PRODUCT DATA SHEET

POLYPROPYLENE RB707CF

DESCRIPTION

RB707CF is a Random Copolymer Polypropylene product produced by the proprietary **Borstar®** process**.** This product is suitable for the manufacturing of films with Blown/Cast Film process.

RB707CF does not contain Slip, Antiblock and Calcium Stearate.

CAS No. 9010-79-1

APPLICATIONS

Transparent packaging film
Sealing layer in monolayer or co-extrusion
Textile packaging film
Form-fill-seal films
Shrink film
Films requiring broader sealing window
Food packaging
Display packaging
Lamination film
Easy tear packaging
Packaging film
Core layer for increased stiffness
Overwrap film
Heat resistant film
Blend
Thermoformed products

SPECIAL FEATURES

Good optics (High Gloss & low Haze)
Good bubble stability
Low heat seal temperature
Broad sealing window
Good mechanical properties
Good low temperature performance
Excellent film appearance
Good stiffness

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PHYSICAL PROPERTIES

Property	Typical Value	Test Method
Density	900-910kg/m³	ASTM D792
Melt Flow Rate (230°C/2.16kg)	1.5g/10min	ASTM D1238
Flexural Modulus	900Mpa	ISO 178
Melting temperature(DSC)	145°C	ISO 3146
Vicat Softening Temperature(Method A)**	125°C	ISO 306

*Data should not be used for specification work

*** Measured on injection moulded specimens, conditioned at 23°C and 50% Rel. Hum*

FILM PROPERTIES

Property	Typical Value	Test Method
Haze	<8%	ASTM D1003
Gloss @ 20 degree(of arc)	>70	ASTM D2457
Tensile Strain at break(MD/TD)	700-800%	ISO 527-3
Tensile Strength(MD/TD)	30MPa	ISO 527-3
Tensile Modulus(MD/TD)	900MPa	ISO 527-3
Heat Seal Temperature	118°C	Borouge method

Specific film values evaluated on Blown films produced with Borouge internal standard conditions with a thickness of 50µm. When compared to films which were produced under other conditions it should be taken into account that the film properties are strongly dependent on the processing conditions.

PROCESSING GUIDELINES

The actual conditions will depend on the type of equipment used.

Specific recommendations for processing conditions can be determined only when the application and type of equipment are known. Please contact your local Borouge representative for such particulars.

FOOD CONTACT REGULATIONS

RB707CF fulfils the food contact regulations in most countries. For specific information and compliance statement please contact your Borouge representative.

STORAGE

RB707CF should be stored in dry conditions at temperatures below 50°C and protected from UV-light. Improper storage can initiate degradation, which results in odour generation and colour changes and can have negative effects on the physical properties of this product.

More information on storage can be found in Safety Information Sheet (SIS) for this product

SAFETY

The product is not classified as a hazardous preparation.

Please see our Safety Information Sheet (SIS) for details on various aspects of safety, recovery and disposal of the product, for more information contact your Borouge representative.

RECYCLING

The product is suitable for recycling using modern methods of shredding and cleaning. In-house production waste should be kept clean to facilitate direct recycling.

RELATED DOCUMENTS

The following related documents are available on request, and represent various aspects on the usability, safety, recovery and disposal of the product.
Safety Information Sheet
Statement on chemicals, regulations and standards
Statement on compliance to food contact regulations

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.

Borouge 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 Borouge 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.

April 2025

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Muehlstein

CERTENE™ LLBF-118A

Muehlstein - Linear Low Density Polyethylene

Tuesday, August 16, 2022

General Information

Product Description

LLBF-118A is a certified prime resin with Butene-comonomer, designed for production of Blown films used in general purpose packaging. LLBF-118A features excellent combination of easy processability with good film strength as well as wide heat sealing temperature range. LLBF-118A applications include garment bags, produce bas and liners. LLBF-118A contains NO slip and NO antiblock. LLBF-118A complies with FDA regulation 21CFR 177.1520(c)3.2a, conditions of use A-H per 21CFR 176.170(c), Table 2.

