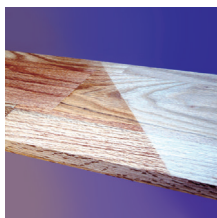




We create chemistry

Urethane Chemicals CASE Product Line

Coatings, Adhesives & Binders,
Sealants, Elastomers



Polyols

Product Name	Product Number	Functionality Number	OH Value	Nominal Molecular Weight (g/mole)	Initiator	Structure	Classification	Bulk	Packaged
CASE									
Pluracol® P410R	30085131	2	265	400	pg	PO	CASE	Yes	D & T
Pluracol® P710R	30085536	2	145	700	pg	PO	CASE	Yes	D & T
Pluracol® P1010	30077374	2	107	1,000	pg	PO	CASE	Yes	D & T
Pluracol® P2010	30077369	2	56	2,000	pg	PO	CASE	Yes	D & T
Pluracol® 1044	30085262	2	29	3,200	pg	PO	CASE	Yes	T
Pluracol® 1062	30076820	2	29	3,500	pg	PO/EO	Molded	Yes	D & T
Pluracol® 628	30076803	2	25	3,850	pg	PO/EO	Molded	Yes	T
Pluracol® 858	30089927	3	935	180	gly	PO	Rigid	No	T
Pluracol® 1158	30079428	3	920	183	TMP	EO	Rigid	No	T
Pluracol® TP440	30077013	3	413	400	TMP	PO	CASE	Yes	D & T
Pluracol® GP430	30076889	3	398	400	gly	PO	CASE	Yes	D & T
Pluracol® GP730	30085588	3	230	700	gly	PO	CASE	Yes	D & T
Pluracol® 1135i	30077360	3	112	1,500	gly	PO	Slab	Yes	T
Pluracol® 726	30085466	3	58	2,600	gly/pg	PO	Slab	Yes	D & T
Pluracol® 4156	30426020	3	56	3,000	gly	PO/EO Heteric	Slab	Yes	D
Pluracol® 1538	30216109	3	56	2,815	gly	PO/EO	Molded	Yes	None
Lupranol® 2005/1/BALANCE	30247445	3	50	3,000	castor	n/a	Slab	No	T
Pluracol® Balance 160	30504580	3	165	1,000	castor	n/a	Slab	Yes	None
Pluracol® 593	30234743	3	46	3,650	gly	PO/EO Heteric	Molded	Yes	D & T
Pluracol® 816	30085255	3	35	4,100	gly	PO/EO	Molded	Yes	D & T
Pluracol® 1421	30127146	3	35	4,800	gly	PO/EO	Molded	Yes	T
Pluracol® 945	30076993	3	35	4,200	gly	PO/EO	Molded	Yes	D & T
Pluracol® 1603	30450951	3	31	4,693	gly/sorb	PO/EO	Molded	Yes	D
Pluracol® 2090	30127144	3	27.5	4,800	gly	PO/EO	Molded	Yes	None
Pluracol® 2097	30233462	3	35	4,100	gly	PO/EO	Molded	Yes	D & T
Pluracol® 2100	30127143	3	25	5,138	TMP	PO/EO	Molded	Yes	None
Pluracol® 220	30077026	3	27	4,600	TMP	PO/EO	Molded	Yes	D & T
Pluracol® 1026	30076823	3	27	5,000	gly	PO/EO	Molded	Yes	D
Pluracol® 380	30076898	3	25	5,100	TMP	PO/EO	Molded	Yes	D & T
Quadrol® PM	30618194	4	770	292	eda	PO	CASE	Yes	D
Pluracol® PEP450	30077370	4	555	400	pen	PO	CASE	Yes	D & T
Pluracol® PEP550	30080349	4	450	500	pen	PO	CASE	Yes	D & T

None = Bulk Only, D = Drum, T = Tote

Product Name	Product Number	Functionality Number	OH Value	Nominal Molecular Weight (g/mole)	Initiator	Structure	Classification	Bulk	Packaged
Rigid									
Pluracol® 922	30085258	4	500	445	eda/tda	PO/EO	Rigid	Yes	D
Pluracol® 1016	30085582	3	500	334	MEOA	PO/EO	Rigid	Yes	T
Pluracol® 735	30077363	4	450	500	tda	EO	Rigid	No	D & T
Pluracol® 736	30085248	4	390	550	tda	PO	Rigid	Yes	D
Pluracol® 1578	30356400	4	405	539	tda	PO/EO	Rigid	Yes	D
Pluracol® 1168	30085270	4	300	740	eda/tda	PO/EO	Rigid	Yes	T
Pluracol® SG-360	30261725	4.5	368	610	suc/gly	PO	Rigid	Yes	D & T
Pluracol® SG-470	30255914	5.5	470	656	suc/gly	PO	Rigid	Yes	D

