

## Technical Data

### Product Description

TOTAL Polypropylene  
PPC 1640

Polypropylene PPC 1640 is a nucleated heterophasic (block) copolymer with a Melt Flow Index of 0.3 g/10'. This resin has a long-term heat stabilization package. It exhibits high stiffness in combination with outstanding impact strength even at very low temperatures.

Polypropylene PPC 1640 has been specifically developed for the extrusion of non-pressure pipes. Other applications include sheet and blow molding.

SABIC® PP RELY  
71EK71PS

This impact copolymer has a high molecular weight and is provided with a long-term heat stabilisation package. It exhibits high stiffness in combination with very high impact strength even at low temperatures. This material is typically used for extrusion of sewage pipe applications and can also be typically used for blow-moulding of large containers and sheet extrusion.

Health, Safety and Food Contact regulations:  
Material Safety Data Sheets (MSDS) and Product Safety declarations are available on our Internet site <http://www.SABIC.com>

This grade material is UL registered under File E111275 ([www.ul.com](http://www.ul.com))  
IMDS 80775790

Eltex®  
TUB 433-NA00

Eltex TUB 433-NA00 is a low melt flow rate, long term heat stabilized, high impact copolymer for pipe, blow moulding and sheet extrusion applications. It offers a very good balance stiffness - impact strength (even at low temperature) and excellent processability.

Applications:

- Non-pressure pipes / fittings
- Blow moulding
- Sheet extrusion

Benefits and Features:

- High impact resistance
- Good rigidity
- Excellent melt strength
- Long term heat stability
- Excellent processability (for solid and structured wall pipes extrusion)

Hostalen  
PP H2464

Hostalen PP H2464 is a natural polypropylene copolymer with an good mechanical properties balance. The product is typically used by customers in the application of solid and structured wall pipes for underground drainage and sewage systems. The product can enable customers to reach medium pipe ring stiffness and good impact strength for installations at room temperature and in particular at sub-zero temperatures. For further details about the suitable applications for this material please contact LyondellBasell.

Borealis PP  
BA160E-8229-01

BA160E-8229-01 is an impact polypropylene heterophasic copolymer (block copolymer) with optimised mechanical properties, intended for injection moulding of compression pipe fittings and is coloured black

The product features very good processability. It also shows excellent stress crack resistance and a good resistance to chemicals. BA160E-8229-01 is characterised by a combination of high stiffness and high impact strength, also at low temperatures. BA160E-8229-01 has a  $\beta$ -crystalline molecular PP structure which improves the mechanical properties as well as the crystallisation temperature. This allows for cycle time reduction during injection moulding through higher demoulding temperatures and shorter cooling time.



BA160E-8229-01 is classified as an MRS 8.0 material (PE80). The additive formulation is designed for appropriate durability

