

Polyethylene
Borstar® FB2230

Product Name (Description)	MDPE PACKAGING Transparent Width (60 cm-146 cm) Thickness (75 µm)
Compound	% 100 Virgin MDPE (Borealis grade)
Biological Specs	E.Koli Mustn't be exist (kob/g) Analyse Method: ISO 18593 S.Aureus < 25 pcs kob/g Analyse Method: ISO 18593 / BAM
Raw Material Specification	Melting Point (DSC)* (ASTM E-794): 110 °C Relentness Point* (ASTM D-1525): 92-98 °C Elongation At Break* (ASTM D-638): 600-640 % Tensile Strength At Yield* * (ASTM D-638): 85-95 kg/cm ² Tensile Strength At Break* (ASTM D-638): 140-190 kg/cm ² Density, 23 °C* (ASTM D-1505): 0.910-0.923) gr/cm ³
Compatibility with Sterilization Methods*	Autoclave: Poor Dry Heat: Poor Ethylene Oxyde (EtO): Good Gamma Irradiation: Good Electron Beam: Good
Chemical Properties	Overall Migration (Referans Method TS EN 1186/1-15) Fatty Food , Food Simulant D1 and D2, Aqueous Food , Food Simulant A, Asidic Food , Food Simulant B. Requirement: 10 mg/dm² IR Spectrum: (Method FT-IR) Analysis Result: Polyethylene (PE)
Shelf Life	2 years
Storage Conditions	It should be stored in a place moisture-free, odor and no sunlight, dry and stored in a cool place.
Packaging	In PE bags or corrugated boxes.
Distribution and Transport Conditions	1. It is carried by clean and odorless trucks. 2. Keep away from direct sunshine. 3. Store it in a dry place. 4. Do not stow. 5. Warehouse's heat should be min: 4 °C / max: 40 °C.
Warnings On Stickers	Store in a dry place
Usage	It's for food, pharmaceutical, textile, automotive and cosmetic sectors. Usage heats are between -4 °C +60 °C
Allergens	No
Consumer Groups	General

*External Source Measurements

Prepered By:
Dipl. Chem Eng. Nigar SEN, PhD
FRKK05 Rev:00

Cerkezkoy Organize Sanayi Bolgesi G.O.Pasa Mah. 3. Cad. No.3 Cerkezkoy 59500 Tekirdag/TURKEY
Tel: +90 212 656 16 82 Fax: +90 212 656 16 93

Animal based materials and BSE/TSE

We certify that manufacturing this product, we do not use or intentionally add into it any additives of animal origin. We therefore state that our product is to be considered safe with respect to BSE and TSE transmissions.

Genetically modified organisms (GMO)

We certify that manufacturing this product, we do not use or intentionally add into it any additives derived from genetically modified organisms.

Halal certification

This product does not have an official Halal certification.

We certify that manufacturing this product, we do not use or intentionally add into it any additives of animal origin or drinkable alcohol (ethanol).

Kosher certification

This product does not have an official Kosher certification.

We certify that manufacturing this product, we do not use or intentionally add into it any additives of animal origin, dairy products, marine products or their derivatives.

Palm oil, palm kernel oil and their derivatives

We state that manufacturing this product, we incorporate small amounts additives derived from fatty acids that can be of palm oil or palm kernel oil origin.

All such additives in this product are RSPO certified.

Prepared by Borealis, Group Product Stewardship / Aino Haritonova

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.

Borstar is a registered trademark of the Borealis group.

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FN 265856a | DCC Commercial Court of Vienna | Website www.borealisgroup.com

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We confirm that this product fulfills the applicable requirements on substances used for the manufacturing of materials and articles or components of articles intended to come into contact with food as described in the below cited legislation and standards.

EU

The below listed regulations represent harmonised EU legislation and are directly applicable in all EU-member states. National legislation implementing such regulations is therefore not separately cited in this document.

We would like to stress that this product is a **Plastic Intermediate Material** as defined in chapter 4.3.1. of *Union Guidance on Regulation (EU) No 10/2011 on plastic materials and articles intended to come into contact with food as regards information in the supply chain, from 28.11.2013*. Therefore this confirmation is restricted to the requirements as applicable for **Plastic Intermediate Materials** used for the manufacturing of materials and articles or components of articles intended to come into contact with food.

- Commission Regulation (EC) No 1935/2004. The organoleptic characteristics of food contact materials are influenced by converting conditions, time and temperature of storage and type of food, therefore compliance with article 3 §1.c must be verified and tested by the producer of the final packaging material.
- Commission Regulation (EU) No. 10/2011 as amended. All used monomers and additives are listed in Annex I of this regulation. For any relevant restriction as set by the Annexes I and/or II see chapter "migration testing".
- Commission Regulation (EC) No. 2023/2006. This material has been manufactured in accordance with the relevant requirements of good manufacturing practice for materials articles intended to come into contact with food, as described in more detail in the "Quality information document" on Borealis' homepage.
- Commission Regulation (EC) No. 1895/2005 - BADGE, NOGE and BFDGE are not used for the production of this grade.
- Commission regulation (EC) No. 450/2009 on active and intelligent materials and articles is not applicable to Borealis' polymer resins.

Additional national legislation in EU-member states (as amended to date)

Polymerisation production aids, aids to polymerisation, colorants and solvents, if not already listed in Annex I of Regulation (EU) No. 10/2011 can be used based on their national approval and are subject to mutual recognition. The process chemicals used for the manufacturing of this grade are permitted by at least one of the following national regulations/recommendations, or are to be deemed safe based on a risk assessment conducted in accordance with article 19 of Regulation (EU) No. 10/2011.

