

# Butyl Caulk

## Application Note

### Significant Issue:

Interfibe RT cellulose fibers are used as a reinforcing thixotrope in adhesives and sealants. They provide desirable flow control characteristics that approach those imparted by asbestos. Although RT fibers are not a 1:1 "drop-in" replacement for asbestos, they do have these properties in common with asbestos: good thixotropy imparted to the formulated caulk; the ability to reinforce the bulk caulk and the ability to produce caulks without excessive surface texture.

### Customer Objectives:

- Replace asbestos or other high cost fibers
- Obtain lower formulation costs through the reduction of other raw materials
- Maintain product flexibility, sag resistance and flow

### Interfibe Solution:

By formulating with Interfibe RT fibers, the customer receives economic benefit by reducing the use of more costly synthetic fibers and benefits environmentally through the use of a safe, non-hazardous alternative to asbestos.

***interfibe***<sup>TM</sup>

*For further information, call  
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### RT Fibers in a Butyl Caulk Formulation

A butyl caulk containing asbestos as a reinforcing thixotrope was reformulated to a non-asbestos containing material using a mixture of fumed silica and RT fibers.

The butyl caulk formulation was chosen as a representative of the class of solvent-based sealants, which includes materials such as acrylic, SBR, Neoprene, and Hyperlon. The results show that asbestos can be replaced with RT fibers with no subsequent loss in physical properties.

### Formulations

	BC-1 (control)	BC-2
Butyl rubbers	9.6	9.6
Polybutene	14.4	11.4
Talc	17.6	17.6
Tackifying resin	3.8	3.8
TiO <sub>2</sub>	1	1
Ground limestone	24	27.5
Mineral spirits	24	23.5
RT fibers	----	4.5
Fumed silica	----	0.5
Asbestos(7RF02)	5	----

### Experimental Results

	BC-1 (control)	BC-2
<b>Appearance</b>		
Surface	9	7
Gloss	6	8
Uniformity	9	8
<b>Viscosity</b>		
Initial	80	50
Aged	88	52
% increase	10	4
<b>Flow, in movement</b>		
Initial	0	2/16
Aged	1.5/16	1/15
<b>Slump (Boeing),</b>		
In. movement	0.20	0.20
<b>UV channel, 24 hr/140°</b>	Pass	Pass
<b>Angle heat aging,</b>		
72 hr/150°F	Pass	pass

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