Engel:

Parameter	Value		Unit	Test method
Film type	Typ 3 ClimaFilm-100	Typ 4 ClimaFilm-100	-	-
Film structure	PE	PE	-	-
Thickness	45 ± 5	35 ± 5	µm	DIN 53370 PA 40-300
Density	0,94	0,94	g/cm³	ISO 1183
Roll width	420	420	mm	-
Linear metre	1.000	1.200	m/roll	-
Plane-parallel chamber load (static ¹⁾)	60-80	50-70	kg	PA 50-100
Constant volume	4	4	week	PA 50-300
Visual appearance	translucent blue	translucent blue	-	-

All values subject to the typical tolerances according to GKV and DIN standards.

1) The specified values result from plane parallel measurements of individual pillows and can and may differ with pillow format.

APPLICATION:

Air pillow films are used to fill individual cavities in packing units or to directly protect goods from blunt forces. They keep the packed goods from sliding or sustaining damage during transport. The very concept of the Floeter air cushion systems set new standards for today's mail order business. The bulky padding material no longer has to be delivered to the packing site over longer distances. Instead, the padding can be produced as needed on site using the APM system.

SCOPE OF PROTECTION:

The air cushion principle offers optimal protection against breakage due to blunt forces arising during transport, handling and storage.

DELIVERY FORMAT:

Shipping unit pallet
28 Rolls on a Euro / one-way pallet

Subject to technical changes. The suitability of our products must be validated by the customer in consideration of the local circumstances. The product information provided here may not be construed as a guarantee or promised features; this information represents only recommendations that are based on our many years of experience and testing. Tolerances for dimensions and quantities according to GKV 2007

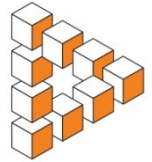
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Material safety data sheet

In adherence to Appendix II of the EU 1907/2006 Directive

Doc. no.: Product Information PAD-FOL® Type 3 & Type 4 ClimaFilm-100® Blauer Engel

1. Material / preparation and company identification

- 1.1 Commercial name: PAD-FOL® Typ 3 & Typ 4 ClimaFilm-100® Blauer Engel
1.2 Product information: co-extruded, PE regranulate in transparent blue
1.3 Product use: Protective transport packing
- 1.4 Supplier: FLÖTER Verpackungs-Service GmbH
Robert-Bosch-Str. 17
71701 Schwieberdingen, Germany
Tel. 07150 / 92396 – 0
Fax: 07150 / 92396 – 80
info@floeter.com
- 1.5 Emergency information: Tel.: +49 7150 / 92396 – 0 (Mon. – Fri. 8:00 to 17:00)
Tel.: +49 180 - 5304505 [24h] (Regional Emergency Service)

2. Possible hazards:

- 2.1 Classification of the material or mixture as per regulation (EU) No. 1272/2008: No hazardous material or hazardous mixture as per the (EU) Regulation no. 1272/2008
- 2.2 Label elements: (EU) Regulation no. 1272/2008 CLP:GHS: No hazardous material or hazardous mixture as per the (EU) Regulation no. 1272/2008
- 2.3 Other hazards:
- Explosion hazard: Only in dust state.
Heating: Ensure proper ventilation of the workplace if the product is heated, such as for heat sealing.
Overheating: Melted material can cause burns.
Fire hazard: No known hazards.
Very flammable. There is a danger of fire breaking out due to dripping, burning material.
Dust: Product dust is an explosion hazard.
Sparking: Electrostatic discharge hazard. The product can charge with static electricity, which could lead to ignitable electrical discharge. All product machines must be properly earthed.
Trip hazard: Film on the ground can present a risk of tripping.

3. Composition / information about components:

- 3.1 Chemical characterization: PE film made from 100% recycled material.
- 3.2 CAS number: Not defined.
- 3.3 EINECS number: All ingredients listed.
- 3.4 EC identification number: Not available.
- 3.5 Hazardous Ingredients: None.