General

Material Status	• Commercial: Active		
Availability	• Latin America	• North America	
Features	• Butene Comonomer • Food Contact Acceptable	• General Purpose • Good Heat Seal	• Good Processability
Uses	• Bags • Film	• General Purpose • Liners	• Packaging
Agency Ratings	• FDA 21 CFR 176.170(c), Table 2 Conditions of use A-H • FDA 21 CFR 177.1520(c) 3.2a		
Forms	• Pellets		
Processing Method	• Blown Film		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	0.918	g/cm³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.0	g/10 min	ASTM D1238
Films	**Nominal Value**	**Unit**	**Test Method**
Film Thickness - Tested	25	µm	
Secant Modulus - 1% Secant, MD (25 µm)	221	MPa	ASTM D882
Secant Modulus - 1% Secant, TD (25 µm)	248	MPa	ASTM D882
Tensile Strength - MD (Yield, 25 µm)	10.3	MPa	ASTM D882
Tensile Strength - TD (Yield, 25 µm)	11.0	MPa	ASTM D882
Tensile Strength - MD (Break, 25 µm)	36.5	MPa	ASTM D882
Tensile Strength - TD (Break, 25 µm)	27.6	MPa	ASTM D882
Tensile Elongation - MD (Break, 25 µm)	550	%	ASTM D882
Tensile Elongation - TD (Break, 25 µm)	700	%	ASTM D882
Dart Drop Impact [2] (25 µm)	90	g	ASTM D1709A
Elmendorf Tear Strength - MD (25 µm)	150	g	ASTM D1922
Elmendorf Tear Strength - TD (25 µm)	300	g	ASTM D1922
Optical	**Nominal Value**	**Unit**	**Test Method**
Gloss (45°, 25.4 µm, Blown Film)	35		ASTM D2457
Haze (25.4 µm, Blown Film)	18.0	%	ASTM D1003

Additional Information

1.0 mil (25 µm) film; melt temperature 410-415°F; blow-up-ratio 2.5 :1.

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] F50

INEOS HDPE B53-35H-011

INEOS Olefins & Polymers USA - Polyethylene, High Density

Friday, September 21, 2007

General Information

Product Description

B53-35H-011 is a high density polyethylene copolymer developed for blow molding applications. This product is recommended for use in applications which require a combination of high top load strength and good environmental stress crack resistance (ESCR). This material meets the Food and Drug Administration requirements of 21CFR 177.1520. This resin contains no animal based additives and is suitable for Kosher applications.

General

Material Status	• Commercial: Active	
Availability	• North America	
Test Standards Available	• ASTM	
Features	• Copolymer • Density, High • ESCR, High (Stress Crack Resist.)	• Food Contact Acceptable • Kosher Approved • Strength, Good
Uses	• Blow Molding Applications	
Agency Ratings	• FDA 21 CFR 177.1520 [1]	
RoHS Compliance	• Contact Manufacturer	
Forms	• Pellets	
Processing Method	• Blow Molding	

Properties [2]

Physical	Nominal Value	Unit	Test Method
Density	0.955	g/cm³	ASTM D4883
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.35	g/10 min	ASTM D1238

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	Tangent: 1500	MPa	ASTM D638
Tensile Strength @ Yield [3]	27.6	MPa	ASTM D638
Tensile Elongation @ Brk [3]	700	%	ASTM D638
Apparent Bending Modulus	690	MPa	ASTM D747
Flexural Modulus	Tangent: 1240	MPa	ASTM D790

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	187	J/m	ASTM D256
Tensile Impact Strength	277	kJ/m²	ASTM D1822

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (D Scale)	65		ASTM D2240

Thermal	Nominal Value	Unit	Test Method
DTUL @66psi - Unannealed	74.0	°C	ASTM D648
Brittle Temperature	-75.0	°C	ASTM D746
Vicat Softening Point	131	°C	ASTM D1525

