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Effective: 29 Sept 2011

## Adiprene® LF 1700A

A TDI-terminated polyester prepolymer

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**ADIPRENE® LF 1700A** is a TDI-terminated polyester prepolymer having very low free TDI content. This prepolymer also has low viscosity, which allows it to be processed at reduced temperature for better heat stability and longer pot life. It yields a high performance, 70-75 Shore A hardness elastomer when cured with 4,4'-methylene-bis-(o-chloroaniline), commonly called MBCA.

### Features of ADIPRENE LF 1700A include:

- Low Free TDI Content
- Low Viscosity
- High Rebound

### Hygiene

All TDI-based prepolymers contain unreacted TDI monomer. The level of monomer can vary from 0.1% to 5.0% by weight, with high hardness materials generally having the highest level of free TDI. ADIPRENE LF 1700A has less than 0.1% free TDI, which can be beneficial in the management and control of worker exposure to TDI.

### Processing

Relative to conventional TDI-based prepolymers of equal hardness, ADIPRENE LF 1700A has the processing advantage of longer pot life and lower viscosity. These qualities can improve the performance of a casting operation by reducing scrap while increasing the variety of products that may be made via the casting process.

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**LIQUID PREPOLYMER SPECIFICATONS**

NCO .....	2.28-2.58
AE .....	1629-1843
Color, Gardner .....	0-2
Brookfield Viscosity, poise.....	9.00-14.00
Appearance @ 25°C .....	Solid, free from contamination

**Typical Properties**

Viscosity, Centipoise (Pa-s)

@ 30°C (86°F) .....	(Solidifies)
@ 70°C (158°F) .....	4800 (4.8)
@ 80°C (176°F) .....	2100 (2.1)
@ 100°C (212°F) .....	1000 (1.0)

Specific Gravity

@ 70°C (158°F) .....	1.16
@ 100°C (212°F) .....	1.14

**PROCESSING CONDITIONS**

ADIPRENE LF 1700A Temperature, °C (°F).....	85-100 (185-212)
MBCA, °C (°F) .....	116 (240)
pph MBCA, 95% Theory, AE = 1736 .....	7.3
Mold Temperature, °C (°F).....	85-100 (185-212)
Pot Life, Minutes .....	11-15
Demold Time, Minutes .....	60 minimum
Postcure Cycle*: hrs/ °C (°F) .....	16/70-100 (158-212)

\*For predictable durometer, avoid cure/postcure temperatures above 100°C (212°F). Higher temperatures give lower durometer.



**TYPICAL PHYSICAL PROPERTIES**

Hardness, Shore A.....	70-75
100% Modulus, psi (MPa) .....	435 (3.0)
200% Modulus, psi (MPa) .....	515(3.6)
300% Modulus, psi (MPa) .....	630 (4.3)
Tensile, psi (MPa) .....	5800 (40.0)
Elongation, % .....	725
Tear Strength pli (kN/m)	
Die C (D-624) .....	260 (45.5)
D-470 Split Tear .....	65 (11.4)
Trouser D-1938 .....	125 (21.9)
Bashore Rebound, % .....	35
Compression Set, % .....	34
Method B,22 Hrs. @ 158°F (70°C)	
Specific Gravity .....	1.22
Compressive Modulus, psi (MPa)	
5%.....	90 (0.6)
10%.....	140 (1.0)
15%.....	200 (1.4)
20%.....	280 (1.9)
25%.....	380 (2.6)