

TWO COLOURS



ONE DIRECTION

Polyethylene  
**TIPOLEN FD 243-51**  
LDPE for blown film

\*\*\*\*\*

### Description

**TIPOLEN FD 243-51** is a film grade of low density polyethylene. The films made of this grade have excellent mechanical and optical properties. The grade does not contain any additives.

### Applications

**TIPOLEN FD 243-51** is intended for high clarity fine films, caps. Recommended film thickness is 0.04-0.08 mm.

**TIPOLEN FD 243-51** is suitable for food contact and for manufacturing of pharmaceutical packing products. The product complies with Food Contact and Pharmaceutical Regulations.

### Properties

	Test method	Unit	Typical value
Melt Mass-Flow Rate (190 °C /2.16 kg)	ISO 1133/B	g/10 min	4
Density (23 °C) *	ISO 1183-2	kg/m <sup>3</sup>	922
Tensile Strength (MD/TD) **	ISO 527-3	MPa	20/15
Tensile Strain at Break (MD/TD) **	ISO 527-3	%	260/550
Dart Drop **	ISO 7765-1	g	85
Haze **	ISO 14 782	%	9
Vicat Softening Temperature *	ISO 306/A120	°C	92
Shore D Hardness *	ISO 868	-	48

Typical properties, not to be used as specification.

\* Average mechanical property values of several measurements carried out on standard pressed specimens (ISO 293) conditioned at room temperature (ISO 291).

\*\* Properties on film (MD = machine direction, TD = trans direction) - thickness of 0.04 mm, blow up ratio 2:1.

TIPELIN TIPOLEN TIPPLEN TATREN BRALEN

The joint product portfolio of TVK and Slovnaft Petrochemicals provide infinite opportunities

MEMBERS OF THE MOL GROUP



### Processing

**TIPOLEN FD 243-51** can be used in conventional film extrusion machines. Recommended processing temperature 170-190 °C.

### Storage and Handling

Pellets are packed in 25 kg PE-LD bags and transported on stretch-wrapped pallets at load of polymer 1375 kg. Heat treated pallets are available as well. Transportation in a road silo or rail silo is also available. For more detailed information please contact Sloznaft Petrochemicals s.r.o. and TVK Plc. sales representative.

Since polyethylene is a combustible substance, the fire safety rules applicable for combustible materials in warehouses and store rooms should be observed.

If polymer is stored in conditions of high humidity and fluctuating temperatures, then atmospheric moisture can condense inside the packing. If it happened, it is recommended the pellets to be dried before use. During the storage polyethylene should not be exposed to UV radiation and temperatures above 40 °C. Producer does not take responsibility for any damages caused by adverse storage.

### REACH Statement

Polymers are exempt of REACH registration. However their raw materials which mean monomers, catalysts and most additives have been registered. Sloznaft Petrochemicals s.r.o./TVK Plc. is committed to fully respect this new legislation and will only use REACH compliant raw materials. At this point in time LDPE BRALEN/TIPOLEN do not contain any substances specifically identified as SVHC at levels greater than 0.1%.

### Safety

See MSDS.

### Recycling

Polyethylene resins are suitable for recycling using modern recycling methods.

In-house production waste should be kept clean to facilitate direct recycling.

### Disclaimer

The information provided in this publication has been compiled to the best of our present knowledge. However, in view of the various applications of polyethylene resins and the equipments used, the processing conditions may differ.

The recommendations and data herein are to be construed as informatory only and do not relieve users from carrying out their own tests and experiments prior to processing in order to check suitability for a specific use. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed. Our products are under continuous development, therefore we reserve the right to change the information presented in this brochure at our own discretion.

The REACH statement herein does not constitute legal advice. The REACH statement is provided for informational purpose only.

TIPELIN TIPOLEN TIPPLEN TATREN BRALEN

The joint product portfolio of TVK and Sloznaft Petrochemicals provide infinite opportunities

MEMBERS OF THE MOL GROUP



**MANUFACTURER**

TVK Plc.  
H-3581 Tiszaújváros,  
P.O. Box: 20  
Hungary  
Internet: [www.tvk.hu](http://www.tvk.hu)  
E-mail: [tvkinfo@tvk.hu](mailto:tvkinfo@tvk.hu)

**TECHNICAL SERVICE**

TVK Plc.  
Polymer Marketing and Sales  
Technical Service  
H-3581 Tiszaújváros,  
P.O. Box: 20  
Hungary  
Fax: + 36 49 521-186  
E-mail: [customerservice@tvk.hu](mailto:customerservice@tvk.hu)

