# SABIC® PP FPC55

#### Polypropylene Impact Copolymer

Saudi Basic Industries Corporation (SABIC)

#### Message:

SABIC® PP FPC55 is a grade developed for the thin wall packaging market. The grade is nucleated and is characterised by excellent flow behaviour in combination with an improved stiffness to impact balance. SABIC® PP FPC55 allows for very cost efficient processing on the basis of easy mould filling, short cycle times and improved part consistency in combination with pigments. It contains an antistatic package.

SABIC® PP FPC55 is typically used in thin wall packing applications both for food and non-food segments. This includes pails & containers, yellow fats/margarine tubs and dairy cups. In de caps and closure segment, the grade could be used for thin walled spray through caps, amongst other. The grade has excellent heat deflection temperature making it particularly suitable for hot fill applications.

The product mentioned herein is in particular not tested and therefore not validated for use in pharmaceutical/medical applications.

General Information			
UL YellowCard	E111275-100605362		
Additive	Antistatic		
	Nucleating Agent		
Features	Antistatic		
	Block Copolymer		
	Fast Molding Cycle		
	Good Flow		
	Good Mold Release		
	Nucleated		
Uses	Caps		
	Closures		
	Containers		
	Cups		
	Food Packaging		
	Packaging		
	Pails		
	Thin-walled Packaging		
=			
UL File Number	E111275		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.905	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	55	g/10 min	ASTM D1238, ISO 1133
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	95		ASTM D785
Shore Hardness (Shore D)	62		ISO 868