Product Name	Product Number	Functionality Number	OH Value	SAN Solids (%)	Initiator	Structure	Classification	Bulk	Packaged
Graft									
Pluracol® 1365	30088418	2	69	50	ACN/SN	n/a	Graft	Yes	T
Pluracol® 1528FF	30292737	3	19	45	ACN/SN	n/a	Graft	Yes	D & T
Pluracol® 4600	30233595	3	29	45	ACN/SN	n/a	Graft	Yes	D & T
Pluracol® 4650	30242917	3	29	45	ACN/SN	n/a	Graft	Yes	None
Pluracol® 4830	30248496	3	24	32	ACN/SN	n/a	Graft	Yes	D & T
Pluracol® 4850	30247563	3	24	32	ACN/SN	n/a	Graft	Yes	None
Pluracol® 5132	30521756	3	25	32	ACN/SN	n/a	Graft	Yes	None
Pluracol® 5250	30471167	3	28	50	ACN/SN	n/a	Graft	Yes	None

Isocyanates

Product Name	Product Number	NCO (%)	Functionality Number	Viscosity @ 75°F (cps)	Storage Temperature (°F)	Shipping Information	Typical Applications
Lupranate® 219	30159429	29.2	2.2	40	77 - 95	25,000 lb max batch size in Livonia	4,4' carbodiimide used in flexibles, elastomers, and lubricants.
Lupranate® 223	30240873	27.5	2.2	140	68 - 86	Geismar and Livonia product - Geismar = FTL MOQ	Modified MMDI prepolymer for binders
Lupranate® 224	30245311	31.5	2.7	150	77 - 95	Geismar product = FTL MOQ	Higher functional PMDI for rigid coatings
Lupranate® 227	30111926	32.1	2.0	15	68 - 95	Livonia product	Pure blend for lubricants
Lupranate® 230	30111927	32.4	2.2	35	68 - 86	Geismar and Livonia product - Geismar = FTL MOQ	PMDI blend for coatings and elastomers
Lupranate® 233	30079433	25.4		175	68 - 86	Livonia product	Prepolymer used in binders and elastomeric coatings
Lupranate® 234	30111928	32.0	2.3	50	68 - 95	Geismar and Livonia product - Geismar FTL MOQ	PMDI blend for coatings and elastomers
Lupranate® 241	30140779	32.6	2.3	26	77 - 95	Livonia product	Polymeric blend for multiple use
Lupranate® 245	30212847	32.3	2.3	35	77 - 95	Livonia product packaged - Geismar bulk	Polymeric blend for multiple use
Lupranate® 253	30088627	33.0		16	86 - 104	Geismar bulk / packaged FTL MOQ	Carbodiimide modified pure mainly used in coatings
Lupranate® 255	30089885	32.0	2.5	70	68 - 95	Geismar bulk / Livonia packaged - Geismar FTL MOQ	Polymeric blends for rigid coatings
Lupranate® 266	30141179	32.0	2.5	66	59 - 95	Geismar bulk / Livonia packaged - Geismar FTL MOQ	Polymeric blends for rigid coatings
Lupranate® 275	30193625	15.9		560	77 - 95	Livonia product	MMDI prepolymer blend for specialty high coatings
Lupranate® 278	30210744	33.0	2.1	17	77 - 95	Geismar bulk / Livonia packaged	MMDI blend used in specialty foams and coatings
Lupranate® 280	30216480	33.0	2.1	17	77 - 95	Geismar product bulk / packaged - FTL MOQ	High 2,4 based MMDI for specialty foams and boards
Lupranate® 5020	30243816	9.5	2.0	2,500	77 - 95	Livonia product for packaged	Low NCO prepolymer for binders
Lupranate® 5030	30243817	18.9	2.0	1,130	77 - 95	Livonia product in packaged - Geismar bulk only	Mid NCO polyester based prepolymer for specialty elastomers and foams
Lupranate® 5040	30244137	26.3	2.1	140	77 - 95	Livonia product for packaged - Geismar product in bulk	MMDI carbodiimide prepolymer blend designed for elastomeric binders
Lupranate® 5050	30244138	21.5	2.1	335	77 - 95	Livonia product	Carbodiimide prepolymer used in coatings and elastomers
Lupranate® 5060	30244139	15.5	2.0	1,000	77 - 95	Livonia product	MMDI prepolymer mid NCO for elastomers
Lupranate® 5070	30243815	13.0	2.0	3,360	77 - 95	Livonia product	Low NCO MMDI prepolymer for specialty elastomers
Lupranate® 5080	30245244	15.9	2.0	330	68 - 86	Livonia product	Mid NCO MMDI prepolymer for specialty coatings
Lupranate® 5090	30256082	23.0	2.1	650	68 - 86	Livonia product	MMDI carbodiimide prepolymer for coating applications
Lupranate® 5100	30571289	32.6		33	77 - 95	Livonia product / Geismar product FTL MOQ	MMDI PMDI blend for flexible foam markets
Lupranate® 5143	30245085	29.2		40	71 - 86	Livonia product	Carbodiimide MMDI for specialty elastomers
Lupranate® 5230	30470426	14.1		1,450	68 - 86	Livonia product/ Moved to Geismar production	Low NCO prepolymer for binders and one component moisture cure
Lupranate® 5260	30527050	31.7		15	68 - 95	Livonia product	