General	TOTAL Polypropylene PPC 1640	SABIC® PP RELY 71EK71PS	Eltex® TUB 433-NA00	Hostalen PP H2464	Borealis PP BA160E-8229-01
Manufacturer / Supplier	• TOTAL Refining & Chemicals	• SABIC	• INEOS Olefins & Polymers Europe	• LyondellBasell Industries	• Borealis AG
Generic Symbol	• 抗撞击 PP 均聚物	• 抗撞击 PP 均聚物	• 抗撞击 PP 均聚物	• 抗撞击 PP 均聚物	• 抗撞击 PP 均聚物
Material Status	• 已商用：当前有效	• 已商用：当前有效	• 已商用：当前有效	• 已商用：当前有效	• 已商用：当前有效
资料 <sup>1</sup>	• <a href="#">Technical Datasheet (English)</a>	--	• <a href="#">Technical Datasheet (English)</a>	• <a href="#">Processing - Extrusion (English)</a> • <a href="#">Processing - Injection Molding (English)</a> • <a href="#">Processing - Mold Shrink (English)</a> • <a href="#">Processing - PE Films (English)</a> • <a href="#">Technical Datasheet (English)</a>	• <a href="#">Technical Datasheet (English)</a>
搜索 UL 黄卡	• <a href="#">TOTAL Refining &amp; Chemicals</a>	• <a href="#">SABIC</a>	• <a href="#">INEOS Olefins &amp; Polymers Europe</a>	• <a href="#">LyondellBasell Industries</a> • <a href="#">Hostalen</a>	• <a href="#">Borealis AG</a>
Availability	• 欧洲	• 北美洲 • 非洲和中东 • 拉丁美洲 • 欧洲 • 亚太地区	• 欧洲	• 非洲和中东 • 欧洲 • 亚太地区	• 北美洲 • 非洲和中东 • 拉丁美洲 • 欧洲 • 亚太地区
Additive	• 成核剂 • 热稳定剂	• 成核剂 • 成核剂 • 热稳定剂	• 热稳定剂	--	--
Features	• Block Copolymer • 成核的 • 高刚性 • 抗冲共聚物 • 良好抗撞击性 • 耐低温冲击 • 热稳定性	• Block Copolymer • 成核的 • 成核的 • 高分子量 • 高刚性 • 良好抗撞击性 • 耐低温冲击 • 热稳定性	• Good Rigidity • 高抗撞击性 • 高熔体强度 • 抗冲共聚物 • 良好刚性 • 流动性低 • 耐低温冲击 • 热稳定性 • 热稳定性，良好 • 优异的加工性能	• Block Copolymer • 共聚物 • 良好刚性 • 良好抗撞击性	• 高 ESCR ( 抗应力开裂 ) • 高刚性 • 高抗撞击性 • 抗冲共聚物 • 可回收材料 • 良好的加工性能 • 耐低温冲击 • 耐化学性良好 • 耐酸
Uses	• 吹塑成型应用 • 管道系统 • 片材	• 工业应用	• 吹塑成型应用 • 管道系统 • 配件 • 片材	• 管道系统	• 配件
Agency Ratings	• EC 1907/2006 (REACH) --	--	--	--	--



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RoHS Compliance	• RoHS 合规	--	• 联系制造商	--	--
Automotive Specifications	--	• GM QK 003711 Color: 00900 Natural • IMDS ID 7172624 Color: -- • 00900 Natural • IMDS ID 80775790	--	--	--
Appearance	--	--	--	• 自然色	• 黑色
Forms	• 粒子	--	--	--	--
Processing Method	• 吹塑成型 • 管路挤出成型 • 挤出 • 片材挤出成型	• 吹塑成型 • 管路挤出成型 • 挤出 • 片材挤出成型	• 吹塑成型 • 管路挤出成型 • 片材挤出成型	• 管路挤出成型	• 注射成型

Physical	TOTAL Polypropylene PPC 1640	SABIC® PP RELY 71EK71PS	Eltex® TUB 433-NA00	Hostalen PP H2464	Borealis PP BA160E-8229-01	单位制	测试方法
Density							
--	0.905	--	0.905	0.900	0.900	g/cm³	ISO 1183
--	--	0.905	--	--	--	g/cm³	ASTM D1505
Apparent (Bulk) Density	0.53	--	--	--	--	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)							ISO 1133
190°C/5.0 kg	--	--	--	0.50	--	g/10 min	
230°C/2.16 kg	0.30	0.30	0.30	0.30	0.30	g/10 min	
230°C/5.0 kg	--	--	--	1.3	--	g/10 min	
Molding Shrinkage	--	--	--	--	1.0 到 2.0	%	No Standard

Mechanical	TOTAL Polypropylene PPC 1640	SABIC® PP RELY 71EK71PS	Eltex® TUB 433-NA00	Hostalen PP H2464	Borealis PP BA160E-8229-01	单位制	测试方法
Tensile Modulus							
-- <sup>3</sup>	--	--	1500	--	--	MPa	No Standard
--	1340	--	--	--	--	MPa	ISO 527-2
--	--	--	--	--	1300	MPa	ISO 527-2/1
--	--	1450	--	--	--	MPa	ISO 527-2/1A
23°C	--	--	--	1350	--	MPa	ISO 527-2



