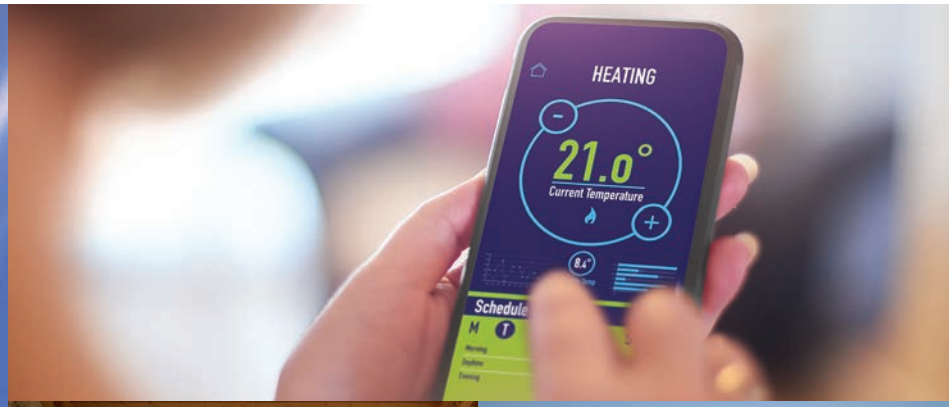
HUNTSMAN

Enriching lives through innovation

TEROL® Specialty Polyester Polyols – Americas



Improving energy efficiency with high performance polyurethane insulation

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With world-scale MDI (methylene diphenyl diisocyanate) and polyol production facilities in North America, Europe and Asia, plus a network of more than 30 systems houses spanning the globe, Huntsman is well positioned to provide innovative, differentiated polyurethane solutions for customers anywhere in the world.

TRANSFORMING PLASTIC WASTE INTO ENERGY-SAVING INSULATION

Huntsman manufactures TEROL® aromatic polyester polyols at its Houston, Texas, facility. These polyols are a critical ingredient in the production of MDI-based polyurethane insulation products – the most effective insulants available in the market, as measured by R-value. Insulation products include polyisocyanurate boardstock systems and spray polyurethane foam (SPF), which provide significant energy savings in residential, commercial and industrial buildings; and pour-in-place applications, including picnic coolers, entry doors, garage doors, refrigerators and commercial freezers.

Huntsman utilizes a proprietary process that enables the use of severely distressed PET (polyethylene terephthalate) streams, that otherwise would have been destined for landfills or found their way into our oceans, in the production of its TEROL® product range. Both pre-consumer and post-consumer sources of PET are used, equivalent to one billion 500 ml PET bottles per year.

Huntsman.com/PETrecycling

TEROL® Polyester Polyols

We have an ever-growing number of commercial and experimental polyols, each of which provides unique performance and processing characteristics, including improved flammability characteristics, which reduces the need for expensive flame retardants.