Tersile Modulus  1% Secant 1 1550 MPa ASTM D638  1900 MPa S0 527-2/1A/1  Tersile Strength  Yield 2 240 MPa S0 527-2/1A/50  Tersile Etongation  Tyield 3 40 MPa S0 527-2/1A/50  Tersile Etongation  Tyield 4 40 % S0 S07-2/1A/50  Tersile Etongation  Tyield 5 MPa STM D638  Yield 5 MPa STM D638  Yield 6 MPa STM D638  Tyield 7 MPa STM D638  Tersile Etongation  Tyield 9 MPa STM D638  Tyield 1 MPa STM D638  Tersile Etongation  Tyield 9 MPa STM D638  Tyield 1 MPa STM D638  Tersile Etongation  Tyield 9 MPa STM D638  Tyield 9 MPa STM D638							
1 1 5 5 5 0 1 5 1 5 1 5 1 5 1 5 1 5 1 5	Mechanical	Nominal Value	Unit	Test Method			
Tensile Strength	Tensile Modulus						
Tersile Strength  Yield 2 24.0 MPa ASTM 0638  Yield 25.0 MPa ISO 527-27/A/50  Tersile Elongation  Yield 3 4.0 S.	1% Secant <sup>1</sup>	1550	MPa	ASTM D638			
Yield 2         240         MPa         ASTM D638           Yield         25.0         MPa         150 527-2/1A/50           Tensile Elongation         Freshell Elongation         350 527-2/1A/50           Yield         4.0         %         ASTM D638           Yield         4.0         %         150 527-2/1A/50           Urild         Test Method         150 527-2/1A/50           Charpy Notched Impact Strength         Int         Test Method           -20°C         5.0         kl/m²           -20°C         7.0         kl/m²           -23°C         9.0         kl/m²           -20°C         45         J/m         ASTM D256A           0°C         60         J/m         ASTM D256A           -20°C         5.0         kl/m²         ISO 180/1A           -20°C         5.0         kl/m²         ISO 180/1A           0°C         6.0         kl/m²         ISO 180/1A           0°C         ASTM D648         ISO 80/1A		1500	MPa	ISO 527-2/1A/1			
Yield         25,0         MPa         150 527-2/1A/50           Tensile Elongation         Tensile Elongation         4.0         %         ASTM D638           Yield         4.0         %         150 527-2/1A/50           Impact         Nominal Value         Unit         Test Method           Chorpy Notched Impact Strength         5.0         L/m²           20°C         5.0         L/m²           30°C         7.0         L/m²           23°C         9.0         L/m²           23°C         9.0         L/m²           23°C         60         J/m         ASTM D256A           0°C         60         J/m         ASTM D256A           23°C         5.0         L/m²         150 180/1A           23°C         5.0         L/m²         150 180/1A           23°C         5.0         L/m²         150 180/1A           23°C         8.0         L/m²	Tensile Strength						
Tersile Elongation  Yield 3 4.0 % ASTM D638  Yield 4.0 % So S27-2/14/50  Impact Nominal Value Unit Test Method Charpy Notched Impact Strength	Yield <sup>2</sup>	24.0	MPa	ASTM D638			
Yield 3         4.0         %         ASTM D638           Yield 4         4.0         %         ISO 527-2/1A/50           Impact Northed Impact Strength         Unit         Test Method           Charpy Notched Impact Strength         ISO 179/1eA         ISO 179/1eA           20°C         5.0         kl/m²         ISO 179/1eA           20°C         7.0         kl/m²         ISO 179/1eA           23°C         9.0         kl/m²         ISO 180/1A           0°C         45         J/m         ASTM D256A           0°C         60         J/m         ASTM D256A           23°C         70         J/m         ASTM D256A           23°C         70         J/m         ASTM D256A           23°C         5.0         kl/m²         ISO 180/1A           23°C         5.0         kl/m²         ISO 180/1A           23°C         6.0         kl/m²         ISO 180/1A           23°C         8.0         Kl/m²         ISO 180/1A	Yield	25.0	MPa	ISO 527-2/1A/50			