France	Décret No. 2007-766 du 10 mai 2007 portant application du code de la consommation en ce qui concerne les matériaux et les objets destinés à entrer en contact avec les denrées alimentaires, as amended and the French DGCCRF guidelines on food contact plastics.
Germany	BfR-Empfehlung III Polyethylen, Stand 01.04.2021
The Netherlands	Verpakkingen- en Gebruiksartikelenbesluit, 2014 (Warenwet), Deel A, Hoofdstuk 1, Kunststoffen, as amended (last update from 01.07.2022)

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Europe (Non-EU-countries)

Norway	Sosial- og helsedepartementets forskrift 1993-12-21-1381 - as amended (referring to Regulation EU No. 10/2011)
Switzerland	Verordnung der EDI über Bedarfsgegenstände vom 16.12.2016 (817.023.21); Stand 15.10.2022, 5. Abschnitt: Bedarfsgegenstände aus Kunststoff
Türkiye	Notification No. 2019/44 from 25.12.2019 - referring to Regulation EU No. 10/2011
United Kingdom	The Materials and Articles in Contact with Food SI 2019 No. 704 - (England) (Amendment) (EU Exit) Regulations 2019 SI 2018 No. 186 - (Northern Ireland) (Amendment) Regulations 2018 SI 2019 No. 32 - (Scotland) (Amendment) Regulations 2019 SI 2018 No. 913 - (Wales) (Amendment) Regulations 2018 (referring to EU legislation)

World

Brazil	ANVISA RDC n° 56 /2012 as amended - lista positiva de monómeros (Brazilian implementation of Mercosur RES 02/12 and amendments) ANVISA RDC n° 326/2019 - Lista Positiva de Aditivos (Brazilian implementation of Mercosur RES 39/19)
China	GB9685-2016 - National standard on the use of additives in food containers and packaging materials, Appendix A - Table A1 GB 4806.1-2016 - National standard on general safety requirements for materials and articles in food contact - so far applicable to polymer resins. GB 31603-2015 General Hygienic Standard for Production of Food Contact Materials and Articles - This material has been manufactured in accordance with the relevant requirements of good manufacturing practice for materials articles intended to come into contact with food, as described in more detail in the "Quality information document" on Borealis homepage. GB 4806.6-2016 - National standard on plastic resins for food contact use - Appendix A - 101 Ethylene-copolymer - no co-monomers with SML used
Japan	Notification No. 196 of 2020 as published on April 28, 2020 by MHLW (Japan Ministry of Health, Labour and Welfare) - and subsequent amendments Appendix 1, Table 1 - Polymer group 2b - polymer composed of alkenes as the main monomer; all food types; max. temp.: III (> 100°C) Appendix 1, Table 2 Additives
Mercosur	All used additives are listed and below the permitted concentration limits MERCOSUR/GMC/RES. N° 02/12 as amended - Lista positiva de monómeros
USA	MERCOSUR/GMC/RES. N° 39/19 - Lista positiva de aditivos FDA, CFR, Title 21, 177.1520 (a)(3)(i)(c)(1), (b) and (c)3.2a Olefin polymers

Limits of use (FDA)

Test samples made from this product fulfilled the extraction requirements according to FDA CFR 21 §177.1520(c), as defined for the type of polymer described above. Therefore this product may be used in contact with all food types as described in table 1 of CFR 21 §176.170(c), under conditions of use A through H as described in table 2 of CFR 21 §176.170(c) (including articles used for packing or holding food during cooking). **It is the responsibility of the converter or food packer to control that the final packaging complies with the requirements of the intended and foreseeable conditions of use.**

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Migration testing

Migration limits

The product contains traces of Aluminium, which is regulated with a specific migration limit in EU (Commission Regulation 10/2011; Article 6.3.a and Annex II), Mercosur (Res. 39/2019 Anexo 4.3.b and Res. 02/2012 chapter 4b) and Switzerland (Bedarfsgegenstandeverordnung 817.023.21, Anhang 2.3.1); (1 mg/kg expressed as Al). Representative worst case tests (3% acetic acid; 4h/100°C; S/N-ratio 6) did not show any migration above 0.04 mg/kg (limit of detection).

Other used monomers and additives are not regulated with specific migration limits.

Substances also authorised as direct food additives ("Dual use additives") are either not used for the manufacturing of this product, kind of not migrating, or only present in quantities that in case of their migration don't allow relevant contribution to exceed of the limits as set in the applicable food legislation.

Migration testing

In accordance with article 12 of Commission Regulation (EU) 10/2011, article 12 of Swiss ordinance 817.023.21, article 2.12 of Chinese standard GB4806.1 and Mercosur GMC Res No. 56/92 as amended by Res 20/2021, the overall migration shall not exceed 10 mg/dm³ from plastic materials and articles, with the exception for plastic materials and articles intended to contact infant or child food (60mg/kg).

A representative sample from this or a comparable material, tested for 2d at 20°C in isooctane (1 mm plate / total immersion) did not exceed the limit of 10 mg/dm³ for overall migration. This test result is only valid for orientation purposes but must not be used to confirm legal compliance of the finished article.

Compliance with the overall and specific migration limits as described above must be measured from the final packaging intended to come into contact with foodstuff by using real food or appropriate food simulants at the intended and foreseeable conditions of use as specified in Annex III of Commission Regulation (EU) 10/2011; Annex 4 of Swiss Ordinance 817.023.21; Chinese standard GB31604.8-2021; Mercosur GMC Res No. 32/2010. It is the responsibility of the converter or food packer to verify that the final packaging complies with the overall and specific migration limits as set out by the applicable legislation.

