

TWO COLOURS



ONE DIRECTION

Polyethylene
TIPELIN FS 471-02
HDPE for blown film

Description

TIPELIN FS 471-02 is a film grade of high density polyethylene copolymer (with hexen-1 as comonomer) grade. The product has high molecular mass, very good Tear strength and Dart drop resistance, low gel content, good vapour barrier properties. The grade contains antioxidants and acid scavenger.

Applications

TIPELIN FS 471-02 is recommended for extra thin packaging films, bags, shopping bags and garbage bags.

TIPELIN FS 471-02 is suitable for food contact. The product complies with Food Contact Regulations.

Properties

| | Test method | Unit | Typical value |
|---|---------------------|-------------------|---------------|
| Melt Mass-Flow Rate (MFR) (190 °C /2.16 kg) | ISO 1133 | g/10 min | 0.18 |
| Melt Mass-Flow Rate (MFR) (190 °C /5.0 kg) | ISO 1133 | g/10 min | 0.80 |
| Melt Mass-Flow Rate (MFR) (190 °C /21.6 kg) | ISO 1133 | g/10 min | 15 |
| Density (23 °C) * | ISO 1183-2 | kg/m ³ | 946 |
| Tensile Strength at Yield (MD/TD) ** | ISO 527-3 | MPa | 25/23 |
| Tensile Strength at Break (MD/TD) ** | ISO 527-3 | MPa | 53/47 |
| Tensile Strain at Break (MD/TD) ** | ISO 527-3 | % | 700/800 |
| Elmendorf Tear Resistance (MD/TD) ** | ISO 6383-2 | cN | 26/270 |
| Dart Drop (F50) ** | ISO 7765-1 method A | g | 95 |
| Flexural Modulus * | ISO 178 | MPa | 1200 |
| Spencer Impact Strength ** | ASTM D 3420 | MPa | 35 |
| Vicat Softening Temperature * | ISO 306/A 120 | °C | 125 |
| Shore D Hardness * | ISO 868 | - | 63 |
| OIT (200 °C) * | EN 728 | min | 42 |

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).

** Average mechanical property values of several measurements on film (MD = machine direction, TD = trans direction) thickness of 0.025 mm, blow up ratio 4:1.

TIPELIN TIPOLEN TIPPLEN TATREN BRALEN

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

MEMBERS OF THE MOL GROUP



Sloznaft
PETROCHEMICALS



Processing

TIPELIN FS 471-02 can be used in HDPE or universal screw provided extrusion machines. Recommended processing temperature 200-220 °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 relevant additives have been registered. TVK Plc. is committed to fully respect this new legislation and will only use REACH compliant raw materials. At this point in time TIPELIN 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
E-mail: 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

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

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 7469

+ 421 2 5859 7741

+ 421 2 5859 7381

Fax:

E-mail:

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

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

TVK France

182 avenue Charles de Gaulle
F-92200 Neuilly-sur-Seine
France

Telephone: +33 (0)1 47 45 63 60

Fax: +33 (0)1 47 45 45 10

E-mail: tvkfrance@fr.tvk.eu

TVK Ukraine

04128 Kiev
ul. Tupoleva, 19, office 303
Ukraine

Telephone: +380 44 374 00 80

+380 67 463 58 70

Fax: +380 44 374 00 90

E-mail: dmaxim@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@pl.tvk.eu

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@molaustria.at

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

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

polymersales@snpch.petchem.sk

January 2012

TIPELIN TIPOLEN TIPPLEN TATREN BRALEN

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

MEMBERS OF THE MOL GROUP



Slovnaft
PETROCHEMICALS