Additional Properties

Tensile Elongation at Break, ASTM D638, 2 in/min: >700%
Brittle Temperature, ASTM D746: < -103°F

Notes

[1] When used unmodified for the manufacture of food contact articles, INEOS HDPE B53-35H-011 will comply with Food Additive Regulations FDA 21 CFR 177.1520 under the U.S. Food, Drug and Cosmetic Act. Such uses are subject to good manufacturing practices and any other limitations which are part of the statute or regulations. These should be consulted for complete details.

[2] Typical properties: these are not to be construed as specifications.

[3] 51 mm/min

SABIC® LLDPE 119NJ

LINEAR LOW DENSITY POLYETHYLENE

DESCRIPTION

SABIC® LLDPE 119NJ is a butene linear low density polyethylene resin produced using solution technology, typically used for general purpose applications. Films produced from this resin are tough with good puncture resistance, high tensile strength and good hottack properties. The resin does not contain slip or antiblock additive. SABIC® LLDPE 119NJ is TNPP free.

This product is not intended for and must not be used in any pharmaceutical/medical applications.

TYPICAL APPLICATIONS

Shipping sacks, ice bags, frozen food bags, stretch wrap film, produce bags, liners, carrier bags, garbage bags, agricultural films, laminated and coextruded films for meat wrap, frozen food and other food packaging, shrink film (for blending with LDPE), industrial consumer packaging, and high clarity film applications if blended with (10~20%) LDPE.

TYPICAL PROPERTY VALUES

Revision 20211203

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Density			
Density [1]	0.919	g/cm³	ASTM D792
Melt Flow Rate (MFR)			
at 190 °C and 2.16 kg	1	g/10 min	ASTM D1238
OPTICAL PROPERTIES [2]			
Gloss			
Gloss (45°)	65	-	ASTM D2457
Haze [2]	12	%	ASTM D1003
FILM PROPERTIES [2]			
Dart Impact Strength			
Dart Drop Impact	100	g	ASTM D1709
Elmendorf Tear Strength			
Tear Strength, MD	100	g	ASTM D1922
Tear Strength, TD	250	g	ASTM D1922
Tensile test film			
2% secant modulus, MD	183	MPa	ASTM D882
2% secant modulus, TD	217	MPa	ASTM D882
Stress @ Yield, MD	13.8	MPa	ASTM D882
Stress @ Yield, TD	13.6	MPa	ASTM D882
Stress @ Break, MD	35	MPa	ASTM D882
Stress @ Break, TD	30	MPa	ASTM D882
Strain @ Break, MD	670	%	ASTM D882
Strain @ Break, TD	720	%	ASTM D882

(1) Base resin

(2) Fabrication Conditions are: Die Gap 70mil (1.8 mm), Melt Temperatire 226C, output: 55 kg/hr, Die Diameter: 203mm, Blow-up Ratio:2.5:1 and Frost Line Height: 71cm

PROCESSING CONDITIONS

Typical processing conditions for 119NJ are: Melt temperature: 195 - 215°C, Blow up ratio: 2.0 - 3.0

STORAGE AND HANDLING

Polyethylene resin should be stored in a manner to prevent a direct exposure to sunlight and/or heat. The storage area should also be dry and preferably do not exceed 50°C. SABIC would not give warranty to bad storage conditions which may lead to quality deterioration such as color change, bad smell and inadequate product performance. It is advisable to process PE resin within 6 months after delivery.