Non-intentionally added substances - NIAS

Commission Regulation (EU) 10/2011 notes that not all contaminants and reaction products of authorised monomers and additives can be listed in its Annex I. The identification of non-listed migrants may therefore not be an exclusion criterion in itself. However, a toxicological evaluation of these migrants needs to be performed.

The major fractions of NIAS in Polyolefins are the oligomers, which are unavoidably formed during polymerisation and cannot be removed. A recent joint study of polyolefin producers demonstrated that oligomers migrating from all types of polyolefins only consist of linear and branched alkanes (POSH) and alkenes (POMH), no cyclic or aromatic compounds were found. The toxicological assessment of such migrants concluded that they are sufficiently characterised by the existing overall migration limit.

Further a variety of representative Borealis products, covering the whole Borealis product spectrum, was assessed in relation to migrating NIAS by renowned test institutes. Beside oligomers the typical NIAS are reaction- and decomposition products from antioxidants, many of them known as "Arvin-substances". Another joint industry study confirmed that none of these Arvin-substances are genotoxic and can therefore be rated at least as "Cramer-class III", allowing a daily consumption of 90 µg/person/day.

However, we wish to stress that a NIAS-assessment is subject to the finished food contact article and the formation of NIAS is influenced by thermal and mechanical treatment during conversion, mixture with other substances and the applied test conditions. A raw material screening therefore can never monitor all potential criteria.

Annex IV of Commission Regulation (EU) 10/2011 (Declaration of compliance), as revised by Commission Regulation (EU) 2020/1245, requires to inform the downstream user about substances in the intermediate material, for which genotoxicity has not been ruled out, and which originate from an intentional use during a manufacturing stage of that intermediate material and which could be present in an amount that foreseeably gives rise to a migration from the final material exceeding 0.00015 mg/kg food or food simulant. To our present day knowledge, this product does not contain any intentionally added or known non-intentionally added substances for which genotoxicity has not been ruled out.

Prepared by Borealis, Group Product Stewardship / Jürgen Emig

Disclaimer

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication.

The legislation cited above applies to the final packaging which is intended to come or is brought into contact with foodstuff. This statement however is restricted to the Borealis product as it leaves production. It is the customers responsibility to verify compliance with applicable legislation of the final packaging under actual and foreseeable conditions of use.

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.

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.

We confirm that during manufacturing of this product we do not use or intentionally add any of the chemicals restricted by the following regulations and standards and their subsequent amendments in amounts which exceed the applicable limits.

- **Annex XVII** of the REACH Regulation **1907/2006/EC** - Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles
- **Annex XIV** of the REACH Regulation **1907/2006/EC** - List of substances subject to authorisation
- **US TPCB Model Toxics in Packaging Legislation**, February 2021
- Directive **94/62/EC** (Packaging and packaging waste - PPW) and related **EN13428** and **CR13695**
 - Sum of Cd, Cr(VI), Hg and Pb < 100 ppm
- Directive **2000/53/EC** (End of life vehicles - ELV) - Cr(VI), Hg and Pb < 0.1 wt%, Cd < 0.01 wt%
- Directive **2011/65/EU** (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment - RoHS) and all other RoHS legislations worldwide that restrict some or all of the following substances - Pb, Hg, Cr(VI), PBB, PBDE, DEHP, BBP, DBP, DIBP < 0.1 wt%, Cd < 0.01 wt%
- Directive **2012/19/EU** (Waste Electrical & Electronic Equipment - WEEE) - Annex VII - No ingredients used which require selective waste treatment
- **Proposition 65** list of chemicals known to the State of California to cause cancer or reproductive toxicity - no warning labels are required for this product
- Regulation **1005/2009/EC** (Substances that deplete the ozone layer)
- **US Clean Air Act**, Title VI, Classes I and II (EPA Final Rule; Federal Register 8136, 11.2.1993) on substances that deplete the ozone layer
- Regulation (EU) **2019/1021** on persistent organic pollutants (POPs)
 - Food allergens as listed in
 - Annex II of Regulation (EU) 1169/2011
 - US FALCPA of 2004 and FASTER Act of 2021
 - Brazilian Resolution RDC no. 272 of July 2022
- Global Automotive Declarable Substance List (**GADSL**)
 - No use of prohibited or declarable substances above threshold limits
- Swiss **SR 814.018** (Verordnung über die Lenkungsabgabe auf flüchtigen organischen Verbindungen - VOCV) - VOC's according to Annexes 1 & 2 < 3 wt%
- Regulation **1223/2009/EC** (cosmetic products) - prohibited and restricted substances
- Directive **2009/48/EC** (safety of toys)
- European Standard **EN 71-3:2019+A1:2021** "Safety of Toys", Part 3: "Migration of certain elements" - Migration below limits for toy material category III in Table 2.
- Japanese **CSCL**, Class I or II Specified Chemical Substances

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Regarding classification of the above product according to REGULATION (EC) No 1272/2008 and its subsequent amendments, reference is made in the SDS/PSIS for the above product.