Features	Hydroxyl Number	Equivalent Weight	Viscosity @ 25°C (cPs)	Acid # (max)	H_2O Content (max)	SpG @ 25°C	Functionality	Aromatic content (%)
TEROL® 11	410 - 460	129.0	500 - 1,500	2.0	0.10	1.23	2.0	29.8
TEROL® 198	175 - 195	303.2	3,200 - 4,200	2.5	0.10	1.23	2.0	31.6
TEROL® 250*	235 - 265	224.4	4,000 - 6,000	2.0	0.15	1.24	2.0	39.5
TEROL® 256*	255 - 275	215.8	10,000 - 14,000	2.2	0.10	1.26	2.2	37.5
TEROL® 305*	285 - 315	187.0	5,000 - 6,000	1.5	0.15	1.24	2.2	34.9
TEROL® 350	335 - 365	160.3	4,000 - 6,000	3.0	0.15	1.22	2.2	34.5
TEROL® 352*	335 - 365	160.3	2,500 - 3,500	2.0	0.15	1.23	2.2	32.6
TEROL® 518	230 - 255	233.8	2,500 - 4,000	1.5	0.15	1.22	2.0	35.4
TEROL® 563*	235 - 255	233.8	2,500 - 4,000	2.0	0.15	1.24	2.0	37.2
TEROL® 595	150 - 170	350.6	1,600 - 2,600	2.0	0.10	1.16	2.0	27.8
TEROL® 649*	360 - 380	151.6	5,500 - 7,500	2.0	0.10	1.21	3.0	30.3
TEROL® 704	105 - 125	487.8	2,500 - 4,500	2.0	0.10	1.14	2.0	30.7
TEROL® 764	235 - 265	224.4	600 - 1,000	2.0	0.15	1.17	2.0	26.0
TEROL® 925*	295 - 315	187.0	10,000 - 13,000	2.1	0.10	1.25	2.4	38.5
TEROL® 1254	235 - 265	224.4	1,200 - 1,800	2.0	0.15	1.19	2.2	29.9
TEROL® 1326	290 - 310	187.0	10,000 - 15,000	1.5	0.15	1.19	2.6	30.4
TEROL® 1465	285 - 305	187.0	4,500 - 6,500	2.0	0.15	1.24	2.4	35.0
TEROL® 1481	290 - 310	187.0	5,250 - 7,250	2.0	0.15	1.18	2.6	29.9

* UL Environment Certified Recycle Content, see certification badge.

Features	High Functionality	Lower Viscosity	Improved Fire Performance	Low Hydroxyl Number	Low Equivalent Weight	Improved Pentane Solubility	High Water Content Compatible	Recommended for Boardstock Applications	General Purpose for Rigid Foams	Recommended for Panel Applications	Recommended for Closed Cell Spray Foam
TEROL® 11		X			X		X		X		
TEROL® 198				X			X		X		
TEROL® 250*			X					X	X	X	X
TEROL® 256*			X						X	X	X
TEROL® 305*			X						X		X
TEROL® 350			X		X				X		X
TEROL® 352*		X			X				X		X
TEROL® 518								X		X	
TEROL® 563*								X		X	
TEROL® 595		X		X		X	X		X		
TEROL® 649*	X		X		X						X
TEROL® 704		X		X		X	X		X		
TEROL® 764		X				X					
TEROL® 925*	X		X							X	X
TEROL® 1254		X				X	X		X		
TEROL® 1326	X					X	X		X	X	
TEROL® 1465	X	X	X				X			X	X
TEROL® 1481	X	X				X			X		X

* TEROL® 250, 256, 305, 352, 563, 649 and 925 modified aromatic polyester polyols has received the Underwriters Laboratories (UL) Environment certification.

While all TEROL® polyols contain recycled and/or renewable content, seven of the polyols have been certified by Underwriters Laboratories (UL) Environment. Huntsman became the first U.S. polyester polyol manufacturer to receive the designation in 2014. To receive this certification, UL verified Huntsman's pre-consumer recycled, post-consumer recycled and renewable resource content claims by reviewing our manufacturing practices and raw materials sources. Our seven UL-certified products contain up to 60 percent recycled content – materials that otherwise would have remained in landfills or added to the growing waste stream.

Manufacturing Locations

MDI Manufacturing Locations

Geismar, Louisiana, USA
Rotterdam, the Netherlands
Shanghai, China

Polyurethane Systems Houses and Downstream Manufacturing Locations

Boisbriand, Canada
Mississauga, Canada
Ringwood, Illinois, USA
Arlington, Texas, USA
Houston, Texas, USA
Cartagena, Colombia
Taboão da Serra, Brazil
King's Lynn, United Kingdom
Osnabrueck, Germany
G'marinehutte, Germany
Deggendorf, Germany
Modena, Italy
Azeglio, Italy
Ternate, Italy
Obninsk, Russia
Istanbul, Turkey
Damman, Saudi Arabia
Dubai, United Arab Emirates
Pune, India
Tokyo, Japan
Bangpoo, Thailand
Ningwu, China
Minhang, China
Jinshan, China
Kuan Yin, Taiwan
Ho Chi Minh City, Vietnam
Jakarta, Indonesia
Deer Park, Australia

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