Custom Formulated Systems for Office Furniture, Bedding, Public Transportation, and Specialty Molded Applications

A better sleep. A cozy seat. More comfort and support for the journey. Our technical service representatives can help you balance the critical factors of performance, economics and environmental impact to produce differentiated foam that will meet or exceed your customers' expectations. We offer many options: high-resilience foam for support and durability; viscoelastic foam for all-season comfort; high-load-bearing foam for greater firmness; improved sustainability attributes; and high-performance foams for reduced odor and emissions.

The following list is a brief overview of Dow's portfolio. Please contact your Dow representative for additional assistance on finding a solution to your specific needs.

Descriptions and Physical Properties

Molded Foam for General Purpose Cushioning/Seating Applications
2K MDI-based water-blown PU system for transportation seating, padding and recreational items.

Product	Viscosity		Molded Density, lb/ft³	50% Compression Set, % thickness loss	Tensile Strength, psi	Elongation, %	Tear Strength, pli
	Polyol	Isocyanate					
SPECFLEX™ NF 766 Polyol/ VORALUX™ HE 150 ISOCYANATE	2200-3300	40-80	2.9	8.5	23.7	103	1.0

Molded Foam for Furniture/Seating Applications Intended to Pass CAL TB117 Flammability

Water-blown fully formulated polyol and isocyanate for furniture and transportation applications.

Product	Viscosity		Molded Density, lb/ft³	50% Compression Set, % thickness loss	Tensile Strength, psi	Elongation, %	Tear Strength, pli
	Polyol	Isocyanate					
VORALUX™ HM 731 Polyol/ VORALUX HE 140 Isocyanate	850-1550	80-140	3.03	<5.0	36	150	1.8
VORALUX RENUE HM 732 Polyol/ VORALUX HE 140 Isocyanate	700-1300	80-140	3.04	10	22	160	1.2
VORALUX HM 738 Polyol/VORALUX HE 140 Isocyanate	1715-3180	80-140	4.5-5.5	–	–	–	–

Molded Foam with Good Physical Properties for Small Parts

2K medium density flexible flexible foam for gaskets, protective padding, armrests and headrests.

Product	Viscosity		Molded Density, lb/ft³	50% Compression Set, % thickness loss	Tensile Strength, psi	Elongation, %	Tear Strength, pli
	Polyol	Isocyanate					
SPECFLEX™ NS 673 Polyol/ SPECFLEX NE 344 Isocyanate	1100-1400	400-550	12.7	–	–	110	9.9

Molded Foam for Low Emissions/Non-PVC-Staining Application

2K medium density flexible foam for gaskets, NVH parts, anti-fatigue mats, protective padding, armrests and headrests.

Product	Viscosity		Molded Density, lb/ft³	50% Compression Set, %thickness loss	Tensile Strength, psi	Elongation, %	Tear Strength, pli
	Polyol	Isocyanate					
SPECFLEX™ NS 806 Polyol/ SPECFLEX NE 344 Isocyanate	850-1550	325-600	10.5	3.3	45	143	2

Integral Skin Applications

2K medium HFC blown foam for furniture, transportation, sports and recreational applications.

Product	Viscosity		Molded Density, lb/ft³	50% Compression Set, %thickness loss	Tensile Strength, psi	Elongation, %	Tear Strength,pli
	Polyol	Isocyanate					
SPECFLEX™ NM 841 Polyol/ SPECFLEX NE 357 Isocyanate	800-1100	30-50	18	–	264	140	28
SPECFLEX NR 803 Polyol/ SPECFLEX NE 357 Isocyanate	800-1100	30-50	14.6	–	190	160	30
SPECFLEX NR 806 Polyol/ SPECFLEX NE 357 Isocyanate	800-1300	30-50	23	–	360	130	37
SPECFLEX NR 874 Polyol/ SPECFLEX NE 357 Isocyanate	700-1200	30-50	15.3	–	–	–	–

Viscoelastic Foam Applications

Water-blown formulated polyols for bedding and medical applications.

