



NIBA—The Belting Association  
6737 W. Washington St. #1300  
Milwaukee, WI 53214  
Ph: 414-389-8606  
[www.niba.org](http://www.niba.org)

# Tech Note

Technical Notes from the Technical Committee, NIBA – The Belting Association

## #11 Conveyor Belt Polymers

A wide variety of polymers are used in conveyor belts, providing the various properties that the many types of applications require. All of the polymers have basic properties that are well known and well documented. However, the polymers are never used in their pure form in conveyor belts. Rather, they are used in compounds, which mixes them with other materials so that the end products have enhanced properties.

The table on the following page shows the polymers regularly used in conveyor belts, where they are used, and relative properties. This table is only intended to be a guide to introduce the reader to the polymers and their general properties. More detailed information on them will have to be obtained from the individual conveyor belt manufacturers, rubber mixers, or polymer manufacturers.

It is common practice to significantly vary the properties of rubber compounds by altering their chemical content. For instance, the heat resistance of basically non-heat resistant polymers can be enhanced by appropriate compounding. The same applies to flame resistance, cold temperature properties, and others. Polymers are commonly blended to provide compromise properties such as oil resistance and fire resistance. The possibilities are endless, generally depending on market demand and economics.

In most cases, there is more than one type of a basic polymer available. In the conveyor belt polymers table, only the basic polymers are included. The varying types of the polymers shown generally have about the same properties as the basic polymer as related to end use. For instance, there are chlorinated and brominated types of butyl, which render the polymers compatible with other polymers whereas standard butyl is not. This has no effect on end use, but is significant to the belt manufacturers in their manufacturing processes. Likewise, there are several types or grades of SBR, neoprene, EPDM and others available, all with properties similar to the respective basic polymers.

The conveyor belt manufacturers provide extensive charts and tables showing the properties of their grades of belts. These indicate the performance of their products in the presence of specific materials or conditions. If past experience doesn't lead to belt selection, the belt manufacturers and/or their product literature should be consulted.