ENVIRONMENT AND RECYCLING

The environmental aspects of any packaging material do not only imply waste issues but have to be considered in relation with the use of natural resources, the preservations of foodstuffs, etc. SABIC Europe considers polyethylene to be an environmentally efficient packaging material. Its low specific energy consumption and insignificant emissions to air and water designate polyethylene as the ecological alternative in comparison with the traditional packaging materials. Recycling of packaging materials is supported by SABIC Europe whenever ecological and social benefits are achieved and where a social infrastructure for selective collecting and sorting of packaging is fostered. Whenever 'thermal' recycling of packaging (i.e. incineration with energy recovery) is carried out, polyethylene -with its fairly simple molecular structure and low amount of additives- is considered to be a trouble-free fuel.

DISCLAIMER

For more information and technical assistance contact:

Chevron Phillips Chemical
P.O. Box 4910
The Woodlands, TX 77387-4910
800.231.1212

Marlex® Polyethylene

SUPERIOR FLEXIBLE PACKAGING RESINS

Marlex® D143FK Polyethylene

METALLOCENE LINEAR LOW DENSITY POLYETHYLENE (mLLDPE)

This metallocene linear low density polyethylene is an ethylene-hexene copolymer tailored for blown film applications that require:

- Superb clarity
- Excellent gloss
- Exceptional toughness
- Outstanding heat seal

Typical blown film applications include:

- Seal layer in coextrusions
- Heavy duty packaging
- Clarity packaging

Nominal Resin Properties	English	SI	Method
Melt Index, 190 °C/2.16 kg	---	1.4 g/10 min	ASTM D1238
Density	---	0.916 g/cm^3	ASTM D1505
Slip	1000 ppm	1000 ppm	---
Antiblock	5000 ppm	5000 ppm	---
Process Aid	Yes	Yes	---

Nominal Blown Film Properties at 1 mil[1]	English	SI	Method
Haze	9 %	9 %	ASTM D1003
Gloss, 60°	105	105	ASTM D2457
COF	0.15	0.15	ASTM D1894
Dart	---	580 g/mil	ASTM D1709
Elmendorf Tear MD/TD	---	170 g/mil	ASTM D1922
Elmendorf Tear MD/TD	---	370 g/mil	ASTM D1922
Tensile Strength at Yield MD/TD	1800 psi	12 MPa	ASTM D882
Tensile Strength at Yield MD/TD	1400 psi	10 MPa	ASTM D882
Tensile Strength at Break MD/TD	7500 psi	52 MPa	ASTM D882
Tensile Strength at Break MD/TD	6450 psi	44 MPa	ASTM D882
Tensile Elongation at Break MD/TD	450 %	450 %	ASTM D882
Tensile Elongation at Break MD/TD	550 %	550 %	ASTM D882
1 % Secant Modulus MD/TD	22000 psi	152 MPa	ASTM D882
1 % Secant Modulus MD/TD	22700 psi	157 MPa	ASTM D882
Seal Initiation Temperature[2]	216 °F	102 °C	ASTM F88

1. Produced on a LLDPE line at 2.5:1 BUR, 80 mil die gap, 8 in die, 250 lb/h, 400 °F melt temperature.
2. Temperature at which 0.3 lb/in heat seal strength is achieved. 0.5 s dwell, 30 psi pressure, 11.8 in/min separation rate.

Revision Date: October, 2021

INEOS HDPE B53-35H-011

INEOS Olefins & Polymers USA - Polyethylene, High Density

Friday, September 21, 2007

General Information

Product Description

B53-35H-011 is a high density polyethylene copolymer developed for blow molding applications. This product is recommended for use in applications which require a combination of high top load strength and good environmental stress crack resistance (ESCR). This material meets the Food and Drug Administration requirements of 21CFR 177.1520. This resin contains no animal based additives and is suitable for Kosher applications.