Product	Viscosity		Molded Density, lb/ft³	50% Compression Set, %thickness loss	Tensile Strength, psi	Elongation, %	Tear Strength,pli
	Polyol	Isocyanate					
VORALUX™ HK 512 Polyol/ SPECFLEX™ NE 382 Isocyanate	800-1480	50-90	3.15	–	–	–	–
VORALUX HK 575 Polyol/ VORALUX HE 141 Isocyanate	1570	60	75	2.25 (75%)	–	–	–

Archery Target Application

2K medium density semi-flexible foam for archery targets and recreational applications.

Product	Viscosity		Molded Density, lb/ft³	50% Compression Set, %thickness loss	Tensile Strength, psi	Elongation, %	Tear Strength,pli
	Polyol	Isocyanate					
SPECFLEX™ ND 866 Polyol/ SPECFLEX NE 361 Isocyanate	2000-4000	450-900	5.8-6.4	–	–	–	–

Typical Reaction Characteristics

Molded Foam for General Purpose Cushioning/Seating Applications

	Hand Mix			
	Cream Time, Seconds	Gel, Seconds	Rise, Seconds	Free Rise Density, lb/ft³
SPECFLEX™ NF 766 Polyol/ VORALUX™ HE 150 Isocyanate	6-12	43-49	46-56	–

Molded Foam for Furniture/Seating Applications Intended to Pass CAL TB117 Flammability

	Hand Mix			
	Cream Time, Seconds	Gel, Seconds	Rise, Seconds	Free Rise Density, lb/ft³
VORALUX™ HM 731 Polyol/ VORALUX HE 140 Isocyanate	12-16	58-70	77-93	2.4-3.0
VORALUX RENUE HM 732 Polyol/VORALUX HE 140 Isocyanate	11-15	54-68	70-86	2.6-3.2
VORALUX HM 738 Polyol/VORALUX HE 140 Isocyanate	10-14	63-77	90-110	3.4-4.2

Molded Foam with Good Physical Properties for Small Parts

	Hand Mix			
	Cream Time, Seconds	Gel, Seconds	Rise, Seconds	Free Rise Density, lb/ft³
SPECFLEX™ NS 673 Polyol/ SPECFLEX NE 344 Isocyanate	11-17	58-70	136-150	6.0-6.8

Molded Foam for Low Emissions/Non-PVC-Staining Applications

	Hand Mix			
	Cream Time, Seconds	Gel, Seconds	Rise, Seconds	Free Rise Density, lb/ft³
SPECFLEX™ NS 806 Polyol/ SPECFLEX NE 344 Isocyanate	16-21	73-81	–	6.8-8.3

Integral Skin Applications

	Hand Mix			
	Cream Time, Seconds	Gel, Seconds	Rise, Seconds	Free Rise Density, lb/ft³
SPECFLEX™ NM 841 Polyol/SPECFLEX NE 357 Isocyanate	17-23	65-78	75-95	6.6-7.4
SPECFLEX NR 803 Polyol/SPECFLEX NE 357 Isocyanate	26=32	80-95	95-110	7.8-8.7
SPECFLEX NR 806 Polyol/SPECFLEX NE 357 Isocyanate	16-22	45-60	62-85	9.5-11.5
SPECFLEX NR 874 Poloyol/SPECFLEX NE 357 Isocyanate	18-24	73-83	93-110	6.6-7.4

Viscoelastic Foam Applications

	Hand Mix			
	Cream Time, Seconds	Gel, Seconds	Rise, Seconds	Free Rise Density, lb/ft³
VORALUX™ HK 512 Polyol/SPECFLEX™ NE 382 Isocyanate	10-14	60-74	85-95	2.6-3.2
VORALUX HK 575 Polyol/VORALUX HE 141 Isocyanate	10-13	82-85	–	–

Archery Target Applications

	Hand Mix			
	Cream Time, Seconds	Gel, Seconds	Rise, Seconds	Free Rise Density, lb/ft³
SPECFLEX™ ND 866 Polyol/SPECFLEX™ NE 361 Isocyanate	22-36	120-180	–	–

Innovating For You

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