

# PE LITEN® BB 29 H

## MATERIAL SPECIFICATION

### PND 33-300 Linear polyethylene LITEN – Part 2

#### PE-HD FOR BLOW MOULDING AND EXTRUSION

##### Characteristics

LITEN BB 29 H is a copolymer with broad molecular weight distribution, suitable for blow moulding and extrusion. The grade exhibits very good balance among processability, stiffness and ESC resistance. Typical application is blow moulding of containers up to 80 litres and production of technical parts.

##### Hygienic approval

LITEN BB 29 H meets the hygienic requirements on materials and articles intended for contact with foodstuffs according to Regulation (EC) 1935/2004 of the European Parliament and of the Council, as well as according to Commission Regulation (EU) No 10/2011 including changes and additions.

**Flammability** EN 13501-1: Class F

**International designation** ISO 17855-PE-HD,,F,57-T012

#### GUARRANTEED PARAMETERS

Parameter	Unit	Value	Test method
Melt flow rate (190 °C/2,16 kg)	g/10 min	0,18 - 0,30	ISO 1133-1
Melt flow rate (190 °C/5 kg)	g/10 min	0,95 - 1,50	
Melt flow rate ratio (21,6 kg/2,16 kg)	-	80 - 160	
Density (23 ± 0,1) °C	kg/m <sup>3</sup>	953 - 957	ISO 1183-2
Volatile matter content	%	<0,1	EN 12099
Yellowness index	-	standard B	ASTM D 1925
Yield stress	MPa	>25	ISO 527-1,2
Flexural modulus of elasticity	MPa	>1100	ISO 178
Charpy notched impact strength at 23 °C at -30 °C	kJ/m <sup>2</sup>	>9 >4	ISO 179-1
Vicat softening temperature (10 N)	°C	>124	ISO 306
ESCR F <sub>50</sub> (50 °C; 100%)	h	>100	ASTM D 1693
FNCT (50°C; 2%; 9 MPa)	h	8*	ISO 16770

\* Informative value

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Unipetrol  
ORLEN GROUP

## Announcement

*according to Art. 32 of the Regulation (EC) No 1907/2006 of the European Parliament and of the Council (REACH)*

The supplied product meets neither the criteria for classification as a dangerous product according to the Regulation (EC) No 1272/2008 of the European Parliament and of the Council (CLP) nor any of the other conditions set in Art. 31 of the Regulation (EC) No 1907/2006 of the European Parliament and of the Council (REACH), and therefore there is no obligation to provide MSDS to the customer.

However the supplier is, according to Art. 32 of the Regulation (EC) No 1907/2006 of the European Parliament and of the Council (REACH), obliged to provide the information below.

### 1. SUPPLIER

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### 2. REGISTRATION

*according to Title II of the Regulation (EC) No 1907/2006 of the European Parliament and of the Council (REACH)*

According to Art. 2(9) of the Regulation (EC) No 1907/2006 of the European Parliament and of the Council (REACH) the product is not subject to registration according to Title II of this Regulation. The monomers are subject to registration according to Art. 6(3), if their content in the polymer is at least 2 % wt.

The product identifiers are as follows:

IDENTIFIER	IDENTIFICATION NAME		IDENTIFICATION NUMBER
Registration	Copolymer	Ethylene/Butene Copolymer	Registration number: it is not subject to registration
	Monomer	Ethylene	01-2119462827-27-0036
	Monomer	But-1-ene	01-2119456615-34
Harmonized classifications	not on the list		not on the list
List of ECHA classification	not on the list		-
International chemical name	Ethylene/Butene Copolymer		CAS number: 25087-34-7
Types	BB/FB 10, BB/FB 29, BB/FB 29 F, BB 29 H, FB/FL 20, SB/SL 20, PL/VL 10, VL 20, ZB 29		

### 3. AUTHORISATION

*according to Title VII of the Regulation (EC) No 1907/2006 of the European Parliament and of the Council (REACH)*

The product is not given on the authorization list in Annex XIV of the Regulation (EC) No 1907/2006 of the European Parliament and of the Council (REACH), and therefore there is no obligation to apply for authorization for its production and use.

### 4. RESTRICTION

*according to Title VIII of the Regulation (EC) No 1907/2006 of the European Parliament and of the Council (REACH)*

The product is not subject to any restrictions stated in Annex XVII of the Regulation (EC) No 1907/2006 of the European Parliament and of the Council (REACH) on production, placing on the market or use.

### 5. OTHER IMPORTANT INFORMATION FOR RISK MANAGEMENT

None.



## 6. OPTIONAL INFORMATION

The following information and recommendations are not obligatorily provided under Article 32 of the Regulation (EC) No 1907/2006 of the European Parliament and of the Council (REACH). This information is provided in good faith. We recommend to take this information into account and to follow the instructions.

