# VIBRATHANE® B615
# A TDI terminated, prepolymer

## DESCRIPTION

**VIBRATHANE B615** is a TDI-terminated polyether prepolymer. Curing with 4, 4'- methylene-bis-(o-chloroaniline), MBCA, yields a high performance 92 Shore A elastomer.

Features of VIBRATHANE B 615 include:

- Low hysteresis and heat buildup
- High Load bearing capability
- Excellent low temperature flexibility
- Outstanding abrasion resistance

These features make VIBRATHANE B 615 the prepolymer of choice for high quality presson tires and caster wheels. Because of its high resilience it is also an excellent choice for many mining applications, particularly for those in slurry contact.

## Hygiene

VIBRATHANE B 615 prepolymer, as an uncured liquid prepolymer, contains free toluene diisocyanate, which is known to cause irritation to eyes, skin, mucous membranes and respiratory system. Avoid contact with eyes, skin, and clothing, and wash thoroughly after handling. Avoid breathing the vapor. Use only with adequate ventilation.

Other materials that may be used with VIBRATHANE B 615 in the manufacture of finished products may present hazards in handling and use. Before proceeding with any compounding or processing work, consult and follow label directions and handling precautions from suppliers of all ingredients.

| LIQUID PREPOLYMER SPECIFICATIONS: | |
|---|---|
| **% NCO** | 4.80 – 5.20 |
| **Brookfield Viscosity, poise @ 100°C** | 2.0 - 4.0 |
| **Color, Gardner** | 0 - 2 |
| **Appearance @ 25°C** | Clear Viscous liquid |
| **Amine Equivalent (AE)** | 808 – 875 |

| TYPICAL PROPERTIES | |
|---|---|
| **Viscosity, Centipoise (Pa·s)** | 4.80 – 5.20 |
| **@ 24°C (75°F)** | 17500 (17.5) |
| **@ 50°C (122°F)** | 3300 (3.3) |
| **@ 70°C (158°F)** | 1050 (1.05) |
| **@ 100°C (212°F)** | 300 (.3) |
| **Specific Gravity @ 24°C (75°F), g/cc** | 1.06 |
| **Specific Gravity @ 93°C (200°F), g/cc** | 1.01 |

| RECOMMENDED MELTDOWN PROCEDURE | |
|---|---|
| Devices such as melting ovens, thermostatically controlled warming blankets, or drum heaters can be used for pre-heating VIBRATHANE B615. Approximate preheat times at 70°C (158°F) are: | |
| **5 gallon pail** | 16 - 24 hours |
| **55 gallon drum** | 36- 48 hours |
| Resins exposed to temperatures lower than 24°C during shipment and / or storage may require longer meltdown times. It is recommended that containers of Vibrathane B615 be rolled prior to use to ensure homogeneity. | |

| PROCESSING CONDITIONS | |
|---|---|
| **VIBRATHANE B 615 Temperature, °C (°F)** | 82 (180) |
| **MBCA, °C (°F)** | 116 (240) |
| **ppH MBCA, 90% Theory** | 14.3 |
| **Mold Temperature, °C (°F)** | 100 (212) |
| **Pot Life (time to 200 poise), Mins** | 8 |
| **Demold Time, Mins** | 60 |
| **Recommended Cure Cycle: Hrs./ °C (°F)** | 1/100 (212) + 16/70 (158) |
| *Room temperature molds may also be used. Longer demold times will be required. | |

| PHYSICAL PROPERTIES | |
|---|---|
| **Hardness, Shore A** | 92 |
| **100% Modulus, psi (MPa)** | 1400 (9.6) |
| **300% Modulus, psi (MPa)** | 2700 (17.9) |
| **Tensile, psi (MPa)** | 5800 (40.0) |
| **Elongation, %** | 420 |
| **D-470 Split Tear, Pli (kN/m)** | 100 (17.5) |
| **Bashore Rebound, %** | 45 |
| **Compression Set, Method B<br>22 hrs. @158°F (70°C)** | 24 |
| **Specific Gravity** | 1.10 |

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