Yield         4.0         %         ISO 527-2/1A/50           Impact         Nominal Value         Unit         Test Method           Charpy Notched Impact Strength         5.0         kl/m²         ISO 179/1eA           20°C         5.0         kl/m²         ISO 179/1eA           23°C         7.0         kl/m²         ISO 189/1e           23°C         9.0         kl/m²         ISO 180/1e           0°C         60         J/m         ASTM D256A           23°C         70         J/m         ASTM D256A           23°C         70         J/m         ASTM D256A           23°C         5.0         kl/m²         ISO 180/1A           23°C         5.0         kl/m²         ISO 180/1A           23°C         6.0         kl/m²         ISO 180/1A           23°C         8.0         kl/m²         ISO 180/1A           15ermal         Nominal Value         Unit         Test Method           Deletiction Temperature Under Load         "C         ASTM D648           0.45 MPa, Unannealed         100         "C         ASTM D648           1.8 MPa, Unannealed         60.0         "C         ASTM D1525, ISO 306/A120 6 6           1.8 MPa,	Tensile Elongation						
Impact         Nominal Value         Unit         Test Method           Charpy Notched Impact Strength         5.0         kJ/m²           -20°C         7.0         kJ/m²           23°C         9.0         kJ/m²           Notched Izod Impact         -20°C         45         J/m         ASTM D256A           0°C         60         J/m         ASTM D256A           0°C         60         J/m         ASTM D256A           23°C         70         J/m         ASTM D256A           23°C         70         J/m         ASTM D256A           23°C         70         J/m         ASTM D256A           0°C         6.0         kJ/m²         ISO 180/1A           23°C         8.0         kJ/m²         ISO 180/1A           24 Stream         Nominal Value         Unit         Test Method           0.45 MPa, Unannealed         10.0         °C         ASTM D1525 ISO           1.8 MPa, Unannealed so         55.0         °C         ASTM D1525, ISO	Yield <sup>3</sup>	4.0	%	ASTM D638			
Charpy Notched Impact Strength         ISO 179/1eA           -20°C         5.0         kJ/m²           0°C         7.0         kJ/m²           23°C         9.0         kJ/m²           Notched Izod Impact             -20°C         45         J/m         ASTM D256A           0°C         60         J/m         ASTM D256A           23°C         70         J/m         ASTM D256A           23°C         5.0         kJ/m²         ISO 180/1A           23°C         5.0         kJ/m²         ISO 180/1A           0°C         6.0         kJ/m²         ISO 180/1A           10°C         6.0         kJ/m²         ISO 180/1A           10°C         8.0         kJ/m²         ISO 180/1A           10°C         8.0         kJ/m²         ISO 180/1A           10°C         ASTM D164         ISO 180/1A           10°C         ASTM D164         ISO 180/1A           10°C         ASTM D164         ISO 75-2/8f           1.8 MPa, Unannealed for the presture         5.0         "C         ASTM D1525, ISO 306/12/26 for ISO 306/	Yield	4.0	%	ISO 527-2/1A/50			
10°C   7.0   10°C	Impact	Nominal Value	Unit	Test Method			
O°C         7.0         kJ/m²           23°C         9.0         kJ/m²           Notched Izod Impact         -20°C         45         J/m         ASTM D256A           0°C         60         J/m         ASTM D256A           23°C         70         J/m         ASTM D256A           -20°C         5.0         kJ/m²         ISO 180/1A           0°C         6.0         kJ/m²         ISO 180/1A           23°C         8.0         kJ/m²         ISO 180/1A           23°C         8.0         kJ/m²         ISO 180/1A           Themal         Nominal Value         Unit         Test Method           Deflection Temperature Under Load         Unit         Test Method           0.45 MPa, Unannealed         10.0         °C         ASTM D648           0.45 MPa, Unannealed d         95.0         °C         ISO 75-2/Bf           1.8 MPa, Unannealed d         60.0         °C         ASTM D648           1.8 MPa, Unannealed f         55.0         °C         ISO 75-2/Bf           Vicat Softening Temperature         76.0         °C         ASTM D1525, ISO 306/R120 6 6            76.0         °C         ASTM D1525, ISO 306/R120 6 6	Charpy Notched Impact Strength			ISO 179/1eA			
23°C   9,0   240m²   20°C   20°C   45   30m   256A   20°C   60   30m   256A   23°C   70   30m   256A   23°C   5.0   20°C   6.0   20°C   20°C   5.0   20°C   20°C   5.0   20°C	-20°C	5.0	kJ/m²				
Notched   Impact	0°C	7.0	kJ/m²				
20°C   45   J/m   ASTM D256A     0°C   60   J/m   ASTM D256A     23°C   70   J/m   ASTM D256A     22°C   50   kJ/m²   ISO 180/1A     0°C   60   kJ/m²   ISO 180/1A     0°C   60   kJ/m²   ISO 180/1A     23°C   80   kJ/m²   ISO 180/1A     23°C   80   kJ/m²   ISO 180/1A     150	23°C	9.0	kJ/m²				