- Available data on physical and chemical properties of the product.  
The product is capable of burning, but hardly ignitable. Dust is explosive. The product may be charged electrostatically.

- Physical state at 20°C, colour, odour	solid colourless (or black) and odourless product
- Density [kg.m <sup>-3</sup> ]	935-955
- Melting point [°C]	115-130
- Bulk density (granules) [ kg.m <sup>-3</sup> ]	520-580
- Bulk density (stabilized powder) [kg.m <sup>-3</sup> ]	370-520
- Flash point (granules) [°C]	370
- Ignition temperature (granules) [°C]	390-400
- Ignition temperature (settled dust) [°C]	350
- Ignition temperature (turbid dust) [°C]	445
- Minimal initiatory ignition energy [J]	1,6
- Lower explosion limit (dust) [g.m <sup>-3</sup> ]	100
- Combustion heat [MJ.kg <sup>-1</sup> ]	45-46
- Instructions for handling and storage  
For safe handling and storage, all the fire-fighting measures and recommended personal protective means (safety goggles, protective gloves, working clothes, sealed footwear) shall be observed.  
Storing facilities shall meet the requirements for fire safety of constructions and electrical facilities and shall be in conformity with valid legal regulations. Avoid contact of the product with incompatible materials, with open flame and high temperatures. To maintain the product quality, do not expose it to moisture and direct sunlight. We recommend to store the product in dry, ventilated, roofed storing facility, the premises of which are protected against direct sunlight, or to secure the above-mentioned conditions by another suitable way (tightly closed containers or packaging). The recommended range of storage temperatures is from -20 °C to +50 °C. At below-zero temperatures, it is necessary to pay increased attention to handling of the product. The product distance from any source of heat shall be at least one meter. The recommended storage time for product in closed (sealed) bags at defined storage conditions is maximum one year. At longer storage time, it is recommended to check the material properties prior to processing.

**Statement.** The data contained are based on the present state of knowledge and current legislation and are in accordance with the legislation in force at the time of document developing. The user is responsible for complying with the requirements of relevant regional legislation.

## MATERIAL DECLARATION

### Product: PE-HD LITEN (all grades)

We declare, that the assortment of PE-HD LITEN does not contain lead, cadmium, mercury and hexavalent chromium, i.e. the amount of these heavy metals does not exceed 100 ppm (Cd < 0,25 ppm, Hg < 0,2 ppm, Pb < 0,5 ppm and Cr < 1 ppm).

PE-HD LITEN is not classified as a hazardous substance and it does not contain any hazardous substances.

Waste from the used product made from PE-HD LITEN is usable via recycling or production of energy. This product is not suitable for waste depot or composting.

During the manufacturing of the above product we do not use or intentionally incorporate into it any of the following substances or materials:

antimony, arsenic, beryllium, bismuth, boron, cobalt, gold, indium, nickel, palladium, selenium, silver, tellurium, thorium and their compounds, acetaldehyde, acrylamide, acrylonitrile, alkylphenols or alkylphenoethoxylates, aromatic amines, artificial musks, asbestos, azocolorants, azodicarbonamide, semicarbazide, 2-chloracetamide, benzophenones, BHT or BHA, biocides (pesti-, herbi-, insecti-, fungi-, bactericides), bisphenols (A, S, F, etc.), triclosan [5-Chlor-2-(2,4-Dichlorphenoxy)phenol], colophony (rosin), DDT, 4,4'-diaminodiphenylmethane (MDA), di-2-ethylhexyl maleate (DEHM), dimethylfumarate (DMF), dibutylfumarate, dioxins and furans, endocrine disruptors, epichlorohydrin, epoxy derivatives (BADGE, BFDGE, NOGE), 2-ethylhexanoic acid, ethoxyquin, fluorinated or chlorinated hydrocarbons, formaldehyde, formamide, fragrances, furfural, geneticaly modified materials (GMO), glycol ethers (EGME, EGMEA, EGEE, EGEEA), hexabromcyclododecane (HBCDD), isothiazolinone compounds, natural or synthetic latex, melamine, cyanuric acid, synthetic nanoparticles, nitrosamines, nonylphenol or octylphenol ethoxylate, organotin compounds, parabens, pentachlorophenol (PCP), perfluorinated tensides (e.g. PFOA, PFOS), plasticisers (e.g. adipates, ESBO, phthalates /DMP, DEP, DEHP, DBP, DIBP, BBP, DINP, DIDP, DNOP/), polychlorinated or polybrominated biphenyls (PCB, PBB), terphenyls (PCT, PBT) or naphthalenes, polybrominated diphenyl ethers (PBDE, decaBDE), polycyclic aromatic hydrocarbons (PAH: BaP, BeP, BaA, CHR, BpFA, BpFA, BkFA, DBAaA), radioactive substances, silicone, thiurams, TNPP, toluene, trichlorobenzene, UV-hardeners (e.g. isopropylthioxanthone (ITX), titanylacetylacetone), vinylchloride, vinylidenechloride, PVC or PVDC.

