

Polyurethane Specialty Products Group

VERSALINK® P-650 OLIGOMERIC DIAMINE

Description

Oligomeric diamine
 Polytetramethyleneoxide-
 di-p-aminobenzoate
 TSCA Registry No.: 54677-43-5
 CAS Registry No.: 54667-43-5

Versalink P-650 oligomeric diamine is a liquid at room temperature. Table 1 outlines this product's physical properties.

Applications

Versalink P-650 oligomeric diamine is a liquid at ambient temperature so it can be mixed and cured at room temperature. It can be used as a curative for diisocyanates (MDI, TDI) and diisocyanate prepolymers and as an amine- and anhydride-cured epoxy modifier (to enhance flexibility). Applications include molding compounds, such as castable elastomers, tooling compounds and encapsulation compounds, as well as two-component adhesives, coatings and sealants. Due to its ease of processing Versalink P-650 oligomeric diamine is excellent for field repair.

Properties

Table 2 outlines typical properties when using Versalink P-650 oligomeric diamine cured with liquid MDI processed at room temperature. When processed at ambient conditions, Versalink P-650-based elastomers have a low shrinkage factor. Linear shrinkage is only 0.3% when processed at room temperature, versus 1.6% when cured at 100 °C.

Table 1 - Typical Properties of Versalink P-650 Oligomeric Diamine

Color	Brown Liquid
Viscosity	Maximum 2,500 cPs @ 40 °C
Specific Gravity	1.0 - 1.05 @ 40 °C
Melting Temperature	- 47 °C
Equivalent Weight	355 - 475
Molecular Weight	710 - 950
n = 9 - 10	

Table 2 - Versalink P-650/MDI Systems

Processing Conditions					
MDI	ISONATE® 2143L		RUBINATE® PBA-2225		RUBINATE LF-168
NCO, %	29		31		29
MDI Level, pph	35		32.7		35
Stoichiometry, %	95		95		95
Mix Temp., °C	25		25		25
Cure Temp., °C	25	100	25*		25**
Pot Life, min.	12	12	12		12
Demold Time, hr.	3	0.25	3**		3**
Cure Time, days	14	0.25	14*		14*
Physical Properties					
Hardness, Shore D	55	55	55		55
Modulus, psi	100%	1,200	1,500	1,700	1,200
	300%	2,800	4,000	3,000	2,800
	Tensile Strength, psi	7,000	8,000	7,000	6,000
Elongation, %	440	350	330		400
Tear Strength, pli	Die C	490	460	530	450
	Split	120	110	140	130
	Rebound, %	46	46	45	

*Alternatively can be cured at 100 °C for 6 hours.
 **Alternative can be demolded in 15 minutes at 100 °C.

Trademarks and Suppliers

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