

SUBMITTAL RECORD \_\_\_\_\_  
 JOB \_\_\_\_\_  
 LOCATION \_\_\_\_\_  
 SUBMITTED TO \_\_\_\_\_  
 SUBMITTAL PREPARED BY \_\_\_\_\_  
 APPROVED BY \_\_\_\_\_  
 DATE \_\_\_\_\_



# Submittal Form

## BTL316

### Butyl Gasket



### DESCRIPTION

BTL316 Butyl Gasket is used in tape and bead form to seal transverse duct connection systems helping to provide a moisture and air tight seal. It is a dark gray permanently soft, non-drying tape sealant compound which contains virgin butyl polymer to enhance its sealing properties and aging characteristics. It is formulated to retain low temperature operating properties. BTL316 Butyl Gasket will not crack or separate while being applied at low end of temperature usage range, however, it is recommended that the material be stored at moderate temperature to enhance its application characteristics. When stored at warehouse conditions, it will remain usable for a prolonged period. BTL316 Butyl Gasket will adhere to most clean, dry surfaces such as steel, galvanized steel, aluminum, plastic, wood and concrete. The product is non-hazardous and non-toxic.

### FEATURES

- Excellent sealant for HVAC, as well as many others industries.
- Non-irritant: No limitation to eyes or skin as listed in CFR, Title 16, "Appraisal of the safety of chemicals in food, drugs, and cosmetics".
- Remains pliable and will not crack or separate while being applied at low end of temperature usage range; when stored in warehouse conditions, it will remain useable for a prolonged period.
- Chemical Resistance: Excellent resistance to water, alcohols, mild acids and bases.

### TYPICAL PROPERTIES

**Base:** Non-drying synthetic polymer  
**Fillers:** Mineral fillers and inert ingredients—Non-asbestos  
**Specific Gravity:** 1.43 to 1.47 G/CC  
**Cone Penetration:** Modified to total moving load at 300 gm., 5 sec @ 77° F; 80-90 mm/10.  
**Adhesive Tensile Strength:** 10 to 12 PSI  
**Temperature Tolerance:** -40° F to +249° F  
**Application Temperature:** Above 40° F  
**Weatherometer Test:** Will not harden even after 1000 hour  
**Flame & Smoke Rating:** Flame 5 Smoke 5  
**Shelf Life:** 1 year minimum  
**Flexibility:** No cracking at -20° F.  
**Paintability:** Yes  
**Vehicle Bleedout:** None  
**Non-Corrosive:** Will not corrode Metals  
**Color:** 21046-light gray / 21047-dark gray

ITEM#	CODE	DESCRIPTION
21046	BTL316-58LG	3/16 x 5/8 UV Resistant Butyl
21047	BTL316-58DG	3/16 x 5/8 UV Resistant Butyl

### RELATED SMACNA RECOMMENDATIONS\*

#### 1.4.1 - Duct Sealing

Ducts must be sufficiently airtight to ensure economical and quiet performance of the system. It must be recognized that airtightness in ducts cannot, and need not, be absolute (as it must be in a water piping system). Codes normally require that ducts be reasonably airtight. Concerns for energy conservation, humidity control, space temperature control, room air movement, ventilation, maintenance, etc., necessitate regulating leakage by prescriptive measures in construction standards. Leakage is largely a function of static pressure and the amount of leakage in a system is significantly related to system size. Adequate airtightness can normally be ensured by a) selecting a static pressure, construction class suitable for the operating condition, and b) sealing the ductwork properly.

The designer is responsible for determining the pressure class or classes required for duct construction and for evaluating the amount of sealing necessary to achieve system performance objectives. It is recommended that all duct constructed for the 1 in. (250 Pa) and 1/2 in. (125 Pa) pressure class meet Seal Class C. However, because designers sometimes deem leakage in unsealed ducts not to have adverse effects, the sealing of all ducts in the 1 in. (250 Pa) and 1/2 in. (125 Pa) pressure class is not required by this construction manual. Designers occasionally exempt the following from sealing requirements: small systems, residential occupancies, ducts located directly in the zones they serve, ducts that have short runs from volume control boxes to diffusers, certain return air ceiling plenum applications, etc. When Seal Class C is to apply to all 1 in. (250 Pa) and 1/2 in. (125 Pa) pressure class duct, the designer must require this in the project specification. The designer should review the *HVAC Air Duct Leakage Test Manual* for estimated and practical leakage allowances.

Seven pressure classes exist [1/2 in. (125 Pa), 1 in. (250 Pa), 2 in. (500 Pa), 3 in. (750 Pa), 4 in. (1000 Pa), 6 in. (1500 Pa), and 10 in. wg (2500 Pa)]. If the designer does not designate pressure class for duct construction on the contract drawings, the basis of compliance with the SMACNA *HVAC Duct Construction Standards* is as follows: 2 in. wg (500 Pa) for all ducts between the supply fan and variable volume control boxes and 1 in. wg (250 Pa) for all other ducts of any application.

Some sealants can adversely affect the release function of breakaway connections to fire dampers; consult the damper manufacturer for installation restrictions.

Seal Class	Sealing Requirements	Applicable Static Pressure Construction Class
A	Class A: All Transverse joints, longitudinal seams, and duct wall penetrations	4 in. wg and up (1000 Pa)
B	Class B: All Transverse joints and longitudinal seams only	3 in. wg (750 Pa)
C	Class C: Transverse joints only	2 in. wg (500 Pa)

In addition to the above, any variable air volume systems duct of 1 in. (250 Pa) and 1/2 in. wg (125 Pa) construction class that is upstream of the VAV boxes shall meet Seal Class C

\*From SMACNA *HVAC Duct Construction Standards Metal and Flexible • Third Edition • 2005*

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