

# CERTENE™ PHM-20AN

Polypropylene Homopolymer  
Muehlstein

Message:

PHM-20AN is a certified prime grade Nucleated Polypropylene designed for injection molding of thin-walled lightweight articles. PHM-20AN contains antistatic and combines a good balance of medium-high flow processability with high contact clarity, good tensile strength, high stiffness, short cycling, and excellent ESCR. PHM-20AN applications include lightweight containers, medical ware, caps, closures, and housewares. PHM-20AN recommended processing temperature is between 220° to 240°C with mold at 20°-50°C. PHM-20AN complies with FDA regulation 21CFR 177.1520 and with most international regulations concerning the use of Polypropylene in contact with food.

General Information			
Additive	Nucleating agent		
	Antistatic property		
Features	Nucleated		
	Rigidity, high		
	High ESCR (Stress Cracking Resistance)		
	High tensile strength		
	Homopolymer		
	Antistatic property		
	Workability, good		
	Fast molding cycle		
	High liquidity		
	Definition, high		
Uses	Thin wall container		
	Shield		
	Household goods		
	Medical/nursing supplies		
Agency Ratings	FDA 21 CFR 177.1520		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	0.905	g/cm <sup>3</sup>	ASTM D1505
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	20	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	96		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength <sup>1</sup> (Yield, Injection Molded)	37.2	MPa	ASTM D638

Tensile Elongation <sup>2</sup> (Yield, Injection Molded)	11	%	ASTM D638
Flexural Modulus - 1% Secant <sup>3</sup> (Injection Molded)	1860	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C, Injection Molded)	32	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45 MPa, Unannealed, Injection Molded)	123	°C	ASTM D648
Vicat Softening Temperature	154	°C	ASTM D1525

#### Additional Information

All specimens were injection molded according to ASTM D2146 Type 1.

Injection	Nominal Value	Unit
Processing (Melt) Temp	104 - 116	°C
Mold Temperature	-6.67 - 10.0	°C

#### NOTE

1. 50 mm/min
2. 50 mm/min
3. 1.3 mm/min

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#### 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