We also confirm that during the manufacturing of the above product we do not use or intentionally incorporate into it any of the following materials:

Acrylamide
Aromatic Amines (restricted in Regulation 1907/2006/EC, Annex XVII)
Artificial Musk
Asbestos
Azocolorants (restricted in Regulation 1907/2006/EC, Annex XVII)
Azodicarbonamide, semicarbazide
Benzophenones (e.g. 4-MBP, 4-HBP, 2,2'-Dimethoxy-2-phenylacetophenone)
BHA or BHT
Biocides (Pest-, Herb-, Insect-, Fungi-, Bactericides)
Bisphenols and their compounds (e.g. NOGE, BFDGE, BADGE)
CFC, HCFC
CMR substances Categories 1A, 1B according to Regulation 1272/2008/EC
Colophony (rosin)
4,4'-Diaminodiphenylmethane (MDA)
Di-2-ethyl-hexyl maleate (DIEHM)
Dimethylfumarate (DMF), Dibutylfumarate
1,4-Dioxane
Elements: Antimony, Arsenic, Beryllium, Bismuth, Cobalt, Gold, Indium, Lanthanides, Nickel, Palladium, Selenium, Silver, Tellurium, Thorium, Tin, Tantalum, Tungsten
Heavy metals: Cadmium, Chromium (VI), Lead, Mercury
Endocrine disruptors: Category 1 substances in the European Commission EDS database or substances identified as ED at EU level
2-Ethylhexanoic acid, Ethoxyquin, ITX, Thiurams
Flame retardants (halogenated or phosphorus based)
Formaldehyde
Fragrances
Furfural
Glycol ethers (e.g. EGME, EGMEA, EGEE, EGEEA)
Glyoxal

*) Quaternary ammonium compounds and nitrites may be found in used process chemicals resulting in traces of these substances in the product at concentrations below 1 ppm.

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The ingredients of the above product, and if applicable the basic polymer(s), are either listed or exempted in the following chemical inventories:

Australia/AIICS
Canada/DSL
China/IECSC
Europe/EINECS or ELINCS or NLP
Japan/ENCS and ISHL
Korea/KECL
New Zealand/NZIoC
Philippines/PICCS
Taiwan/TCSI
USA/TSCA (all relevant ingredients designated as active)

Prepared by Borealis, Group Product Stewardship

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UYGUNLUK DEKLARASYONU DECLARATION OF CONFORMITY

Üretici
Manufacturer
Address
Address

Ürünler
Products

EU Directive

AT Direktifi

Yerel Mevzuat
Local Legislation

Beyan
Declaration

Kapsam dışı
Exclusions

Date: 24.11.2022

Dipl.Chem.Eng. Nigar SEN, PhD

VETAŞ PLASTİK VE AMBALAJ SANAYİ A.Ş.

ÇERKEZKÖY ÖSB G. O. PAŞA MAH. 3. CAD. NO:3
ÇERKEZKÖY/TEKİRDAĞ TÜRKİYE

LDPE, MDPE, HDPE, PP, OPP, CPP materyallerden:
Baskılı Baskısız, Şeffaf - Renkli, Tek Katlı ve Çok katlı Plastik Film/Ambalaj Malzemeleri
Production of Flexible Packaging made of LDPE, LLDPE, MDPE, HDPE, PP, OPP and CPP - Printed and Unprinted, Transparent and Colored, Mono and Multi Layered Plastik Film/Packaging

Commission Regulation (EU) 2020/1245 amending Regulation (EU) No 10/2011 on plastic materials and articles intended to come into contact with food.
Directive 94/62/EC on Packaging and packaging waste (amended Directive 2004/12/EC)

Commission Framework Regulation (EU) No. 1935/2004/EC;
Commission Regulation EC No. 2023/2006 on Good Manufacturing Practice for Materials and Articles intended to come into contact with Food.

Türk Gıda Kodeksi Yönetmeliği
Türk Gıda Kodeksi Gıda İle Temas Eden Plastik Madde ve Malzemeler Tebliği (2019/44);
Turkish Food Codex Contact Matter and Material Communiqué (2019/44)

Tarafımızdan yayınlanan ve yukarıdaki listelenen tüm ürünlerimizin uygulanabilir standartlarına uygun olduğunu ve AT direktifi ve yerel mevzuat şartlarını karşıladığımız beyan ederiz. We declare that all our products mentioned above and listed on the EC Certificate published by us, conforms the applicable standards and meet the requirements of EU Directive and local legislation.

Bu uygunluk deklarasyonu ürünlerin pazara arz edildiği tüm ülkelerde, o ülkenin dilinde hazırlanmış kullanım kılavuz ve Etiketleriyle ve yetkili distribütörünün sorumluluğuyla geçerlidir.

This declaration of conformity is valid with labels and IFUs prepared in the local language where the products have been marketed under the responsibility of the authorised distributor.

ÇÖSB G.O.Paşa Mah. 3. Cad.No:3 Çerkezköy -TEKİRDAĞ Tel : +90 444 34 59 Faks : +90 212 656 16 93
www.vetastplastik.com





T.C. TARIM VE ORMAN BAKANLIĞI
T.C. MINISTRY OF AGRICULTURE and FORESTRY

İNTERTEK TEST HİZMETLERİ A.Ş.
İSTANBUL ÖZEL GIDA KONTROL LABORATUVARI
İNTERTEK İSTANBUL PRIVATE FOOD CONTROL
LABORATORY

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MUAYENE VE ANALİZ RAPORU
EXAMINATION and ANALYSIS REPORT

