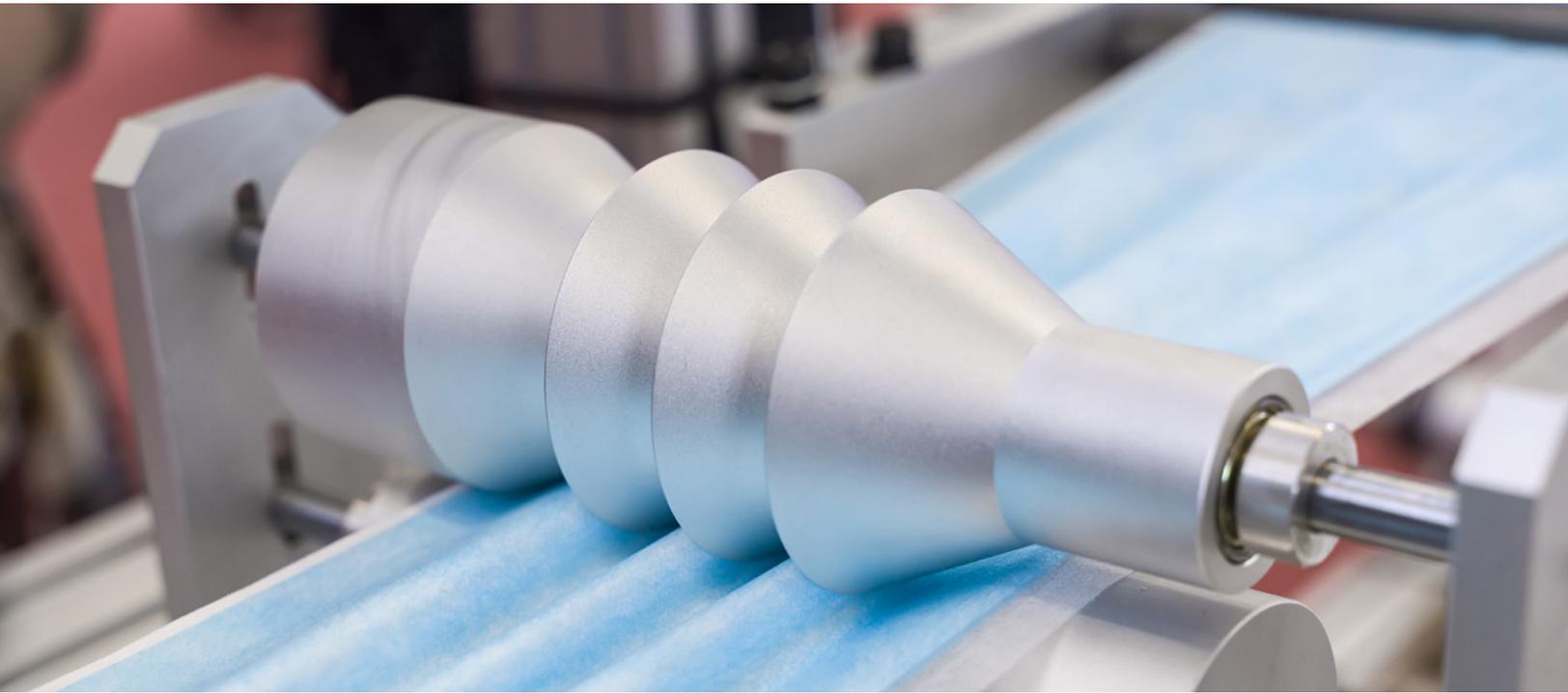


Catalloy Process Resins for Non-Woven Fibers

Advancing what's possible in soft and stretchable fabrics





Catalloy Process Resins are reactor thermoplastic polyolefins (reactor TPO) that combine the thermal advantages of polypropylene (PP) with the high impact capabilities of Ethylene-Propylene Rubber. The *Catalloy* process enables PP based resin to contain finely and uniformly dispersed rubber in very high proportions, creating soft and flexible products.

