SureSpec HD53-4000

High Density Polyethylene

Genesis Polymers

Message:

HD53-4000 is a copolymer certified prime resin specially designed for molding thin wall applications requiring good balance of properties. HD53-4000 features high flow, fast cycling, easy processability, good impact strength, high gloss surfaces, good dimensional stability and good stiffness. HD53-4000 recommended processing temperature is 210 to 230°C. with mold @ 20 to 40°C.

Features	General Information			
Good Dimensional Stability Good Impact Resistance Good Processability Good Stiffness High Density High Flow High Gloss Uses Thin-walled Parts Forms Pellets Processing Method Injection Molding Physical Nominal Value Unit Test Method Density 40 8710 min ASTM D1538 Met Mass-Flow Rate (MFR) (190°C/2-16 Kg) 89 80 80 80 80 80 80 80 80 80 80 80 80 80	Features	Copolymer		
Good Impact Resistance Good Processability		Fast Molding Cycle		
Good Processability Good Stiffness High Density High Flow High Gloss		Good Dimensional Stability		
Good Stiffness High Density High Flow High Flow High Gloss Wass		Good Impact Resistance		
High Plow High Flow High Flow High Flow High Flow High Flow High Flows High Flow		Good Processability		
Uses Thin-walled Parts Forms Pellets Processing Method Injection Molding Physical Nominal Value Unit Test Method Density 0,952 g/m² ASTM D1505 Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) g/10 min ASTM D1238 Environmental Stress-Cracking Resistance (50°C, F50) 0,900 hr ASTM D1693 Mechanical Nominal Value Unit Test Method Tensile Strength ¹ (Yield) 27.6 MPa ASTM D638 Tensile Ingaction ² (Break) 45 % ASTM D638 Flexural Modulus 3 1140 MPa ASTM D638 Flexural Modulus 3 115 kg/m² ASTM D1622 Themal Nominal Value Unit Test Method Deflection Temperature Under Load (0.45 kg/m² ASTM D1622 Themal Nominal Value Unit Test Method Deflection Temperature Under Load (0.45 kg/m² ASTM D1622 Themal Nominal Value Unit Test Method Deflection Temperature Under Load (0.45 kg/m² ASTM D648 Brittleness Temperature Vical Softening Temperature Vical Softening Temperature Nominal Value Unit Test Method		Good Stiffness		
Uses Inim-walled Parts Forms Pellets Processing Method Injection Molding Physical Nominal Value Unit Test Method Density 0,952 g/cm³ ASTM D1505 Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) g/10 min ASTM D1238 Environmental Stress-Cracking Resistance (50°C, FS0) 0,900 hr ASTM D1693 Mechanical Nominal Value Unit Test Method Tensile Strength¹ (Vield) 27.6 MPa ASTM D638 Tensile Strength¹ (Vield) 27.6 MPa ASTM D638 Tensile Ingactor ² (Break) 45 % % ASTM D638 Flexural Modulus³ 1140 MPa ASTM D638 Flexural Modulus³ 1140 MPa ASTM D638 Tensile Impact Strength (Compression Moninal Value Unit Test Method Tensile Impact Strength (Compression Moninal Value Unit Test Method Tensile Impact Strength (Compression Moninal Value Unit Test Method Tensile Impact Strength (Compression Molded) 15.5 kl/m² ASTM D1822 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load (0.45 MPa, Unannealed) 73.0 °C ASTM D648 Brittleness Temperature Vical Softening Temperature 123 °C ASTM D1525 Injection Nominal Value Unit		High Density		
Thin-walled Parts Forms Pellets Processing Method Injection Molding Physical Nominal Value Unit Test Method Density 0.952 g/cm³ ASTM D150S Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) 40 g/10 min ASTM D1238 Environmental Stress-Cracking Resistance (50°C, F50) 0.900 hr ASTM D1693 Mechanical Nominal Value Unit Test Method Tensile Strength ¹ (Yield) 27.6 MPa ASTM D638 Flexural Modulus ³ 1140 MPa ASTM D638 Flexural Modulus ³ 1140 MPa ASTM D790 Impact Nominal Value Unit Test Method Tensile Impact Strength (Compression Molded) MPa ASTM D1822 Thermal Nominal Value Unit Test Method Pellection Temperature Under Load (0.45 MR) MPa ASTM D648 Brittleness Temperature 70.0 *C ASTM D648 Brittleness Temperature 70.0 *C ASTM		High Flow		