Product Name	Product Number	NCO (%)	Functionality Number	Viscosity @ 75°F (cps)	Storage Temperature (°F)	Shipping Information	Typical Applications
Lupranate® 5270	30527049	30.6			68 - 95	Livonia product	
Lupranate® 5310	30550304	8.0	2.0	2,700	68 - 95	Livonia product	MMDI preopolymer for coatings applications
Lupranate® 5330	30567523	33.0		15	68 - 95	Livonia product	
Lupranate® 5340	30566270	18.0		880	68 - 95	Livonia product	
Lupranate® 5350	30590777	32.6			68 - 95	Livonia product	
Lupranate® 5370	30599680	16.5		6,100	68 - 95	Livonia product	MMDI preopolymer for coatings applications
Lupranate® 5380	30598524	19.8		525	68 - 95	Livonia product	MMDI carbodiimide prepolymer for spray elastomers
Lupranate® 5390	30604734	31.7		120	68 - 95	Livonia product	
Lupranate® 78	30077010	32.0	2.3	65	59 - 86	Geismar product	PMDI blend for rigid foams and semi flexible foams
Lupranate® 8020	30087192	44.5			61 - 84	Geismar only product - ships bulk only	PMDI TDI blend for flexible molded foams
Lupranate® 81	30088692	29.5	2.1	40	68 - 95	Livonia product	2,4, 4,4' Carbodiimide for mutiple flexible and elastomers
Lupranate® LP27	30443456	32.4	2.0	17	80 - 95	Livonia product	Pure MMDI based product for prepolymer production
Lupranate® LP30	30169787	33.0	2.0	16	86 - 104	Livonia product	Pure MMDI carbodiimide modified for prepolymers
Lupranate® LP30D	30262160	33.0	2.0	16	86 - 95	Livonia product	Drum version Pure MMDI carbodiimide modified for prepolymers
Lupranate® M	30088652	33.5	2.0	solid @ 0	32	Ships via frozen reefers - Geismar product - stored at Kinder Morgan	Pure MMDI for prepolymer production, spandex, blends, and greases.
Lupranate® M	30088652	33.5	2.0	5	104 - 122	Ships via temp controlled bulk trailers - Geismar product	Molten bulk form
Lupranate® M10	30088975	32.0	2.3	70	68 - 95	Geismar and Livonia product - Geismar = FTL MOQ	PMDI - MMDI blend for specialty foams and elastomers
Lupranate® M20	30089687	31.5	2.7	200	68 - 86	Geismar product	Polymeric MDI (PMDI) used primarily in rigid foams, flexibles, elastomers.
Lupranate® M70L	30140936	31.0	3.0	700	68 - 86	Geismar product	Higher functional polymeric designed for rigid foams and laminate board.
Lupranate® MI	30077022	33.5	2.0	12	73 - 86	Geismar product	MMDI 2,4, 4,4' designed for a wide variety of CASE and binder applications.
Lupranate® MM103	30076816	29.5	2.2	40	77 - 95	Geismar product	4,4' Carbodiimide used in elastomers and coatings.
Lupranate® MP102	30088685	23.0	2.0	700	77 - 95	Geismar product	MMDI prepolymer for mostly elastomers and coatings.
Lupranate® MS	30088778	33.5	2.0	solid @ 0	32	Ships via frozen reefers - Geismar product - stored at Kinder Morgan	Pure MMDI with stabilizer frozen in drums
Lupranate® MS	30088778	33.5	2.0	5	104 - 122	Ships via temp controlled bulk trailers - Geismar product	Stabilized version of Lupranate M molten
Lupranate® T80 Type I	30076828	48.2	2.0	3	60 - 90	Ships as hazardous / protect from freezing - Geismar product	Flexible foam molded and slab
Lupranate® T80 Type II	30089685	48.2	2.0	3	60 - 90	Ships as hazardous / protect from freezing - Geismar product	Acidified version for prepolymers typically for CASE
Lupranate® TF2115	30245304	32.3	2.4	49	77 - 95	Geismar and Livonia product - Geismar = FTL MOQ	PMDI - MMDI blend for spray coatings and molded flexibles

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BF-10410 10/15



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