PE-HD LITEN does not contain any recycled materials.

The substances used in the manufacturing of the above product and - if applicable - the basic polymers are listed in the following chemical inventories: Australia/AICS, Canada/DSL, Europe/EINECS or ELINCS or NLP, Japan/ENCS, Korea/KELC, Philippines/PICCS, USA/TSCA.

The assortment of PE-HD LITEN meets the requirements of the following regulations and their subsequent amendments:

- Annex XVII of the REACH Regulation (EC) 1907/2006 (superseeding Directive 76/769/EEC)
- CONEG „Toxics in packaging“ Model Legislation, rev. 2008
- Directive 94/62/EC (PPW)
- Directive 2000/53/EC, 2013/28/EC (ELV)



- Directive 2011/65/EU (ROHS), Directive 2015/863 (RoHS II)
- Directive 2012/19/EU (WEEE)
- Directive 2009/48/EU (on the safety of toys)
- Chemical List of Proposition 65 of the State of California and subsequent amendments, as known to the State of California to cause cancer
- CEPA Canadian Challenge
- Regulation (EC) No 1005/2009 (Substances that deplete the ozone layer)
- US Clean Air Act, Title VI, Classes I and II on substances that deplete the ozone layer
- Regulation (EC) No 850/2004 (POPs)
- Regulation (EC) No 1169/2011 Annex II Substances or products causing allergies or intolerances
- Global Automotive Declarable Substance List (GADSL) and VDA232-101
- Swiss SR 814.018 (Ordinance on the Incentive Tax on Volatile Organic Compounds (OVOC)) – VOC's according to Annexes 1 & 2 < 3 %wt.
- OSPAR List of Chemicals for Priority Action
- Husqvarna Group Restricted Material List (RML 10/ 2016).

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 2018-02-05

Disclaimer:

End users must make their own determination that their use of our product is safe, lawful and technically suitable in their intended applications.

No liability can be accepted in respect of the use of UNIPETROL RPA, s.r.o.' 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.

**CONFIDENTIAL!**

## DECLARATION OF COMPLIANCE

### **Product: PE-HD LITEN BB 29 H**

We certify that this product fulfils the requirements on plastic materials and articles intended to come into contact with foodstuffs, as described in:

#### **EU:**

Regulation (EC) No 1935/2004 of the European Parliament and of the Council,  
Commission Regulations (EC) No 1895/2005, 2023/2006,  
Commission Regulations (EU) No 10/2011 as amended by regulations (EU) 1282/2011, 1183/2012, 202/2014,  
865/2014, 2015/174, 2016/1416, 2017/752, 2018/79 and Commission Implementing Regulation (EU) No 321/2011.

The product meets the requirements on OML in food simulants A, B and D2 under test conditions OM5 (100 °C/2 h).  
Substances with restrictions/specifications: none.  
Dual use additives (Food additives/flavourings): none.

Regarding composition, chemical reactions and the closed manufacturing process, we are not aware of the presence of any non-intentionally added substances (NIAS) in our product, which might subsequently be transferred into foodstuff in an amount, which could cause concern for human health.

The traceability of the product is guaranteed under Article 17 of Regulation (EC) No 1935/2004 by issuing a Certificate of Inspection for each product according to EN 10204, cl. 3.1, as well as by placing an individual code on each package in case of bagged product.

#### **USA:**

FDA, CFR, Title 21 (4/2017) 177.1520 (a)(3)(i), (b) and (c)3.1a Olefin polymers.

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#### **Disclaimer:**

End users must make their own determination that their use of our product is safe, lawful and technically suitable in their intended applications.

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## MATERIAL DECLARATION

**Product: PE-HD LITEN BB 29 H**

We certify, that during manufacture of the above product, we do not use or intentionally incorporate into it any animal derived materials.

We therefore state that this product is to be considered safe to use in food, pharmaceutical and cosmetic contact applications with respect to BSE and TSE transmissions.

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Ultimately customers must make their own determination that their use of our product is safe, lawful and technically suitable in their intended applications.

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## MATERIAL DECLARATION

### **Products: PE-HD LITEN, PP MOSTEN (all grades)**

In the manufacture of the above products any "Substances of Very High Concern" (see Candidate list for authorisation of ECHA, 191 substances, last updated June 27, 2018) are not used as additives, ingredients or adjuvants in concentration more than 0,1 %.

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## MATERIAL DECLARATION

**Product: PP MOSTEN, PE-HD LITEN – all grades**

We declare, that the assortment of PE-HD LITEN and PP MOSTEN does not contain **chlorine and its compounds**.

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2019-01-15

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