Porcessing Method Injection Molding Physical Nominal Value Unit Test Method Density 0,952 g/cm³ ASTM D1505 Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) 40 9/10 min ASTM D1238 Environmental Stress-Cracking Resistance (50°C, FS0) Mehanical Nominal Value Unit Test Method Tensile Strength ¹ (Yield) 27.6 MPa ASTM D638 Tensile Strength ¹ (Yield) 45 MPa ASTM D638 Flexural Modulus ³ 1140 MPa ASTM D638 Flexural Modulus ³ 1140 MPa ASTM D790 Impact Nominal Value Unit Test Method Tensile Impact Strength (Compression Molded) 31.5 KJ/m² ASTM D1822 Themal Nominal Value Unit Test Method Tensile Impact Strength (Compression Molded) 31.5 KJ/m² ASTM D1822 Themal Nominal Value Unit Test Method Peffection Temperature Under Load (0.45 MPa, Unannealed) 73.0 °C ASTM D648 Brittleness Temperature		High Gloss		
Porcessing Method Injection Molding Physical Nominal Value Unit Test Method Density 0,952 g/cm³ ASTM D1505 Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) 40 9/10 min ASTM D1238 Environmental Stress-Cracking Resistance (50°C, FS0) Mehanical Nominal Value Unit Test Method Tensile Strength ¹ (Yield) 27.6 MPa ASTM D638 Tensile Strength ¹ (Yield) 45 MPa ASTM D638 Flexural Modulus ³ 1140 MPa ASTM D638 Flexural Modulus ³ 1140 MPa ASTM D790 Impact Nominal Value Unit Test Method Tensile Impact Strength (Compression Molded) 31.5 KJ/m² ASTM D1822 Themal Nominal Value Unit Test Method Tensile Impact Strength (Compression Molded) 31.5 KJ/m² ASTM D1822 Themal Nominal Value Unit Test Method Peffection Temperature Under Load (0.45 MPa, Unannealed) 73.0 °C ASTM D648 Brittleness Temperature				
Processing Method Injection Molding Physical Nominal Value Unit Test Method Density 0,952 g/cm³ ASTM D1505 Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) g/10 min ASTM D1238 Environmental Stress-Cracking Resistance (60°C, FS0) 0,900 hr ASTM D1693 Mechanical Nominal Value Unit Test Method Tensile Strength ¹ (Yield) 27.6 MPa ASTM D638 Tensile Elongation ² (Break) 45 % ASTM D638 Flexural Modulus ³ 1140 MPa ASTM D790 Impact Nominal Value Unit Test Method Tensile Impact Strength (Compression Molded) 31.5 k/m² ASTM D1822 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load (0.45 MPa, Unannealed) 73.0 °C ASTM D648 Brittleness Temperature -70.0 °C ASTM D746 Vicat Softening Temperature 123 °C ASTM D1525	Uses	Thin-walled Parts		
Physical Nominal Value Unit Test Method Density 0.952 g/cm³ ASTM D1505 Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) 40 g/10 min ASTM D1238 Environmental Stress-Cracking Resistance (50°C, F50) 0.900 hr ASTM D1693 Mechanical Nominal Value Unit Test Method Tensile Strength ¹ (Yield) 27.6 MPa ASTM D638 Tensile Elongation ² (Break) 45 % ASTM D638 Flexural Modulus ³ 1140 MPa ASTM D790 Impact Nominal Value Unit Test Method Tensile Impact Strength (Compression Molded) 31.5 kl/m² ASTM D1822 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load (0.45 MPa, Unannealed) 73.0 °C ASTM D648 Brittleness Temperature -70.0 °C ASTM D1525 Injection Nominal Value Unit ASTM D1525	Forms	Pellets		
Density 0.952 g/cm³ ASTM D1505 Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) 40 g/10 min ASTM D1238 Environmental Stress-Cracking Resistance (50°C, F50) 0.900 hr ASTM D1693 Mechanical Nominal Value Unit Test Method Tensile Strength ¹ (Yield) 27.6 MPa ASTM D638 Flexural Modulus ³ 1140 MPa ASTM D790 Impact Nominal Value Unit Test Method Tensile Impact Strength (Compression Molded) 31.5 kl/m² ASTM D1822 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load (0.45 MPa, Unannealed) 73.0 °C ASTM D648 Brittleness Temperature 70.0 °C ASTM D746 Vicat Softening Temperature 123 °C ASTM D1525 Injection Nominal Value Unit Test Method	Processing Method	Injection Molding		
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) 40 g/10 min ASTM D1238 Environmental Stress-Cracking Resistance (50°C, F50) Mechanical Nominal Value Unit Test Method Tensile Strength 1 (Yield) 27.6 MPa ASTM D638 Tensile Elongation 2 (Break) 45 % 8 ASTM D638 Flexural Modulus 3 1140 MPa ASTM D790 Impact Nominal Value Unit Test Method Tensile Impact Strength (Compression Molded) 31.5 KJ/m² Tensile Impact Strength (Compression Molded) 73.0 °C ASTM D1822 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load (0.45 MPa, Unannealed) Tensile Impact Strenger (1.45 MPa) 73.0 °C ASTM D1825 Brittleness Temperature Vicat Softening Temperature Vicat Softening Temperature Nominal Value Unit	Physical	Nominal Value	Unit	Test Method