**Technical service for PE**

Telephone: + 36 49 521-367, + 36-80 204-249,

**Technical service for PP**

Telephone: + 36 49 522-013, + 36-80 204-248

TIPELIN TIPOLEN TIPPLEN TATREN BRALEN

The joint product portfolio of TVK and Slovnaft Petrochemicals provide infinite opportunities

MEMBERS OF THE MOL GROUP



**TVK Plc.**

H-3581 Tiszaújváros,  
P.O. Box: 20  
Hungary  
**Telephone:** +36 49 521-355  
**Fax:** +36 49 522-410  
**E-mail:** [polymersales@tvk.hu](mailto:polymersales@tvk.hu)

**Slovnaft Petrochemicals, s.r.o.**

Vlčie hrdlo 4846  
824 12 Bratislava  
Slovak Republic  
**Telephone:** +421 2 5859 6549  
+421 2 5859 7231  
+421 2 5859 7741  
**Fax:** +421 2 5859 7381  
**E-mail:**  
[polymersales@snpch.petchem.sk](mailto:polymersales@snpch.petchem.sk)

**TVK Inter-Chemol GmbH.**

Fellnerstrasse 7-9.  
D-60322 Frankfurt am Main  
Germany  
**Telephone:** +49 69 154 04 0  
+49 69 154 04 31  
**Fax:** +49 69 154 04 41  
**E-mail:** [tvkich@de.tvk.eu](mailto:tvkich@de.tvk.eu)

**TVK Italia S.r.l.**

Via Teulié, 1  
20136 Milano  
Italy  
**Telephone:** +39 02 58 30 5523  
**Fax:** +39 02 58 30 3492  
**E-mail:** [tvkitaly@it.tvk.eu](mailto:tvkitaly@it.tvk.eu)

**TVK-France**

182 Avenue Charles DeGaulle  
F-92200 Neuilly-sur-Seine  
France  
**Telephone:** +33 (0)1 47456360  
**Fax:** +33 (0)1 47454510  
**E-mail:** [tvk.france@orange.fr](mailto:tvk.france@orange.fr)

January 2011

**TVK Ukraine**

04128 Kiev  
ul. Tupoleva, 19, office 303  
**Telephone:** +380 44 374 00 80  
**Fax:** +380 44 374 00 90  
**E-mail:** [office@tvkukraine.eu](mailto:office@tvkukraine.eu)

**TVK Polska Sp. z o.o.**

ul. Wąwozowa 23/12  
PL 02-796 Warszawa  
Poland  
**Telephone:** +48 22 545 70 70  
**Fax:** +48 22 545 70 60  
**E-mail:** [tvkpolska@tvkpolska.pl](mailto:tvkpolska@tvkpolska.pl)  
[tvkpolska@pl.tvk.eu](mailto:tvkpolska@pl.tvk.eu)  
[www.tvkpolska.pl](http://www.tvkpolska.pl)

**MOL- Austria Handels GmbH.**

Gartenbaupromenade 2/6  
A-1010 Wien  
Austria  
**Telephone:** +43 1 515 991 120  
+43 1 515 991 121  
**Fax:** +43 1 513 37 55 1120  
+43 1 513 37 55 1121  
**E-mail:** [JHauk@MOL.hu](mailto:JHauk@MOL.hu)

**SC. MOL Romania P.P. SRL**

Str. Danielopolu 4-6  
ET2 Sector 1 Cod 014 134  
Bucuresti, Romania  
**Telephone:** +40 21 204 85 00  
+40 21 204 85 02  
**Fax:** +40 21 232 1059  
**E-mail:** [petchem@molromania.ro](mailto:petchem@molromania.ro)

**Other European Countries**

**Telephone:** +36 49 521 355  
+421 2 5859 7515  
+421 2 5859 7682  
**Fax:** +36 49 522 410  
+421 2 5859 7224  
**E-mail:** [polymersales@tvk.hu](mailto:polymersales@tvk.hu)  
[polymersales@snpch.petchem.sk](mailto:polymersales@snpch.petchem.sk)

TIPELIN TIPOLEN TIPPLEN TATREN BRALEN

The joint product portfolio of TVK and Slovnaft Petrochemicals provide infinite opportunities

MEMBERS OF THE MOL GROUP



**Slovnaft**  
PETROCHEMICALS