O°C         60         J/m         ASTM D256A           23°C         70         J/m         ASTM D256A           -20°C         5.0         kJ/m²         ISO 180/1A           0°C         6.0         kJ/m²         ISO 180/1A           23°C         8.0         kJ/m²         ISO 180/1A           Thermal         Nominal Value         Unit         Test Method           Deflection Temperature Under Load           Under May Deflection Temperature Under Load           0.45 MPa, Unannealed         100         °C         ASTM D648           1.8 MPa, Unannealed 4         95.0         °C         ISO 75-2/Bf           1.8 MPa, Unannealed 5         55.0         °C         ASTM D648           1.8 MPa, Unannealed 5         55.0         °C         ASTM D1525, ISO 306/A120 6 6           Wick Softening Temperature	Notched Izod Impact						
23°C   70	-20°C	45	J/m	ASTM D256A			
150 180/1A   150 180/1A   160	0°C	60	J/m	ASTM D256A			
150 180/1A   150 180/1A   123°C   8.0   kJ/m²   150 180/1A   150/1A   150/1	23°C	70	J/m	ASTM D256A			
SO 180/1A   SO 180/1A   Thermal   Nominal Value   Unit   Test Method	-20°C	5.0	kJ/m²	ISO 180/1A			
Thermal   Nominal Value   Unit   Test Method	0°C	6.0	kJ/m²	ISO 180/1A			
Deflection Temperature Under Load  0.45 MPa, Unannealed	23°C	8.0	kJ/m²	ISO 180/1A			
0.45 MPa, Unannealed       100       °C       ASTM D648         0.45 MPa, Unannealed 4       95.0       °C       ISO 75-2/Bf         1.8 MPa, Unannealed 5       55.0       °C       ASTM D648         1.8 MPa, Unannealed 5       55.0       °C       ISO 75-2/Af         Vicat Softening Temperature          150       °C       ASTM D1525, ISO 306/A120 6 6 No 306/A120 6 6 No 306/B120 7 7 No 306/B120 7 No 306/B120 7 7 No 306/B120 7 No 306/B120 7 7 No 306/B120 7 N	Thermal	Nominal Value	Unit	Test Method			
0.45 MPa, Unannealed 4 95.0 °C ISO 75-2/Bf  1.8 MPa, Unannealed 5 60.0 °C ASTM D648  1.8 MPa, Unannealed 5 55.0 °C ISO 75-2/Af  Vicat Softening Temperature  150 °C ASTM D1525, ISO 306/A120 6 6  76.0 °C ASTM D1525, ISO 306/B120 7 7  NOTE  1. 5.0 mm/min 2. 50 mm/min 3. 50 mm/min 4. testbar 80*10*4mm 5. Rate B (120°C/h), Loading 1 (10 N)	Deflection Temperature Under Load						
1.8 MPa, Unannealed 5 55.0 °C ISO 75-2/Af  Vicat Softening Temperature  150 °C ASTM D1525, ISO 306/A120 6 6 ASTM D1525, ISO 306/A120 6 6 ASTM D1525, ISO 306/B120 7 7 ASTM D1525, ISO 306/B120 7 ASTM D1525,	0.45 MPa, Unannealed	100	°C	ASTM D648			
1.8 MPa, Unannealed 5 55.0 °C ISO 75-2/Af  Vicat Softening Temperature  150 °C 306/A120 6 6  76.0 °C 306/B120 7 7  NOTE  1. 5.0 mm/min 2. 50 mm/min 3. 50 mm/min 4. testbar 80*10*4mm 5. Rate B (120°C/h), Loading 1 (10 N)	0.45 MPa, Unannealed <sup>4</sup>	95.0	°C	ISO 75-2/Bf			
ASTM D1525, ISO 306/A120 6 6	1.8 MPa, Unannealed	60.0	°C	ASTM D648			
ASTM D1525, ISO 306/A120 6 6  76.0 °C ASTM D1525, ISO 306/B120 7 7  NOTE  1. 5.0 mm/min 2. 50 mm/min 3. 50 mm/min 4. testbar 80*10*4mm 5. testbar 80*10*4mm 6. Rate B (120°C/h), Loading 1 (10 N)	1.8 MPa, Unannealed <sup>5</sup>	55.0	°C	ISO 75-2/Af			
150 °C 306/A120 6 6  ASTM D1525, ISO 306/B120 7 7  NOTE  1. 5.0 mm/min 2. 50 mm/min 3. 50 mm/min 4. testbar 80*10*4mm 5. Rate B (120°C/h), Loading 1 (10 N)	Vicat Softening Temperature						
76.0 °C 306/B120 7 7  NOTE  1. 5.0 mm/min  2. 50 mm/min  3. 50 mm/min  4. testbar 80*10*4mm  5. testbar 80*10*4mm  6. Rate B (120°C/h), Loading 1 (10 N)		150	°C	ASTM D1525, ISO 306/A120 6 <sup>6</sup>			
1. 5.0 mm/min 2. 50 mm/min 3. 50 mm/min 4. testbar 80*10*4mm 5. testbar 80*10*4mm 6. Rate B (120°C/h), Loading 1 (10 N)		76.0	°C				
2. 50 mm/min 3. 50 mm/min 4. testbar 80*10*4mm 5. testbar 80*10*4mm 6. Rate B (120°C/h), Loading 1 (10 N)	NOTE						
2. 50 mm/min 3. 50 mm/min 4. testbar 80*10*4mm 5. testbar 80*10*4mm 6. Rate B (120°C/h), Loading 1 (10 N)	1.	5.0 mm/min	5.0 mm/min				
3. 50 mm/min 4. testbar 80*10*4mm 5. testbar 80*10*4mm 6. Rate B (120°C/h), Loading 1 (10 N)			50 mm/min				
4.       testbar 80*10*4mm         5.       testbar 80*10*4mm         6.       Rate B (120°C/h), Loading 1 (10 N)			50 mm/min				
5. testbar 80*10*4mm 6. Rate B (120°C/h), Loading 1 (10 N)							
6. Rate B (120°C/h), Loading 1 (10 N)							
·							
r Kale b (170°C/b) Loading 2 (50 N)	7.		Rate B (120°C/h), Loading 2 (50 N)				

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