kg) 40 g/10 min ASTM D1238 Environmental Stress-Cracking Resistance (50°C, F50) ner Nominal Value ner	Density	0.952	g/cm³	ASTM D1505
Koo°C, F50)0.900hrASTM D1693MechanicalNominal ValueUnitTest MethodTensile Strength 1 (Yield)27.6MPaASTM D638Tensile Elongation 2 (Break)45%ASTM D638Flexural Modulus 31140MPaASTM D790ImpactNominal ValueUnitTest MethodTensile Impact Strength (Compression Molded)31.5kJ/m²ASTM D1822ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (0.45 MPa, Unannealed)73.0°CASTM D648Brittleness Temperature-70.0°CASTM D746Vicat Softening Temperature123°CASTM D1525InjectionNominal ValueUnit		40	g/10 min	ASTM D1238
Tensile Strength 1 (Yield) 27.6 MPa ASTM D638 Tensile Elongation 2 (Break) 45 % ASTM D638 Flexural Modulus 3 1140 MPa ASTM D790 Impact Nominal Value Unit Test Method Tensile Impact Strength (Compression Molded) 31.5 kJ/m² ASTM D1822 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load (0.45 MPa, Unannealed) 73.0 °C ASTM D648 Brittleness Temperature 7-70.0 °C ASTM D746 Vicat Softening Temperature 123 °C ASTM D1525 Injection Nominal Value Unit		0.900	hr	ASTM D1693
Tensile Elongation ² (Break) 45 % MPa ASTM D638 Flexural Modulus ³ 1140 MPa ASTM D790 Impact Nominal Value Unit Test Method Tensile Impact Strength (Compression Molded) 31.5 kJ/m² ASTM D1822 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load (0.45 MPa, Unannealed) 73.0 °C ASTM D648 Brittleness Temperature 7-70.0 °C ASTM D746 Vicat Softening Temperature 123 °C ASTM D1525 Injection Nominal Value Unit	Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus ³ 1140 MPa ASTM D790 Impact Nominal Value Unit Test Method Tensile Impact Strength (Compression Molded) 31.5 KJ/m² ASTM D1822 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load (0.45 MPa, Unannealed) 73.0 °C ASTM D648 Brittleness Temperature 123 °C ASTM D746 Vicat Softening Temperature Nominal Value Unit Unit	Tensile Strength ¹ (Yield)	27.6	MPa	ASTM D638
ImpactNominal ValueUnitTest MethodTensile Impact Strength (Compression Molded)31.5kJ/m²ASTM D1822ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (0.45 MPa, Unannealed)73.0°CASTM D648Brittleness Temperature-70.0°CASTM D746Vicat Softening Temperature123°CASTM D1525InjectionNominal ValueUnit	Tensile Elongation ² (Break)	45	%	ASTM D638
Tensile Impact Strength (Compression Molded) 31.5 kJ/m² ASTM D1822 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load (0.45 MPa, Unannealed) 73.0 °C ASTM D648 Brittleness Temperature 70.0 °C ASTM D746 Vicat Softening Temperature 123 °C ASTM D1525 Injection Nominal Value Unit	Flexural Modulus ³	1140	MPa	ASTM D790
Molded)31.5kJ/m²ASTM D1822ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (0.45 MPa, Unannealed)73.0°CASTM D648Brittleness Temperature-70.0°CASTM D746Vicat Softening Temperature123°CASTM D1525InjectionNominal ValueUnit	Impact	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45 MPa, Unannealed) 73.0 °C ASTM D648 Brittleness Temperature -70.0 °C ASTM D746 Vicat Softening Temperature 123 °C ASTM D1525 Injection Nominal Value Unit		31.5	kJ/m²	ASTM D1822
MPa, Unannealed)73.0°CASTM D648Brittleness Temperature-70.0°CASTM D746Vicat Softening Temperature123°CASTM D1525InjectionNominal ValueUnit	Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature 123 °C ASTM D1525 Injection Nominal Value Unit		73.0	°C	ASTM D648
Vicat Softening Temperature123°CASTM D1525InjectionNominal ValueUnit	Brittleness Temperature	-70.0	°C	ASTM D746
Injection Nominal Value Unit			°C	
	Processing (Melt) Temp	210 to 230	°C	

Mold Temperature	20.0 to 40.0	°C	
NOTE			
1.	50 mm/min		
2.	50 mm/min		
3.	13 mm/min		

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533 Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