Rapor No / Report No: FS10165672		Yayımlandığı Tarih / Date: 09/03/2022	
Analiz Amacı / Purpose of Analysis: Özel İstek / Private Demand			
Müşteri Bilgileri / Customer Information			
Müşteri Adı / Customer Name: Mıng Plastik ve Ambalaj San. A.Ş.		Adres / Address: Çarşıoğlu O.S.B., G.D. Paşa Mr. 3. Cd. No:3, Çarşıoğlu, Tekirdağ, TÜRKİYE.	
Numune Bilgileri / Sample Information			
Adı / Name: HDPE Şeffaf Torba - HDPE Transparent Bag	Numunenin Fotoğrafı / Sample Photo		
Üretici Adı / Producer Name: Viteg Plastik ve Ambalaj San. A.Ş.			
Tarihi ve Seri - Part No / Description and Batch Number			
Üretileceği ve Son Kullanma Tarihi / Production & Expiry Date			
Ambalaj ve Miktar / Package and Quantity: 2x şeffaf poşet / transparent bag			
İlgili Kişi / Contact Person: Nilgün Şen (nilgun@vitegplastik.com)			
Numune kabul tarihi / Sample received / transport by: 10/02/2022 kargo / parcel service			
Numune alınacaklığı / Sample temp when received			
Numuneyi teslim alan ve mühür / Submitted by & Seal: Müşteri Mühürü / Client Name/			
Tahdit No / Quotation No: 79493			
Analiz başlama ve bitiş zamanı / Start / End of analysis: 10.02.2022 / 09.03.2022			
Açıklamalar / Remarks			

Özelliklerin Kabul ve Sorumluluğu / Supervisor of Sample Receiving and Receiving Section
Ezgi Paşalıoğlu / Supervisor of Food Contact Material Analysis Section
Melik Hıranço / Supervisor of Micro Analysis Section

09/03/2022
Tasdik Olunur / Approved by
Laboratuvar Müdürü / Laboratory Manager
Çiğdem Kalın Vatansever



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İNTERTEK TEST HİZMETLERİ A.Ş.
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Sayfa / Toplam Sayfa: 1/1
Page / Total Pages



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T.C. MINISTRY OF AGRICULTURE and FORESTRY

İNTERTEK TEST HİZMETLERİ A.Ş.
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İNTERTEK İSTANBUL PRIVATE FOOD CONTROL
LABORATORY

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MUAYENE VE ANALİZ RAPORU
EXAMINATION and ANALYSIS REPORT

Rapor No / Report No: FS10165672		Yayımlandığı Tarih / Date: 09/03/2022						
Analizler / Analyses								
No	Analiz Adı / Analysis Name	Sonuç / Results	Ölçüm Limiti / LOQ	Genel Kazanım / Recovery	Ölçüm Belirsizliği / Uncertainty	Metot / Method	Limit / Requirement	Değerlendirme / Interpretation
1	Toplam Migrasyon (Su/Gıda, Gıda Benzeri A, %10 Etanol) Dağılımı / Immersion 40°C, 10 gün / 40°C, 10 d.* (Determination of Overall Migration (Aqueous Food/Food Simulant A, Ethanol (10%)))	Tepept Edilmedi / Not Detected mg/dm ²	2 mg/dm ²	-	-	TS EN 1186-3	<= 10 mg/dm ²	Uygun / Pass
2	Toplam Migrasyon (Asitli Gıda, Gıda Benzeri B, %3 Asetik Asit) Dağılımı / Immersion 40°C, 10 gün / 40°C, 10 d.* (Determination of Overall Migration (Acidic Food, Food Simulant B, 3% Acetic Acid))	Tepept Edilmedi / Not Detected mg/dm ²	2 mg/dm ²	-	-	TS EN 1186-3	<= 10 mg/dm ²	Uygun / Pass
3	Toplam Migrasyon (Yağlı Gıda, Gıda Benzeri D2, Etanol Yağı) Dağılımı / Immersion 40°C, 10 gün / 40°C, 10 d.* (Determination of Overall Migration (Fatty Food, Simulant for Simulant D2, Vegetable Oil))	Tepept Edilmedi / Not Detected mg/dm ²	1 mg/dm ²	-	-	TS EN 1186-1, TS EN 1186-2	<= 10 mg/dm ²	Uygun / Pass

Özelliklerin Kabul ve Sorumluluğu / Supervisor of Sample Receiving and Receiving Section
Ezgi Paşalıoğlu / Supervisor of Food Contact Material Analysis Section
Melik Hıranço / Supervisor of Micro Analysis Section

09/03/2022
Tasdik Olunur / Approved by
Laboratuvar Müdürü / Laboratory Manager
Çiğdem Kalın Vatansever



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Sayfa / Toplam Sayfa: 1/1
Page / Total Pages



T.C. TARIM VE ORMAN BAKANLIĞI
T.C. MINISTRY OF AGRICULTURE and FORESTRY

İNTERTEK TEST HİZMETLERİ A.Ş.
İSTANBUL ÖZEL GIDA KONTROL LABORATUVARI
İNTERTEK İSTANBUL PRIVATE FOOD CONTROL
LABORATORY

intertek
Total Quality. Assured.