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Tensile Stress							
屈服	28.0	--	--	28.0	--	MPa	ISO 527-2
屈服	--	--	--	--	30.0	MPa	ISO 527-2/50
屈服	--	28.0	--	--	--	MPa	ISO 527-2/1A
屈服, 23°C, 4.00 mm, 注塑	--	--	28.0	--	--	MPa	ISO 527-2/50
Tensile Strain							
屈服	9.0	--	--	13	--	%	ISO 527-2
屈服	--	--	--	--	11	%	ISO 527-2/50
屈服	--	8.0	--	--	--	%	ISO 527-2/1A
屈服, 23°C, 4.00 mm, 注塑	--	--	9.0	--	--	%	ISO 527-2/50
Flexural Modulus							
--	1350	--	--	--	--	MPa	ISO 178
23°C, 4.00 mm, 模压成型 <sup>4</sup>	--	--	1500	--	--	MPa	
Impact	TOTAL Polypropylene PPC 1640	SABIC® PP RELY 71EK71PS	Eltex® TUB 433-NA00	Hostalen PP H2464	Borealis PP BA160E-8229-01	单位制	测试方法
Charpy Notched Impact Strength							
-20°C	8.0	--	--	10	--	kJ/m <sup>2</sup>	ISO 179
-20°C	--	7.0	--	--	5.0	kJ/m <sup>2</sup>	ISO 179/1eA
-20°C, 注塑 <sup>5</sup>	--	--	7.0	--	--	kJ/m <sup>2</sup>	ISO 179/1eA
0°C	--	--	--	34	--	kJ/m <sup>2</sup>	ISO 179
0°C	--	20	--	--	--	kJ/m <sup>2</sup>	ISO 179/1eA
0°C, 注塑 <sup>5</sup>	--	--	18	--	--	kJ/m <sup>2</sup>	ISO 179/1eA
23°C	> 80	--	--	55	--	kJ/m <sup>2</sup>	ISO 179
23°C	--	80	--	--	50	kJ/m <sup>2</sup>	ISO 179/1eA
23°C, 注塑 <sup>5</sup>	--	--	> 50	--	--	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	--	无断裂	--	--	--		ISO 179/1eU
Notched Izod Impact Strength							
-20°C	8.0	--	--	--	--	kJ/m <sup>2</sup>	ISO 180
-20°C	--	6.0	--	--	--	kJ/m <sup>2</sup>	ISO 180/1A
0°C	--	35	--	--	--	kJ/m <sup>2</sup>	ISO 180/1A
23°C	> 80	--	--	--	--	kJ/m <sup>2</sup>	ISO 180
23°C	--	无断裂	--	--	--		ISO 180/1A



Hardness	TOTAL Polypropylene PPC 1640	SABIC® PP RELY 71EK71PS	Eltex® TUB 433-NA00	Hostalen PP H2464	Borealis PP BA160E-8229-01	单位制	测试方法
Shore Hardness (邵氏 D)	--	66	--	--	--		ISO 868
Thermal	TOTAL Polypropylene PPC 1640	SABIC® PP RELY 71EK71PS	Eltex® TUB 433-NA00	Hostalen PP H2464	Borealis PP BA160E-8229-01	单位制	测试方法
Heat Deflection Temperature							
0.45 MPa, 未退火	--	--	95.0	--	89.0	°C	ISO 75-2/B
0.45 MPa, 未退火, 4.00 mm <sup>6</sup>	--	95.0	--	--	--	°C	ISO 75-2/Bf
1.8 MPa, 未退火, 4.00 mm <sup>6</sup>	--	55.0	--	--	--	°C	ISO 75-2/Af
Vicat Softening Temperature							
--	--	156	--	--	--	°C	ISO 306/A120
--	--	--	155	--	--	°C	ISO 306/A
--	--	--	--	--	86.0	°C	ISO 306/B50
--	--	81.0	--	--	--	°C	ISO 306/B120
Melting Temperature							
--	--	--	165	--	--	°C	ASTM D3417
--	165	--	--	--	--	°C	ISO 3146
Additional Information	TOTAL Polypropylene PPC 1640	SABIC® PP RELY 71EK71PS	Eltex® TUB 433-NA00	Hostalen PP H2464	Borealis PP BA160E-8229-01	单位制	测试方法
氧感应时间							
200°C	--	--	> 30	--	--	min	DIN EN 728
200°C	--	> 100	--	--	--	min	EN 728
200°C	--	--	--	30	--	min	ISO 11357-6
Injection	TOTAL Polypropylene PPC 1640	SABIC® PP RELY 71EK71PS	Eltex® TUB 433-NA00	Hostalen PP H2464	Borealis PP BA160E-8229-01	单位制	
Processing (Melt) Temp	--	--	--	--	230 到 260	°C	
Mold Temperature	--	--	--	--	10 到 40	°C	

