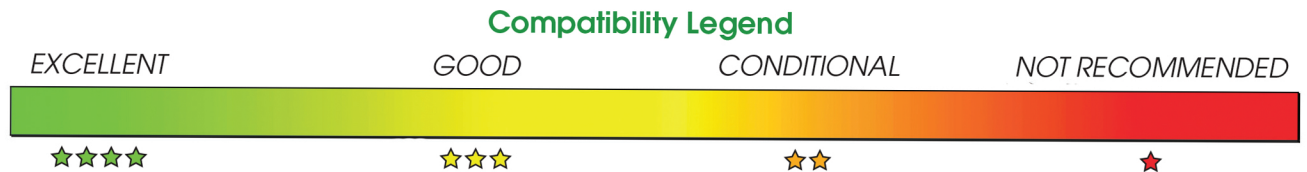


CHEMICAL RESISTANCE CHART

For Available Polyurethane Timing Belts and Cover Materials

BRECOflex CO. L.L.C. offers a large array of belt and cover materials for varying application and environments. Please refer to the B212 and B208 catalogs for more details on belts and cover materials. The following chart offers general guide lines for chemical compatability.



Note: This chart does not refer to chemical blends or combination of chemical exposures which may react differently. Sample sections of belt or back cover materials are available for testing purposes. We recommend testing of chemical combinations to confirm specific compatibility. Typically, an immersion test may be performed and the belt periodically examined for softening or hardening.

	Polyurethanes	PVC Back Covers		Rubber Back Covers		Other Covers	
	Beltting and Back Covers (PU 385, PU Yellow, D15)	Standard (White Nub, Herringbone, Supergrip Blue)	Oil Resistant (Supergrip Green, Minigrip)	Nitrile (Linatrilite, NBR 65)	Natural (Linatex, RP 430)	Silicone	PTFE (Teflon)
Acetaldehyde	★	★	★	★	★★	★★	★★★★
Acetic Acid (Glacial)	★★	★	★	★★	★★	★★★	★★★★
Acetic Acid - 30%	★★	★★	★★	★★	★★★	★★★★	★★★★
Acetic Anhydride	★★★	★★	★★	★★	★★	★★	★★★★
Acetone	★	★	★	★	★	★★	★★★★
Alcohols	★	★★	★★	★★★★	★★★	★★★	★★★★
Aluminum Chloride	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Aluminum Nitrate	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Aluminum Carbonate	★★★★	★★★★	★★★★	★★★	★★★★	★★★★	★★★★
Ammonium Hydroxide	★★★	★★★★	★★★★	★	★	★★★	★★★★
Ammonium Nitrate	★★★★	★★★★	★★★★	★★★★	★	★★★★	★★★★
Ammonium Phosphate	★★★★	★★★	★★★★	★★★★	★★★	★★★★	★★★★
Ammonium Sulfate	★★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Animal Fats	★★	★	★★★	★★★	★	★★	★★★★
Asphalt	★★★	★	★★	★★★	★	★★★	★★★★
Barium Chloride	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Borax	★★★★	★★★★	★★★★	★★★	★★★	★★★★	★★★★
Boric Acid	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Butter	★★★	★	★★★	★★★★	★	★★	★★★★
Calcium Chloride	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Calcium Hydroxide	★★★	★★★★	★★★★	★★★★	★★★★	★★★	★★★★
Calcium Nitrate	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★