MUAYENE VE ANALİZ RAPORU
EXAMINATION and ANALYSIS REPORT

Rapor No / Report No: FS10165672		Yayımlandığı Tarih / Date: 09/03/2022						
Analizler / Analyses								
No	Analiz Adı / Analysis Name	Sonuç / Results	Ölçüm Limiti / LOQ	Genel Kazanım / Recovery	Ölçüm Belirsizliği / Uncertainty	Metot / Method	Limit / Requirement	Değerlendirme / Interpretation
4	Toplam Migrasyon (Yağlı Gıda, Gıda Benzeri D2, %50 Etanol) Dağılımı / Immersion 40°C, 10 gün / 40°C, 10 d.* (Determination of Overall Migration (Fatty Food, Food Simulant D2, Ethanol (50%)))	2,9 mg/dm ²	2 mg/dm ²	-	-	TS EN 1186-3	<= 10 mg/dm ²	Uygun / Pass
5	Primer Aromatik Aminlerin Spesifik Migrasyonları Toplamı / Specific Migration of Primary Aromatic Amines Sum of Specific Migration of Primary Aromatic Amines	Tepept Edilmedi / Not Detected mg/kg	0,007 mg/kg	%76	-	EN 13330-1 BUR 24815 EN 2011	<= 0,01 mg/kg	Uygun / Pass
6	Bakır (Cu) Migrasyonu / %3 Asetik Asit, 40°C, 10 gün / 3% Acetic Acid, 40°C, 10 days.* Migration of Copper (Cu)	Tepept Edilmedi / Not Detected mg/kg	0,007 mg/kg	-	-	TS EN 13330-1 BUR 17294-1B2	<= 5 mg/kg	Uygun / Pass

Özelliklerin Kabul ve Sorumluluğu / Supervisor of Sample Receiving and Receiving Section
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Page / Total Pages



T.C.
GAZİANTEP VALİLİĞİ
İL GIDA, TARIM VE HAYVANCILIK MÜDÜRLÜĞÜ
İŞLETME KAYIT BELGESİ

Kayıt No : TR-27-K-006049
İşletmecinin Adı-Soyadı / Tüzel Kişiliğın Adı : Ritaş Kimya ve Tekstil San. Tic. A.Ş.
İşletmenin Ticaret Unvanı : Ritaş Kimya ve Tekstil San. Tic. A.Ş.
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İşletmenin Adresi : 2. Organize Sanayi Bölgesi Celal Doğan Bulvarı
11 Nolu Cad. No:10
Şehitkamil - Gaziantep / Türkiye
İşletmenin Faaliyet Konusu : Plastik esaslı madde ve malzeme üretimi

Belgenin İlk Veriliş Tarihi : 09/01/2014

Belgenin Değişiklik Tarihi :

İş bu belge, 5996 sayılı Kanunun 30 uncu maddesine dayanılarak düzenlenmiştir.


İbrahim YILMAZ
İl Müdürü

RI TAŞ

KİMYA ve TEKSTİL SAN.TİC.AŞ.



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06.02.2024

MALZEME GÜVENLİK BİLGİ FORMU

KISIM 1 : ÜRÜN/FİRMA KİMLİĞİ

1.1. ÜRÜN ADI :

Polipropilen ve Polietilen Kumaş

1.2. FİRMA KİMLİĞİ

RI TAŞ KİMYA TEKSTİL SAN. TİC. A.Ş.

KISIM 2 : KİMYASAL VE FİZİKSEL BİLEŞENLER

2.1. KİMYASAL BİRLEŞİM:

Polipropilen

Antisiplit

UV

Yumuşatıcı

Polietilen

2.2. FİZİKSEL ANALİZ:

Katı ve kokusuz

3.3. GÖZ TEMASI: Tozu gözde tahriş veya göz yüzeyinde aşınmaya sebep olabilir.

KISIM 4 : İLK YARDIM

GENEL BİLGİLER : Aşağıda listelenen önlemler kritik durumlar için geçerlidir.

4.1. DERİ: Sabun ve soğuk su ile yıkayın.

4.2. GÖZ: Temiz suyla gözlerinizi yıkayınız , sonra doktora başvurunuz.

4.3. SOLUNUM: Temiz havaya çıkarın ve oksürük ve diğer şikâyetler devam ederse tıbbi yardım alın.

KISIM 5 : YANGIN TALİMATI

5.1. PARLAMA NOKTASI: > 450°C

5.2. HAVA İLE YANMA LİMİTLERİ: Bilinmiyor.

5.3. UYGUN SÖNDÜRÜCÜ MALZEMELER: Su, CO₂, Kuru Kimyasallar

5.4. UYGUN OLMAYAN SÖNDÜRÜCÜ MALZEMELER: Su jeti

5.5. ÜRÜNÜN YANMASINDAN OLUŞAN GAZLARDAN KAYNAKLANAN ÖZEL TEHLİKELER : Yangın durumunda bu gazlar açığa çıkabilir; Karbondioksit (CO₂), Karbonmonoksit (CO) Ürünlerin alev alması tehlikelidir. Yapımında kullanılan hidrokarbon ve aldehitler bir yangının ilk aşamalarının oluşumunu mümkün kılar.(Özellikle 400°C -700° C arasında)

5.6. EK BİLGİLER : Nefes alma aparatları giyinin. Sıcaklık değeri : 8.000-11.000 Kcal

KISIM 6 : KAZA YOLU İLE SALINIMLARI

6.1. SUDA ÇÖZÜNDÜĞÜNDE ZEHİRLİLİK: Bilinmiyor.

6.2. KENDİSİ VE TOZLARINI TEMİZLEME ADIMLARI: Atık kutusuna süpürülecek ve vakumlanacak .

6.3. KİMYASAL YOK ETME: Uygun değil.

KISIM 7 : SAKLAMA&YÜKLEME&BOŞALTIMA

7.1. ÖN UYARI: Özel bir yükleme/boşaltma metodu yoktur.

7.2. SAKLAMA KOŞULLARI: Yanıcı ve uygun olmayan malzemelerle beraber saklanmamalıdır. Depolama alanı doğrudan güneş ışığını almamalıdır. Kuru ve 50C'nin altında ortamlarda saklanmalıdır.