Property Performance using *Catalloy* Process Resins

- High gas and Moisture Transmission Rates
- High heat resistance
- High impact at low temperatures
- Polyethylene (PE) and PP compatible
- Range of low to high flexural modulus
- Extreme toughness, tear and puncture
- Higher elasticity than PE and PP
- Processes like normal PP

The proprietary, multiple gas-phase reactor, *Catalloy* process produces unique grades such as *Adflex* and *Softell* reactor-TPO's. The *Catalloy* process also produces value-added *Adsyl* terpolymers and high ethylene copolymers, which may be used for low initiation temperature applications

Some Typical Applications



Transportation



Hygiene



Building & Construction



Geotextiles

Benefits

When *Catalloy* process technology is applied to a fiber grade homopolymer PP, you receive enhanced characteristics including:

- Significantly faster spinning speeds
- Softer fibers with lower tenacity and Young's modulus
- Finer fibers
- Yarn with relatively higher ultimate elongation

Catalloy Process Resins

LyondellBasell's extensive product offering of *Catalloy* process resins allows for the development of customized solutions in non-woven fiber applications.

Properties	Physical		Mechanical							Typical Conversion Processes	Typical Customer Applications	Notes	
	Grade Name	Melt Flow Rate (2.16 kg, 230°C) (g/10min) ISO 1133	Flexural Modulus (MPa) ISO 178	Tensile Stress at Break (MPa) ISO 527	Shore D Hardness (15 seconds) ISO 868	HDT (°C) (0.45 Mpa) ISO 75	VICAT (A50,°C) ISO 306	Charpy Notched Impact Strength					
								(23°C) (kJ/m2) ISO 179	(-20°C) (kJ/m2) ISO 179				(-40°C) (kJ/m2) ISO 179
Adflex													
Q109F	0.60	100	10	30	40	60	41	107	2.8	Compounding	Automotive	Flexibility and softness	
Q100F	0.60	100	10	30	40	60	NB	110	5	Blown film, calendaring	Flexible packaging	High impact, elastic recovery	
Q401F	0.65	480	21	49	57	108	86	3.2	2.2	Blown film	Flexible packaging	Stiffness and impact balance	
Q402F	0.65	480	21	49	57	108	86	3.2	2.2	Blown film	Flexible packaging	Stiffness and impact balance	
Q200F	0.80	150	13	49	44	76	60	87	2.1	Blown film, sheet extrusion	Flexible packaging	High impact	
KS021P	0.90	350	10	38	52	67	70	98	3.2	Blown film, sheet extrusion, compounding, blow molding, fiber spinning	Automotive, flexible packaging, industrial blow molding, non-wovens	Soft touch, matte finish	
Q302B	0.90	350	10	38	52	67	70	98	3.2	Blow molding	Tubes, bottles	Soft touch, matte finish	
X101H	8	100	10	30	36	55	NB	NB	1.5	Cast film, compounding	Flexible packaging, bitumen modification	Flexibility and impact	
X500F	7.5	550	22	46	58	94	65	45	5	Cast film, compounding, fiber spinning, injection molding	Flexible packaging, non-wovens	Clarity impact modifier	
KS311P	9.5	530	15	46	53	112	59	4.1	1.4	Cast film, compounding, fiber spinning, injection molding	Roofing membrane, automotive, non-wovens	Soft touch, matte finish	
V109F	12	80	8	30	35	55	35	5	1.4	Cast film, compounding, injection molding	Flexible packaging	Flexibility and impact	
Z108S	27	80	6	30	37	53	33	2.8	1.3	Cast film, extrusion coating, fiber spinning, injection molding	Flexible packaging, non-wovens	Flexibility and impact	
KS084P	30	100	13	35	40	53	47	2.8	1.2	Cast film, extrusion coating, fiber spinning, injection molding	Flexible packaging, non-wovens	Flexibility and impact	

ABOUT US

LyondellBasell (NYSE: LYB) is one of the largest plastics, chemicals and refining companies in the world. Driven by its employees around the globe, LyondellBasell produces materials and products that are key to advancing solutions to modern challenges like enhancing food safety through lightweight and flexible packaging, protecting the purity of water supplies through stronger and more versatile pipes, improving the safety, comfort and fuel efficiency of many of the cars and trucks on the road, and ensuring the safe and effective functionality in electronics and appliances. LyondellBasell sells products into more than 100 countries and is the world's largest producer of polymer compounds and the largest licensor of polyolefin technologies. More information about LyondellBasell can be found at www.LyondellBasell.com.

For more information, visit lyb.com

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