	Polyurethanes			Rubber Back Covers		Other Covers	
	Belling and Back Covers (PU 385, PU Yellow, D15)	PVC Back Covers (Standard (White Nub, Herringbone, Supergrip Blue))	Oil Resistant (Supergrip Green, Minigrip)	Nitrile (Linatrilite, NBR 65)	Natural (Linatex, RP 430)	Silicone	PTFE (Teflon)
Carbolic Acid	★	★	★	★	★	★	★★★★
Castor Oil	★★★★★	★	★★★★★	★★★★★	★	★★★★★	★★★★★
Chlorinated Solvents	★	★	★	★	★	★★	★★★★
Chlorine Solutions	★★	★★	★★	★★	★★★★★	★★	★★★★★
Citric Acid	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★	★★★★★
Coal	★★★★★	★★	★★★★★	★★★★★	★	★★★★★	★★★★★
Coconut Oil	★★★★★	★	★★★	★★★★★	★	★★	★★★★★
Copper Sulfate	★★★★★	★★★★★	★★★★★	★★★★★	★★★	★★★★★	★★★★★
Corn Oil	★★★	★	★★★	★★★★★	★	★★★	★★★★★
Cotton Seed Oil	★★★	★	★★★	★★★★★	★	★★★	★★★★★
Denatured Alcohol	★	★★	★★	★★★★★	★★★★★	★★★	★★★★★
Diesel Fuel	★★★★★	★	★★★	★★★★★	★	★★	★★★★★
Ethyl Alcohol	★	★★	★★	★★★★★	★★★★★	★★★	★★★★★
Ethyl Cellulose	★	★★	★★★	★★★★★	★★★★★	★★★★★	★★★★★
Ethylene Glycol	★★★	★★	★★	★★★★★	★★★	★★★	★★★★★
Fatty Acids	★★★	★	★★	★★★	★	★★★	★★★★★
Ferric Chloride	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Ferric Sulfate	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Formaldehyde	★★★★★	★★★★★	★★★★★	★★★★★	★★★	★	★★★★★
Fuel Oils	★★	★	★★★	★★★★★	★	★★	★★★★★
Furfural	★	★	★	★★★★★	★	★★★★★	★★★★★
Gasoline	★★★	★	★	★★★★★	★	★★	★★★★★
Glucose	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Glycerine	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Hydraulic Oil	★	★	★★★	★★★	★	★★	★★★★★
Hydrochloric Acid	★	★★	★★	★	★★★	★★	★★★★★
Kerosene	★	★	★	★★★	★	★★	★★★★★
Lacquers	★	★	★	★	★	★	★
Lard	★★★	★	★★★	★★★	★	★★★★★	★★★★★
Limestone	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Linseed Oil	★	★	★★★	★★★★★	★	★★★	★★★★★
Lubricating Oil	★★	★	★★★★★	★★★★★	★	★★	★★★★★
Magnesium Chloride	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Magnesium Hydroxide	★★★★★	★★★★★	★★★★★	★★★	★★★	★★★★★	★★★★★
Magnesium Sulfate	★★★★★	★★★★★	★★★★★	★★★★★	★★★	★★★★★	★★★★★
Methyl Alcohol	★	★★	★★	★★★★★	★★★★★	★★★	★★★★★

WATER OR OIL-BASED COMPOUNDS

When the base for the chemical compound can be prevented from absorbing in to the belt polyurethane the resistance is higher to other parts of the compound that would otherwise be more harmful. Many compounds are water based so polyurethane with high resistance to water absorbion (hydrolysis) may be advisable. BRECOflex CO., L.L.C offers specifically formulated alternative polyurethanes and tension member materials that can help combat these attacks.

	Polyurethanes	PVC Back Covers		Rubber Back Covers		Other Covers	
	Belling and Back Covers (PU 385, PU Yellow, D15)	Standard (White Nub, Herringbone, Supergrip Blue)	Oil Resistant (Supergrip Green, Mingrip)	Nitrile (Linatrilite, NBR 65)	Natural (Linatex, RP 430)	Silicone	PTFE (Teflon)
Methyl Ethyl Ketone	★	★	★	★	★	★★	★★★★
Mineral Oil	★★★★	★★	★★★★	★★★★	★	★★	★★★★
Mineral Spirits	★	★	★	★★	★	★★	★★★★
Molasses	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Naptha	★	★	★	★★	★	★★	★★★★
Nitric Acid	★	★★	★★	★	★	★★	★★★★
Oil Sands	★★★★	★	★★★★	★★★★	★	★★	★★★★
Oil Shale	★★★★	★	★★★★	★★★★	★	★★★	★★★★
Ozone	★★★★	★★	★★	★	★	★★★	★★★★
Paraffin	★★	★★★	★★★★	★★★★	★	★★★★	★★★★
Peanut Oil	★★★	★	★★★	★★★	★	★★★	★★★★
Petroleum Oils	★★	★	★★★	★★★★	★	★★★	★★★★
Phosphate Ore	★★★★	★★★	★★★	★★★★	★★★★	★★★★	★★★★
Phosphoric Acid	★★	★★★★	★★★★	★★★	★★	★★	★★★★
Pine Oil	★★★	★★	★★★★	★★★★	★	★★★	★★★★
Potassium Chloride	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Potassium Hydroxide	★★★	★★★★	★★★★	★★★	★★★	★★★	★★★★
Potassium Nitrate	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Potassium Sulfate	★★★★	★★★★	★★★★	★★★★	★★★	★★★★	★★★★
Silicone Oil	★★★★	★★★	★★★★	★★★★	★★	★★★★	★★★★
Soda Ash	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Sodium Bicarbonate	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Sodium Bisulfate	★★★★	★★★★	★★★★	★★★★	★★★	★★★★	★★★★
Sodium Chloride	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Sodium Hydroxide	★★★	★★★★	★★★★	★★★	★★★★	★★	★★★★
Sodium Hypochlorite	★★	★★	★★	★★	★★	★★	★★★★
Sodium Nitrate	★★★★	★★★★	★★★★	★★★	★★★	★★★★	★★★★
Sodium Peroxide	★★★★	★★★★	★★★★	★★★	★★★	★★★★	★★★★
Sodium Phosphates	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Sodium Silicate	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Sodium Sulfate	★★★★	★★★★	★★★★	★★★★	★★★	★★★★	★★★★
Sodium Sulfide	★★★★	★★★★	★★★★	★	★★	★★★★	★★★★
Soybean Oil	★★★	★★	★★★	★★★★	★	★★★	★★★★
Sugar Beets	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Sugar Cane	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Sufur	★★★★	★★★★	★★★★	★	★	★★★★	★★★★