备注

- 通过这些链接您能够访问供应商资料。我们尽量保证及时更新资料；不过您可以从供应商处了解最新资料。
- 一般属性：这些不能被视为规格。
- Calculated from ring stiffness measurements carried out on 110 mm solid wall pipes
- Cooling Rate = -15°C/min
- 4 mm thickness
- 80\*10\*4mm



## 购买地点

供应商	
TOTAL Polypropylene PPC 1640	<b>TOTAL Refining &amp; Chemicals</b> Houston, TX USA 电话: 713-483-5000 Web: <a href="http://www.totalrefiningchemicals.com/">http://www.totalrefiningchemicals.com/</a>
SABIC® PP RELY 71EK71PS	<b>SABIC</b> Web: <a href="http://www.sabic.com/">http://www.sabic.com/</a>
Eltex® TUB 433-NA00	<b>INEOS Olefins &amp; Polymers Europe</b> , Belgium 电话: +32-2264-3808 Web: <a href="http://www.ineospolyolefins.com/">http://www.ineospolyolefins.com/</a>
Hostalen PP H2464	<b>LyondellBasell Industries</b> Wilmington, DE USA 电话: 713-309-7200 Web: <a href="https://www.lyondellbasell.com/">https://www.lyondellbasell.com/</a>
Borealis PP BA160E-8229-01	<b>Borealis AG</b> Vienna, Austria 电话: +43-122-400-302 Web: <a href="http://www.borealisgroup.com/">http://www.borealisgroup.com/</a>



## 分销商

TOTAL Polypropylene PPC 1640

**Plastribution**

电话: +44-845-345-4560  
 Web: <http://www.plastribution.co.uk/>  
 供货地区: United Kingdom

**RESINEX Group**

*RESINEX is a Pan European distribution company. Contact RESINEX for availability of individual products by country.*

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 Web: <http://www.resinex.com/>  
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**Telko Oy**

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**TER HELL Plastic GmbH**

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电话: +49-2366-5661-0  
 Web: <https://www.terplastics.com/>  
 供货地区: France, Germany, Poland, Spain

SABIC® PP RELY 71EK71PS

**Nexo Solutions**

电话: 800-531-7106  
 Web: <http://www.nexeosolutions.com/>  
 供货地区: North America

**广州海森化工有限公司**

电话: +86-20-8732-0686  
 Web: <http://www.hisunchemical.com>  
 供货地区: China

Eltex® TUB 433-NA00

**Biesterfeld**

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 Web: <http://www.biesterfeld-plastic.com/>  
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**Distrupol Ltd**

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Web: <http://www.distrupol.com/>

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**GAZECHIM PLASTIQUES**

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Web: <http://www.gazechim.com/>

供货地区: France

Hostalen PP H2464

**ALBIS Plastic**

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Web: <http://www.albis.com/>

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Web: <http://www.omya.com>

供货地区: Europe

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Borealis PP BA160E-8229-01

**M. Holland Canada Company**

电话: 905-665-1168

Web: <http://www.mholland.com/>

供货地区: Canada

**M. Holland Company**

电话: 855-497-1403

Web: <http://www.mholland.com/>

供货地区: Mexico, United States

**Nexeo Solutions - Europe**

*Nexeo Solutions is a Pan European distribution company. Contact Nexeo for availability of individual products by country.*

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