



## TECHNICAL DATA SHEET #1

### BTR™ Series Polyurethane Binders

OTS binders are formulated specifically for the wet-pour or Pour-in-Place surfacing industry for the bonding of rubber resilient surfaces. It is manufactured with a proprietary castor oil based polyol and a non-solvent based wetting agent that lowers the trowel drag coefficient during installation.

BTR™ binders are available for several climate characteristics, including extreme conditions. Choosing the best binder for the prevailing weather not only improves the working conditions for the installer, but better assures that the installer will be able to perform his best work.

Variations of temperature, dew point and humidity affect the cure rate and workability of PU binders. Generally, high temperatures combined with high humidity result in a fast cure of the surface. Likewise, lower temperatures or humidity will extend the curing time. Consequently, our BTR™ binders are formulated with specific amounts of catalyst and wetting agent to accommodate a wide range of installation issues.

**BTR™-1110** is an **aromatic** binder containing UV stabilizers to reduce ambering from exposure to sunlight. It is suitable for use in high temperatures and high humidity conditions, and has slow curing characteristics.

**BTR™-1119** is an **aromatic** binder with UV stabilizers for use in high temperatures with low humidity (arid conditions).

**BTR™-1119-W** is an **aromatic** binder with UV stabilizers and modified viscosity for low temperatures and low humidity or for cool and damp conditions.

**BTR™-1103-UV** is an **aliphatic** binder with the highest UV protection available to prevent ambering from exposure to sunlight. It has slow curing characteristics, unless ordered with special catalysts. See Technical Data Sheet #2 for additional information about this binder.

The choice of a particular binder is based not only on the prevailing weather conditions, but the ability of the installer to plan and execute his work at a speed that allows the workmen to trowel a tight and smooth surface finish.

#### **TYPICAL PROPERTIES OF AROMATIC BINDERS:**

BTR™ binders are exceptionally high in tensile strength, both dry and wet aged, and have high elongation. The rubber and PU matrix is notably strong and resilient. They are formulated with an exceptional forgiveness of high humidity and moisture presence, and are proven to resist foaming.

BTR™ binders have a low drag troweling coefficient that enables the installer to lay a consistent, smooth and well-knitted tight surface with less effort. It is available in a variety of cure rates, and has a low yellowing index.

Coverage / Usage: The usage rate of the material will be dependent on the type of rubber and the method of use, and is normally in the range of 15-21% of binder to the weight of the rubber. The installer is responsible for the determination of the exact quantity and proportions based on his rubber type and mix. The physical properties below are guide values and are not to be used for specification purposes.

Density (g/cm)	at 20° C (68° F)	1.03 to 1.13
Bulk Density		9.0 lbs/gal
Viscosity	at 23° C (68° F) at 3° C (37° F)	3000 cPs (Baum) 60400 cPs
VOC		0 gm/L
% NCO		8-8.4
Color		Clear Brown Amber Liquid
Yellowness Index (16 days)		45 (+/- 0.6)
Cure Time	at 20° C (68° F)	12 to 14 hours
Tack Free Time	at 20° C (68° F)	4 to 6 hours
Substrate and Application Temperature	min max	8° C (46° F) 40° C (104° F)
Permissible Relative Humidity	min max	40 % 90 %
Tensile Strength - Film		1.09 N/m <sup>2</sup>
Tensile Strength - Compressed EPDM mat		230 PSI
Elongation		150-190%

**SAFETY GUIDELINES:**

Do not use product near flame, welding, torpedo heaters, or open lighting with potential for spark.

Adequate ventilation is required during the application process. Respiratory sensitization is possible.

Approved eye protection and gloves are recommended during application.

Should contact occur with skin, wash thoroughly with soap and water; for eyes, flush with copious amounts of water and seek medical attention.

Consult Material Safety and Data Sheet for details. Consult OTS Technical Bulletin "Surfacing Systems - Installer Health Issues" for a general discussion of issues and safeguards.

**STORAGE AND PACKAGING:**

BTR™ binders should be kept dry and cool. Shelf life of product stored in original containers is approximately 12 months.

BTR™ binders are shipped in sealed containers and must be protected against moisture.

BTR™ binders are packaged in 5 gallon pails (44#), 55 gallon drums (465#) and totes.

**INSTALLATION GUIDELINES:**

The surface to be coated must be clean, dry, and free of oil, grease, and dirt and any foreign residue.

BTR™ binder is ready for use as supplied and should be mixed with dry rubber granules in a paddle mixer until the granules are fully coated and without clumps. Do not over mix. This mixture is normally applied by experienced technicians with hand trowels to a specified thickness in order to obtain a uniform, level surface.

The cure time varies with temperature and humidity. High temperature and high humidity will decrease cure time, while low temperature and low humidity will increase the cure time.

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