POLYURETHANE MATERIAL

Polyurethane	Color	Hardness	FDA 21CFR	Hydrolysis-resistance	Features
TPU ST1	White	92 Shore A	No	Med	Standard Polyurethane
TPU FDA1	Clear	92 Shore A	Yes	Low	Food grade, non-wash down
TPU FDA2	Clear	85 Shore A	Yes	Low	Food grade, non-wash down
TPU AU1	Clear	92 Shore A	Yes	High	Food grade, wash down
TPU AU2	Clear	95 Shore A	Yes	High	Food grade, wash down
TPU AU3	Gray	86 Shore A	No	Low	Resistant to oils and fats
BRECOprotect®	Blue	92 Shore A	Yes	High	Sealed cords, FDA, wash down

	Polyurethanes	PVC Back Covers		Rubber Back Covers		Other Covers	
	Belling and Back Covers (PU 385, PU Yellow, D15)	Standard (White Nub, Herringbone, Supergrip Blue)	Oil Resistant (Supergrip Green, Minigrip)	Nitrile (Linatrilite, NBR 65)	Natural (Linatex, RP 430)	Silicone	PTFE (Teflon)
Sulfuric Acid	★★	★★★	★★★	★	★★	★★	★★★★
Tar (Bituminous)	★★★★	★★	★★★★	★★★★	★	★★★★	★★★★
Tartaric Acid	★★★★	★★★★	★★★★	★★★★	★★★	★★★★	★★★★
Tetrachloroethylene	★	★	★	★	★	★	★
Toluene	★	★	★★	★★	★	★	★★★★
Trichloroethylene	★	★	★	★	★	★	★
Trichloroethane	★	★	★	★	★	★	★★★★
Turpentine	★	★	★★	★★★★	★	★★	★★★★
Ultra-Violet	★★★	★★★★	★★★★	★★	★★★	★★★★	★★★★
Urea	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Urine	★★★	★★★★	★★★★	★★★	★★★	★★★★	★★★★
Vegetable Oils	★★★	★	★★★	★★★★	★	★★★	★★★★
Vinegar	★★★★	★★★★	★★★★	★★★	★★★	★★★	★★★★
Water	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Wood Oils	★★★★	★★	★★★★	★★★★	★	★★★★	★★★★
Xylene	★	★	★	★	★	★	★★★★
Zinc Chloride	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Zinc Sulfate	★★★★	★★★★	★★★★	★★★★	★★★	★★★★	★★★★

TENSION MEMBER SELECTION

Tension member, or cord, selection is important for corrosive environments. Standard steel tension members have a zinc coating but is not suitable for long life in wash down environments. Stainless steel or BRECOprotect® with its sealed encapsulated cords are recommended for continuous or intermittent wash down.

TENSION MEMBER MATERIAL

Material	Corrosion Resistance	Features
Steel	Low	Standard cord, best stiffness and strength
Stainless Steel	High	80% of standard strength and equal stiffness
BRECOprotect®	High	Sealed steel cords in AU1 polyurethane
Kevlar (Aramid)	High	60% more elongation, absorbs water

INTERMITTENT CONTACT

Many timing belts are utilized in the food or medical industry where periodically the belts need to be periodically cleaned. It may be possible to use chemicals rated as conditional or unacceptable such as chlorine compounds when a follow-up rinsing process is performed. Please contact us for material samples to confirm acceptability for your use.

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