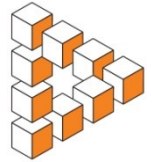
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4. First aid measures:

4.1 Description of first aid measures

General information:	If irritation or other symptoms occur, consult a physician and submit this safety data sheet
After inhaling:	Not applicable
After skin contact:	If melted polymers touch the skin, cool immediately with water to remove the material sticking to the skin, and seek a doctor's attention for burn treatment
After eye contact	Treat like any foreign body in the eye; thoroughly rinse with water
After swallowing:	No applicable information available; effects are not known; seek a physician if symptoms occur

4.2 The most important acute and delayed occurring symptoms and effects: None known

4.3 Notes about immediate physician's help or special treatment: None known

5. Measures for fire-fighting:

5.1 Extinguisher material

Suitable:	Water, dry extinguisher, foam
Unsuitable for safety reasons:	Carbon dioxide is not recommended due to its low cooling capabilities Reflammability hazard.

	Feste, glutbildende Stoffe, z.B. Holz, Textilien	Flüssige oder flüchtig werdende Stoffe, z.B. Benzin, Öle	Gasförmige, auch unter Druck stehende Stoffe z.B. Propan	Brennbare Metalle wie z.B. Aluminium, Magnesium	Speiseöle und -Fette (pflanzlich oder tierisch)
Brandklassen					
Pulverlöscher mit Glutbrandpulver	✓	✓	✓		
Pulverlöscher mit Metallbrandpulver				✓	
Schaumlöscher	✓	✓			
Wasserslöscher	✓				
Kohlendioxid-löscher		✓			
Fettbrandlöscher	✓	✓			✓

5.2 Special hazards from the material or mixture

Hazardous combustion products:	Upon combustion, formation of carbon dioxide/carbon monoxide. Depending upon conditions, substances such as tetrahydrofurane may also be formed.
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5.3 Notes on fire-fighting

Fire-fighting actions:	Block the hazardous area and keep non-participants away. Rinse the fire area, cool down and prevent re-ignition.
Special protective equipment for fire-fighting:	Fire department staff must wear suitable protective clothing; if there is a massive product release, use respiratory protection devices which do not use ambient air

6. Measures for unintended release:

6.1 Staff-related preventive measures, protective equipment, and procedures to use in emergencies:

One can trip on any material lying on the ground. Mechanically sweep up and put in suitable containers for disposal.

6.2 Environmental protection measures:

Disposal is done following local regulations plastics.

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6.3 Methods and materials for retention and cleaning: Gather material into suitable and properly labelled containers. See also Chapter 13, “Notes on Disposal” for further information.

6.4 References to other sections:

If necessary, reference is made to other sections in the prior subsections.

7. Handling and storage

7.1 Protective measures for safe handling:

Smoking, open flames or ignition sources in work areas and storage areas are to be avoided. Avoid dust build-up through mechanical processes.

Melted product may not go into the eyes, the skin or clothing. Inhaling vapours which could occur during processing must be avoided. See Section 8, “Limiting and monitoring exposure / personal protective equipment”

7.2 Conditions for safe storage with consideration of environmental compatibilities:

Storage temperature:	≤23°C
Transport temperature:	Ambient temperature
Loading and unloading temperature:	Ambient temperature
Storage and transport pressure:	Atmospheric
Relative humidity:	As dry as possible
Electrostatic discharge hazard:	Take measures against electrostatic discharge.
Usual shipping method:	On pallets in lorries
Safe storage:	Store on pallets in dry, enclosed rooms with a solid floor. Avoid direct sun radiation and heat.

7.3 Specific end uses

Environmental conditions can influence processing on machines. Avoid great temperature variations, avoid heat and cool-down.

8. Limiting and monitoring exposure / personal protective equipment

8.1 Parameters to be monitored:

No limit values established

8.2 Restriction and monitoring exposure

Technical control measures: General ventilation and exhaust should be sufficient for the planned processing.

Individual protective measures: If contact with hot material is possible, wear heat-resistant gloves, arm protection and face protection. If necessary, use measures for suction, among other things, or wear respiratory protection.