General

Material Status	• Commercial: Active	
Availability	• North America	
Test Standards Available	• ASTM	
Features	• Copolymer • Density, High • ESCR, High (Stress Crack Resist.)	• Food Contact Acceptable • Kosher Approved • Strength, Good
Uses	• Blow Molding Applications	
Agency Ratings	• FDA 21 CFR 177.1520 [1]	
RoHS Compliance	• Contact Manufacturer	
Forms	• Pellets	
Processing Method	• Blow Molding	

Properties [2]

Physical	Nominal Value	Unit	Test Method
Density	0.955	g/cm³	ASTM D4883
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.35	g/10 min	ASTM D1238

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	Tangent: 1500	MPa	ASTM D638
Tensile Strength @ Yield [3]	27.6	MPa	ASTM D638
Tensile Elongation @ Brk [3]	700	%	ASTM D638
Apparent Bending Modulus	690	MPa	ASTM D747
Flexural Modulus	Tangent: 1240	MPa	ASTM D790

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	187	J/m	ASTM D256
Tensile Impact Strength	277	kJ/m²	ASTM D1822

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (D Scale)	65		ASTM D2240

Thermal	Nominal Value	Unit	Test Method
DTUL @66psi - Unannealed	74.0	°C	ASTM D648
Brittle Temperature	-75.0	°C	ASTM D746
Vicat Softening Point	131	°C	ASTM D1525

Additional Properties

Tensile Elongation at Break, ASTM D638, 2 in/min: >700%
Brittle Temperature, ASTM D746: < -103°F

Notes

[1] When used unmodified for the manufacture of food contact articles, INEOS HDPE B53-35H-011 will comply with Food Additive Regulations FDA 21 CFR 177.1520 under the U.S. Food, Drug and Cosmetic Act. Such uses are subject to good manufacturing practices and any other limitations which are part of the statute or regulations. These should be consulted for complete details.

[2] Typical properties: these are not to be construed as specifications.

[3] 51 mm/min

Luban DFDA-7047

Linear Low Density Polyethylene

Description

Luban DFDA-7047 is a butene LLDPE grade offering excellent drawdown and puncture resistance combined with high gloss and clarity. Films made with Luban DFDA-7047 have very good tensile and toughness properties.

Additives:
- Thermal Stabilizer

Application

Lamination film, stretch wrap film, cling film, agricultural Film, bag in box, food packaging films, FFS packaging films, liner bags, multi-layer packaging films

Properties (Typical Values)

Property	Unit	Test method	Value*
Melt Index (190°C/2.16 kg)	g/10 min	ASTM D1238	1
Density	g /cm³	ASTM D792	0.918
Peak melting temperature	°C	Univation Method	120
Tensile stress at break (MD/TD)	MPa	ASTM D882	57/38
Elongation at break (MD/TD)	%	ASTM D882	590/860
Secant modulus – 1% secant (MD/TD)	MPa	ASTM D882	220/250
Dart Drop Impact	g	ASTM 1709A	120
Elmendorf tear strength (MD/TD)	g	ASTM D1922	120/480
Gloss (45°)		ASTM D2457	47
Haze	%	ASTM D1003	9

*The film properties have been measured on 30 µm (1.18 mil) thick films (Blow-up ratio: 2.5).

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Luban DFDA-7047

Linear Low Density Polyethylene

Note: These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

Storage and Handling

Luban DFDA-7047 must be protected from direct sunlight and should be stored in a shaded and completely dry area. During handling and processing, the material should be kept in a well-ventilated area to prevent the accumulation of dust and fumes. Contact with strong oxidizers, excessive heat, sparks or open flame should be avoided as this could initiate the degradation process and consequently impact the quality of the material.

Safety

Luban DFDA-7047 is not classified as dangerous preparation. For further information about safety in handling and processing please refer to the Safety Data Sheet.

Food Contact

Luban DFDA-7047 meets the requirements of the U.S. Food and Drug Administration (FDA) as specified in 21 CFR 177.1520, covering safe use of polyolefin articles and components of articles intended for direct food contact. For additional information on approved conditions of use for food contact applications, please refer to the "Product Stewardship Declaration".

Recycling

The product is suitable for recycling using modern methods of shredding and cleaning. In-house production waste should be kept clean to facilitate direct recycling.

Updated: Mar. 2020

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