Nano Nucleating Agent Masterbatch NB SERIES

Product Description

Nano Nucleating Agent Masterbatch is in masterbatch form. When used in film extrusion, it provides a surface for fast crystal formation. Cycle times in injection molding are reduced for optimal efficiency. Mechanical properties like flexural modulus, strength, heat-distortion temperature and hardness will increase. This product is designed in ***nano*** form and the clarity and transmittance is therefore significantly improved.

Applications

1) Injection Molding
2) Thermoforming
3) Extrusion Blow molding
4) Rotomolding
5) Extrusion
6) Blown Film

Example: pallet shrink wrap film, broom and MOP packaging film and many other applications

Advantages

Speeds up the crystal morphology
Enhanced mechanical properties (impact strength, tensile strength, tensile elongation, flexural strength).
Significantly improve the clarity and transmittance

Method of Use

Suitable polymers / materials: PP, PE, LLDPE, EPE
Advantages: recommended dual-screw extruder

Packaging and Storage

25KG Bag packing / 1000KG Pallet
Store for 2 Year



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Comparison Test Results

Linear low density polyethylene (LLDPE) Stretch Wrap:
Film thickness reduced by 20% when adding NB!

Formulation		Add 4% NB	Original	Original
Film thickness		12um	14um	15um
Tearing strength (g)	MD	16	16	16
	CD	307	321	336
Tensile strength (kg/cm^2)	MD	536	540	557
	CD	184	188	210
Elongation(%)	MD	480	478	523
	CD	754	750	798
Young's modulus (kg/mm^2)	MD	8.18	8.24	9.14
	CD	10.85	10.38	10.35
Haze %		1.1	1.3	1.6
Gloss %		149	147	146
Adhesion (g/30cm)		13.7	9.8	10.2
Thrust resistance (kg)		7.1	5.9	7.8

12um PE Film:

	Formulation	Maximum	Breaking %
1	Add 30% Metallocene PE	0.86	373.494
2		1.00	389.848
3		0.98	392.228
4	**Add 3% NB**	1.02	440.418
5		0.98	423.94
6		1.00	441.556
7	**Add 5% NB**	1.06	472.032
8		1.06	484.49
9		1.15	545.834
10	Competition Product	1.06	399.186
11		1.25	447.544
12		1.25	496.616

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Expandable Polyethylene: Mechanical Strength

Mechanical strength	Method	Add 5% talc powder	Add 5% SiO2	**Add 5% NB**
Flexural Strength kg/cm^2	ASTM D790	104.83	103.87	109.53
Tensile Strength kg/cm^2	ASTM D638	114.7	119	126.5
Impact strength kg/cm^2	ASTM D256	114.7	119	126.5