

# Polidan® TUX 100

交联聚乙烯

Solvay Specialty Polymers

## Technical Data

### 产品说明

POLIDAN® TUX 100 is a high density crosslinkable polyethylene compound manufactured according to the "SIOPLAS®" process. It has been developed for the production of crosslinked pipes in a wide range of diameters and wall thickness.

Crosslinked PE pipes manufactured from POLIDAN® TUX 100 show outstanding properties:

- excellent temperature resistance
- very high environmental stress crack (ESCR) and notch resistance
- very good chemical resistance
- very high resistance towards rapid crack propagation (RCP)
- excellent long term strength

The MRS classification of the POLIDAN® TUX 100 has been calculated by EXOVA Polymer according to ISO 9080. It largely exceeds the specifications of the MRS 10 class.

### 总体

性能特点	<ul style="list-style-type: none"><li>• 高 ESCR ( 抗应力裂纹 )</li><li>• 高密度</li><li>• 规格级别</li></ul>	<ul style="list-style-type: none"><li>• 抗破裂性, 良好</li><li>• 可交联</li><li>• 良好的强度</li></ul>	<ul style="list-style-type: none"><li>• 耐化学性良好</li><li>• 耐磨蚀性, 良好</li><li>• 耐热性, 高</li></ul>
用途	<ul style="list-style-type: none"><li>• Oil/Gas Applications</li><li>• 工业领域:</li></ul>	<ul style="list-style-type: none"><li>• 管道系统</li><li>• 零件装置</li></ul>	
机构评级	<ul style="list-style-type: none"><li>• ISO 9080 PE 100</li></ul>	<ul style="list-style-type: none"><li>• ISO/DIS 12162 - MRS 10 MPa, PE100</li></ul>	<ul style="list-style-type: none"><li>• KTW Unspecified Rating</li></ul>
加工方法	<ul style="list-style-type: none"><li>• 管路挤压成型</li></ul>	<ul style="list-style-type: none"><li>• 挤出</li></ul>	<ul style="list-style-type: none"><li>• 注射成型</li></ul>

物理性能	额定值	单位制	测试方法
比重 <sup>3</sup>	0.953	g/cm <sup>3</sup>	ASTM D792
熔流率 <sup>3</sup> (190°C/5.0 kg)	1.3	g/10 min	ISO 1133
凝胶含量 <sup>3</sup>	> 65	%	EN 579
机械性能	额定值	单位制	测试方法
拉伸模量			ISO 527-2/1B/1
-40°C	3300	MPa	
23°C	1250	MPa	
100°C	130	MPa	
拉伸应力			ISO 527-2/1B/50
屈服, -40°C	47.0	MPa	
屈服, 23°C	26.0	MPa	
屈服, 100°C	6.00	MPa	
拉伸应变			
屈服, -40°C	7.0	%	ISO 527-2/1B/50
屈服, 23°C	8.0	%	ISO 527-2/1B/50
屈服, 100°C	16	%	ISO 527-2/1B/50
断裂, -40°C	110	%	ISO 527-2/1B/25
断裂, 23°C	390	%	ISO 527-2/1B/25
断裂, 100°C	170	%	ISO 527-2/1B/25
弯曲模量			ISO 178
-40°C	2600	MPa	
23°C	1200	MPa	
100°C	167	MPa	

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冲击性能	额定值 单位制	测试方法
简支梁缺口冲击强度		ISO 179/1A
-40°C	15 kJ/m <sup>2</sup>	
-25°C	Partial Break	
23°C	Partial Break	
100°C	无断裂	
热性能	额定值 单位制	测试方法
维卡软化温度	88.0 °C	ISO 306/B50
线形膨胀系数 - 流动		
-90 到 -30°C <sup>3</sup>	0.00010 cm/cm/°C	
-100 到 100°C <sup>4</sup>	0.00014 cm/cm/°C	
-30 到 90°C <sup>3</sup>	0.00019 cm/cm/°C	

## 补充信息

### Processing

- POLIDAN® TUX 100 is processed together with a catalyst masterbatch namely CATALYST CAT 10 in the ratio of 95 to 5 respectively. The POLIDAN® TUX 100 compound and its Catalyst CAT 10 can be used together with good quality PE based colour masterbatches. Solvay Specialty Polymers suggests pre-drying all colour masterbatches prior use.

### Properties

- The crosslinking is brought about by post-treatment of the finished product with hot water or steam.

### Storage and Handling

- In order to avoid pre-mature crosslinking, the POLIDAN® TUX 100 compound and its Catalyst CAT 10 shall be stored separately and mixed only when used. The crosslinkable compound shall be used within 6 - 8 hours after bags are opened.
- The product shall be stored under the following conditions:
  - Closed and unbroken bags
  - Ambient temperature not exceeding 40°C
  - Indoor in order to avoid direct exposure from sunlight
- The product could undergo alterations due to extended period of storage. Solvay Specialty Polymers suggests the product use within 12 months from the production date printed on the packaging. Solvay Specialty Polymers accepts no liability of any kind in case the above mentioned conditions are not fulfilled.

### Packaging

- POLIDAN® TUX 100 is supplied in 500 kg octabins which contain a single moisture resistant bag or in 25 kg moisture resistant bags placed on 1375 kg pallets.

### Technical Service

- POLIDAN® TUX 100 is part of the Solvay Specialty Polymers POLIDAN® product range. Solvay Specialty Polymers Technical Service is available to assist customers with further information and advice including the start-up and also for any eventual necessity during the use of the product.
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