KISIM 8 : IŞIK KONTROL-KİŞİSEL KORUMA

8.1. VANTİLATÖR GEREKLİLİĞİ: Sadece pp tozu için.

8.2. GENEL KORUMA VE HİJYENİK ÖNLEMLER: Çalışırken bir şey yiyip içmeyiniz. Sigara içmeyiniz.

8.3. KORUYUCU EKİPMAN: PP Tozlarının yoğun olduğu ortamda onaylanmış hijyenik bir endüstriyel maske kullanılmalı.

8.4. GÖZ KORUNMASI : Gözle temasın olabileceği ortamlarda, uygun bir formda gözlük veya yüz camı kullanılmalıdır.

8.5. DERİ KORUNMASI: Gerekli değil.

8.6. EKSTRA EKİPMAN: Gerekli değil.

8.7. VÜCUT KORUNMASI : Normal tulum , güvenli ve kaymaz botlar ya da ayakkabılar.

KISIM 9 : FİZİKSEL VE KİMYASAL ÖZELLİKLER

9.1. FİZİKSEL DURUMU: Beyaz Katı

9.2. KAYNAMA DERESESİ: Tanımsız

9.3. ÖZGÜL AĞIRLIĞI: 0.89-0.93gr/m³,

9.4. KUMAŞ AĞIRLIĞI: Değişkendir.

9.5. SU İÇİNDE ÇÖZÜNME: İhmal edilebilir.

9.6. ERİME NOKTASI: 145-165°C

9.7. UÇUCU MADDELER: <92

9.8. PATLAMA TEHLİKESİ: Ürün patlayıcı değildir.

9.9. SUDA ÇÖZÜNÜRLÜK: Suda çözünmez.

9.10. BUHAR YOĞUNLUĞU: Tanımsız

KISIM 10 : STABİLİTE VE REAKSİYONA GİRME KABİLİYETİ

10.1. KAÇINILMASI GEREKEN TERMAL AYRIŞMA KOŞULLARI: Ürün normal depolama ve kullanma koşullarında sağlamdır.

10.2. UYGUNSUZLUK DURUMLARI: Sitrik asit ve türevlerinin içinde çürümeye eğilimlidir.

10.3. STABİLİTEYİ BOZAN KOŞULLAR: Aşırı ısıdan kaçınılmalıdır. 225C'den itibaren alev ışığı fiziksel zarar verir.

300C'den itibaren oksitlenmiş eriyik oluşur ve bu da hızlı sıcaklık artışına sebep olur.

Bu koşullar altında karbon monoksit, formaldehit ve akrolein açığa çıkar.

10.4. TEHLİKELİ REAKSİYONLARI: Bilinen tehlikeli reaksiyonu yoktur.

10.5. TEHLİKELİ ÜRÜNLERİN AYRIŞMASI: Oda sıcaklıklarında bilinen tehlikeli ürün ayrışması yoktur.

KISIM 11 : TOKSİKOLOJİK BİLGİLER

11.1. BİRİNCİL TAHRİŞ EDİCİ ETKİLER : Ürün zehirli değildir.

11.2. HASSASLAŞTIRMA: Bilinen hassaslaştırıcı etkisi yoktur.

KISIM 12 : EKOLOJİK BİLGİ

12.1. SUYU ZEHİRLEMESİ: Bu ürünlerin bilinen hiç bir toksikolojik etkisi yoktur.

12.2. DİĞER BİLGİLER: Ürünlerin geri dönüşümü mümkündür.

13.1. ÜRÜNLER: Mümkün olursa yeniden kullanınız ya da geri dönüştürünüz.

13.2. ATIK İMHA ETME: Yerel yönetmeliklere göre imha edilmelidir.

KISIM 14 : YÜKLEME BİLGİSİ

14.1. YÜKLEME BİLGİSİ: Ulusal ve uluslararası karayolu, demiryolu, denizyolu ve havayolu taşıma kurallarına göre bu ürün tehlikeli olarak sınıflandırılmamıştır.

KISIM 15 : EK BİLGİLER

İmalatını yapmış olduğumuz PP ve PE kumaşların ürün kullanım sırasında alınması gereken güvenlik önlemleri yukarıda belirtilmiş olup ek olarak aşağıdaki işlemler yapılmaktadır;

15.1. Toksik ve endüstriyel zararlı atıklardan arındırılarak imal edilmektedir.

15.2. Ürünlerin taşıma, sevkiyat ve son kullanıcı kullanım prosesine kadar dış etkenlerden olumsuz etkilenmemesi için minimum 50 mikron ve üzeri şeffaf ambalajlarının bulunması, yine taşıma ve kullanım sırasında ürün deformasyonunu önleyecek şekilde minimum 800 Newton mukavemete dayanıklı orjinalden imal karton masura kullanılmaktadır.

15.3. Ürünlerin gerek tarafımızda gerekse son kullanıcı proseslerinde kullanım kolaylığı ve güvenliği göz önüne alınarak özel müşteri talebi olmadığı sürece ürün gr/m^2 'sine bağlı olarak 1000 ile 3000 metre arasında imal edilmektedir.

15.4. Özel müşteri talepleri doğrultusunda 15.1.-15.2. ve 15.3. numaralı maddelerde bulunan şartları daha da güvenli hale getirebilmek için özel ambalaj, karton kutu, palet, streç ve çemberleme şekli ile ürünler güvenli hale getirilmektedir.

15.5. Kimyasal olarak üretim sırasında tamamen insan sağlığına hassasiyet gösterilmiş ve yukarıda yer alan teknik bilgilerde yer alan uyarıları kapsayan belirli lisans ve ruhsat sahibi rafinelerde üretilen hammaddeleri kullanılmaktayız.