8.3 Restriction and monitoring environmental exposure

See Section 7, “Handling and storage” and Section 13 “Disposal instructions for measures to prevent excessive environmental exposure during use and waste disposal”

9. Physical and chemical properties:

9.1 Information about basic physical and chemical properties:

Appearance

- Aggregate status:	Solid materials
- Colour:	translucent blue
Smell:	Slightly characteristic smell during processing
Smell threshold:	none
pH:	Not applicable
Boiling point:	Decomposition temperature: >300°C
Melting point:	100 - 140 °C
Freezing point	Not applicable

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Flash point:	Not applicable
Vaporisation speed:	Not applicable
Flammability:	No
Explosion limits:	Not applicable
Vapour pressure:	negligible
Rel. vapour density:	Not applicable
Rel. density	0,94 g/cm ³
Water solubility	Practically insoluble
Partition coefficient:	No data available
Self-ignition temperature:	>350°C
Decomposition temperature:	No data available
Kinematic viscosity	Not applicable at room temperature
Explosive properties:	Explosive in the form of powder or dust in contact with open flames, sparks and electrostatic discharges. Electrical equipment and lights should be protected in accordance with applicable standards in the case of possible dust accumulations in order to prevent dust coming into contact with hot surfaces, sparks or other ignition sources.
Oxidising properties:	No

9.2 Other information

The physical data in Section 9 correspond to typical values for this product and should not be seen as a product specification.

10. Stability and reactivity

10.1 Reactivity	No data available
10.2 Chemical stability:	The product is stable No special information known under normal storage conditions and normal use.
10.3 Possible hazardous reactions:	No data available
10.4 Conditions to be avoided:	Direct sunlight, avoid extreme heat and humidity. Dangerous gases could be released upon heating.
10.5 Incompatible materials:	None known
10.6 Hazardous decomposition products:	Process vapors under recommended processing conditions may contain trace amounts of hydrocarbons, carbon oxides.

11. Toxicology information:

11.1 Information about toxic effects

Acute toxicity:	No relevant information available.
Skin irritation or destruction:	Not skin-irritating even after longer skin contact. Injuries only due to mechanical effects.
Severe eye injury or irritation:	Solids or dust can lead to injury to the cornea due to mechanical effects. Increased temperatures can lead to vapour concentrations which can result in eye irritation.
Sensitisation:	For sensitisation of the skin and respiratory tract: No relevant information available.
Systemic target organ toxicity (single exposure):	No relevant information available.
Systemic target organ toxicity (repeated exposure):	No relevant information available.
Carcinogenicity:	No relevant information available.
Teratogenicity:	No relevant information available.
Reproduction toxicity:	No relevant information available.
Mutagenicity:	No relevant information available.

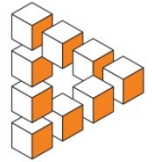
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Aspiration hazard: Does not present an aspiration hazard due to the physical properties and available information

12. Environmental information:

- 12.1 Toxicity: With intended handling, no acute toxicity expected.
- 12.2 Persistence/degradability: -
- 12.3 Bioaccumulation potential: -
- 12.4 Soil mobility: -
- 12.5 Results of the PBT and vPvB assessment: No data available
- 12.6 Other damaging effect: No relevant information available.

13. Information about disposal:

Recommended disposal: Household waste landfill, incineration, recycling

The disposal of uncontaminated material includes mechanical and chemical recycling or energy recovery. In some countries, disposal at a landfill is permitted. The same options exist for contaminated material, although an additional assessment is required. For all countries, the disposal methods must comply with national and local laws and regulations.

The definitive assignment of this material to the corresponding European waste group and therefore to the appropriate European waste code depends on the end use of this material. Contact the authorized waste disposal company.

14. Information about transport:

Not a hazardous good and no special classification for land transport (ADR/RID), for ocean-going ship transport (IMO - IMDG code) or for air transport (IATA-DGR)

15. Legal provisions:

The product is not a hazardous material in the sense of the Chemicals Law or Hazardous Materials Regulation in the current valid versions.

16. Other information:

Subject to technical changes without notice. The use of our products in the local conditions must be validated by the customer. The information provided in the product information is not to be regarded as a guarantee or assured property, but only to give recommendations based on our many years of experience and testing. Climactic effects, contamination and environmental influences can sometimes have a significant influence on material properties. Tolerances in terms of size and quantity in accordance with GKV 2007

The information is based on the current state of knowledge and experience. The safety data sheet describes the product in regard to safety requirements. The information does not have the meaning of characteristics assurance.

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