

**TOTAL**Refining & Chemicals  
Polymers**+135-3858-6433 (GuangDong)**  
**+188-1699-6168 (ShangHai)**  
**+852-6957-5415 (HongKong)****Lumicene Supertough® 20ST20**Technical data sheet  
Polyethylene CAST FILM  
Produced in Europe**Description**

Lumicene Supertough® 20ST20 is a polyethylene film grade that is especially designed to have an excellent processability in cast extrusion and to give very high "toughness – holding" force balance allowing new innovative multilayer film concepts. Thanks to this innovative design, Lumicene Supertough® 20ST20 allows creation of added value in the film market.

**Characteristics**

Property	Method	Unit	Typical value
Density	ISO 1183	g/cm <sup>3</sup>	0.920
Melt Flow Rate (190°C/2.16 kg)	ISO 1133	g/10 min	1.8
Melting temperature	ISO 11357	°C	112
Vicat temperature	ISO 306	°C	106

*Values indicated are typical for this product. Density and MFR are properties routinely measured during "the standard quality control procedure". The other figures are generated by tests not included in the "standard quality control procedure", and are given for information only. Data are not intended for specification purposes.*

**Processing**

On a cast film line Lumicene Supertough 20ST20® are typically extruded in the following conditions:

- Melt Temperature: 220 to 280°C
- Chill roll temperature: 20 to 80°C

**Additives**

Antioxidant : yes

Polymer Processing Aid : no

Polyethylene

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Metallocene Polyethylene CAST FILM  
Produced in Europe**Cast film properties**

These values have been measured on a 20 µm cast film.

Property	Method	Unit	Typical value (*)
Tensile Strength at Yield MD/TD(**)	ISO 527-3	MPa	7.8 / 7.7
Tensile Strength at Break MD/TD(**)	ISO 527-3	MPa	37 / 39
Elongation at Break MD/TD(**)	ISO 527-3	%	379 / 610
Elmendorf MD/TD(**)	ISO 6383-2	N/mm	40 / 140
Dart test	ISO 7765-1	g	1100

(\*) Figures stated here above are obtained using laboratory test specimens produced at the following extrusion conditions: die gap = 250 µm, chill roll temperature = 20°C, throughput = 7 kg/h, melt temperature = 260 °C

(\*\*) MD : Machine Direction ; TD : Transverse Direction

Polyethylene