

UL VERIFIED TEROL® Specialty Polyester Polyols – Americas



Certified by Underwriters Laboratories (UL)



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 upcycling 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.

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 ₂ O Content (max)	SpG @ 25°C	Functionality	Aromatic content (%)	Pre- Consumer Recycle¹ (%)	Post- Consumer Recycle ² (%)	Rapidly Renewable Content³ (%)
TEROL® 250*	235 - 265	224.4	4,000 - 6,000	2.0	0.15	1.24	2.0	39.5	29	26	0
TEROL® 256*	255 - 275	215.8	10,000 - 14,000	2.2	0.10	1.26	2.3	37.5	22	18	0
TEROL® 305*	285 - 315	187.0	5,000 - 6,000	1.5	0.15	1.24	2.2	34.9	20	17	0
TEROL® 352*	335 - 365	160.3	2,500 - 3,500	2.0	0.15	1.23	2.2	32.6	19	16	0
TEROL® 518	230 - 255	233.8	2,500 - 4,000	1.5	0.15	1.22	2.0	35.4	25	0	5
TEROL® 563*	235 - 255	233.8	2,500 - 4,000	2.0	0.15	1.24	2.0	37.2	33	0	0
TEROL® 649*	360 - 380	151.6	5,500 - 7,500	2.0	0.10	1.21	3.0	30.3	21	0	17
TEROL® 925*	295 - 315	187.0	10,000 - 13,000	2.1	0.10	1.25	2.4	38.5	16	14	0

- 1 Pre-consumer Recycle Material materials diverted from waste stream in a manufacturing process as defined by International Standard ISO 14021.
- 2 Post-consumer Recycle Material materials generated by households or by commercial industrial and institutional facilities in their role as end-users of the product which can no longer be used for its intended purpose as defined by International Standard ISO 14021.
- 3 Rapidly Renewable Materials materials made from plants tat are typically harvested with a ten year cycle or shorter as defined by LEED for New Construction & Major Renovations, Version 2.2.
- * UL Environment Certified Recycle Content, see certification badge.















While all TEROL® polyols contain recycled 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.

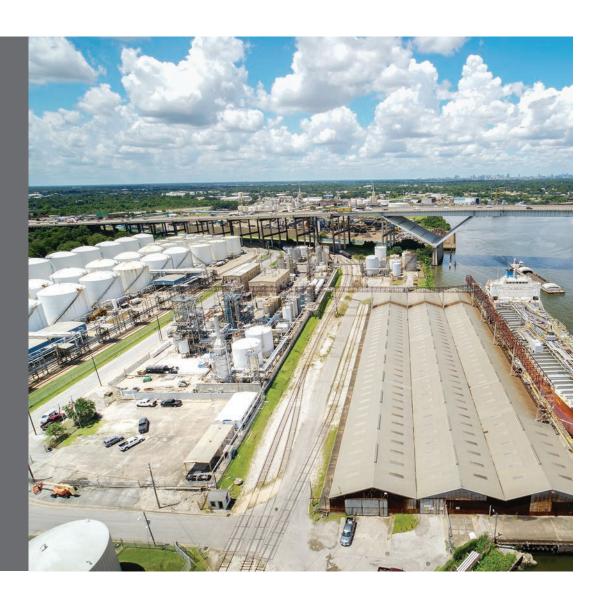
MDI Manufacturing Locations

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



HUNTSMAN

Enriching lives through innovation

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Huntsman Polyurethanes warrants only that its products meet the specifications agreed with the buyer. Typical properties, where stated, are to be considered as representative of current production and should not be treated as specifications.

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Products may be toxic and require special precautions in handling. The user should obtain Safety Data Sheets from Huntsman Polyurethanes containing detailed information on toxicity, together with proper shipping, handling and storage procedures, and should comply with all applicable safety and environmental standards.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent on the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

Huntsman Polyurethanes is an international business unit of Huntsman International LLC. Huntsman Polyurethanes trades through Huntsman affiliated companies in different countries such as Huntsman International LLC in the USA and Huntsman Holland BV in Western Europe.

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