15.6. Kimyasal birleşim müşteri isteğine bağlı olarak belirlenir ve buna bağlı olarak formül düzenlenir.

Yukarıda belirtilen Malzeme Güvenlik bilgileri uyarı ve uygulamaları dikkate alınarak üretim yapılmaktadır.

HAZIRLAYAN	HAZIRLAYAN	ONAYLAYAN
KIDEMLI İHRACAT UZMANI	KALİTE KONTROL SORUMLUSU	FABRİKA MÜDÜRÜ
İBRAHİM HALİL BOZDOĞAN	BAHAR BİLBEN KARAKUŞ	MEHMET KADIOĞLU
İmza : 	İmza : 	İmza : 

İbrahim KADIOĞLU
06-02-2024

Polyethylene

Borstar® FB2230

Linear Low Density Polyethylene for Film Extrusion

Description

Borstar® FB2230 is a high molecular weight linear low density polyethylene film grade combining excellent extrusion behavior, excellent draw down and superior mechanical properties

For films made of Borstar® FB2230, the high toughness remains in cold conditions.

Cas No. 25087-34-7

Borstar® FB2230 contains:

Antioxidant

Typical characteristics

Borstar® FB2230 can be described with following typical characteristics:

Bubble stability Excellent ESCR and flex crack resistance
 Good stiffness/toughness balance High recycle incorporation enabler

Applications

Borstar® FB2230 is intended for following applications:

Agricultural film Heavy-duty sacks
 Food packaging Lamination film
 Frozen food packaging General packaging film

Physical properties

Property	Typical value *	Unit	Test method
Density	923	kg/m ³	ISO 1183-1
Melt flow rate (190 °C/5 kg)	0,95	g/10min	ISO 1133-1
Melt flow rate (190 °C/21.6 kg)	22	g/10min	ISO 1133-1
Melting temperature	124	°C	ISO 11357-3

* Data should not be used for specification work

Borstar® is a registered trademark of the Borealis Group



Polyethylene

Borstar® FB2230

Film properties

Property	Typical value *	Unit	Test method
Tensile Modulus MD ¹	280	MPa	ISO 527-3
Tensile Modulus TD ¹	370	MPa	ISO 527-3
Tensile strength MD ¹	55	MPa	ISO 527-3
Tensile strength TD ¹	45	MPa	ISO 527-3
Tensile strain at break MD ¹	510	%	ISO 527-3
Tensile strain at break TD ¹	750	%	ISO 527-3
Dart drop ¹	250	g	ISO 7765-1
Instrumented puncture test, Total penetration energy	20	J	ISO 7765-2
Tear resistance (Elmendorf) MD ¹	46	N/mm	ISO 6383/2
Tear resistance (Elmendorf) TD ¹	220	N/mm	ISO 6383/2
Haze ¹	80	%	ASTM D1003
Gloss 45° ¹	5	GU	ASTM D2457
Coefficient of friction (Dynamic) ¹	0,40	-	ISO 8295

¹ Film properties measured on 40 µm blown film on 60 mm Windmüller & Höflicher extruder LD = 30, die diameter 200 mm, die gap 1.4 mm, BUR = 3:1, FLH = 3,50D

* Data should not be used for specification work

Processing techniques

Borstar® FB2230 is easily processed on conventional extruders. Borstar® FB2230 can be processed in most types of blown film equipment, incl. LDPE, LLDPE or even HDPE extruders.

The balance of draw down properties and bubble stability is superior to conventional LLDPE and LDPE. Thicknesses of 10 to >200µm can be processed with good bubble stability. Borstar FB2230 is well suited for co-extrusion. Recommended extrusion temperature is 190-210°C. Conventional die gaps can be used without shark skin or draw down problems. A gap of 1.0 - 1.5 mm will give the best balance between extruder pressure and physical properties in the film. Wider die gap gives higher machine direction orientation and narrow die gap may give too high extruder pressure.

Borstar® FB2230 is sensitive to the orientation obtained by the film blowing conditions like Blow Up Ratio (BUR) and Frost Line Height (FLH). Higher impact can be achieved by using the FLH to 4DD. High BUR (>2) also results in better mechanical properties and better balance in MD/TD.

As a guideline the following conditions should be used.

FLH: 2 - 4 DD

BUR: 3:1

Packaging and storage

Borstar® FB2230 should be stored in dry conditions at temperatures below 50°C and protected from UV-light. Improper storage can initiate degradation, which can result in odour generation and colour changes and can have negative effects on the physical properties of this product.

Product compliance documents

Latest versions of product safety information sheets (PSIS), product safety data sheets (SDS) and other product liability documents are available in our website www.borealisgroup.com.

Sustainability aspects

Borealis is ever mindful of the impact of our products on the planet. We promote Design for Circularity (DFC) and Design for Recycling (DFR) to conserve natural resources and to reduce the environmental impact of products over their entire lifetime (including production, use phase and after phase). DFR helps ensure that material can be effectively recycled while maximizing the material performance efficiency.

Further information on sustainability and Design for Recycling (DFR) can be found from our websites www.borealisgroup.com and www.borealisvermind.com.

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Polyethylene

Borstar® FB2230

Disclaimer

The product(s) mentioned herein are not intended to be used for medical, pharmaceutical or healthcare applications and we do not support their use for such applications. 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 any Borealis product in conjunction with any other products and/or materials. The information contained herein relates exclusively to our products when not used in conjunction with any other material unless as specifically provided for in the test methods stated above.

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