



CERTIFICATE NUMBER	21-2151070-PDA
EFFECTIVE DATE	04-Aug-2021
EXPIRY DATE	03-Aug-2026
ABS TECHNICAL OFFICE	Houston Materials

## CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

### **TRIANGLE FLUID CONTROLS, LTD.**

located at

**399 COLLEGE ST. E, BELLEVILLE, ON, Canada, K8N 5S7**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

**Product:** Gasket  
**Model:** PTFE Sheet Gaskets - DURLON 9000/9000N, 9002, 9200, 9600  
**Endorsements:**  
**Tier:** 2 - PDA Issued

This Product Design Assessment (PDA) Certificate remains valid until 03/Aug/2026 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

Satya P.K. (Satya Meruva) Meruva, Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

**Company Name Details**

**Company Information**

**Additional Company / Plant Detail**

**Confirmation of Type Approval**

TRIANGLE FLUID CONTROLS, LTD.  
 399 COLLEGE ST. E  
 BELLEVILLE  
 ON  
 Canada  
 K8N 5S7  
 Tel 613-968-1100  
 Fax 613-968-1099  
 Email: info@trianglefluid.com  
 Website: www.trianglefluid.com

This product doesn't have a Confirmation of Type Approval.

Certificate Number	Category	Expiry Date

**Product**                      Gasket

**Model**                        PTFE Sheet Gaskets - DURLON 9000/9000N, 9002, 9200, 9600

**Endorsements**

**Tier**                            2 - PDA Issued

**Intended Service**                      Flanged gaskets, equipment gaskets, and various in-process piping gasket applications requiring a material with wide temperature and pressure ranges and chemical compatibility. Sheets may be cut by hand or die-cut. Applications include steam, chemicals pH 0-14 (except molten alkali metals and elemental fluorine), salt water, fresh and potable water, air, hydraulic, fuel and lube oil services.

<b>Description</b>	DURLON 9000/9000N and 9002: Inorganic Filler with Pure PTFE Resins; DURLON 9200: Barium Sulfate Filler with Pure PTFE Resins; DURLON 9600: Expanded Pure PTFE. Thickness: 1/64" (0.5mm) - 1/4" (6mm). Size: 60" x 60" (1524mm x 1524 mm) and 60" x 120" (1524mm x 3048 mm).
<b>Ratings</b>	DURLON 9000/9000N, 9002 and 9200 - Temperature Range: -350°F to +520°F (-212°C to +271°C); Pressure:1500 psi (103 bar) Maximum; pH Range: 0 to 14. DURLON 9600 - Temperature Range: -350°F to +600°F (-212°C to +316°C); Pressure:1800 psi (124 bar) Maximum; pH Range: 0 to 14. See attached 'pdf'
<b>Service Restrictions</b>	1. Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined. 2. Not to be used where materials rendered ineffective by heat are prohibited.
<b>Comments</b>	1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product. 2. Physical properties and manufacturer's acceptance criteria are to meet the design/application requirements; ii) Chemical compatibility as per manufacturer's recommendation.
<b>Notes, Drawing and Documentation</b>	Drawing No. Correspondence, Request for Approval, Revision: -, Pages: 1 Drawing No. DURLON Filled PTFE-ABS C of C, Declaration of Conformance, Revision: -, Pages: 1 Drawing No. PO ALIREZA050521, Purchase Order, Revision: -, Pages: 1 Drawing No. Safety Data Sheets, Safety Data Sheets, Revision: -, Pages: 1 Drawing No. Tech Sheets, Tech Sheets, Revision: -, Pages: 1
<b>Term of Validity</b>	This Product Design Assessment (PDA) Certificate remains valid until 03/Aug/2026 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).  Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.
<b>ABS Rules</b>	This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.
<b>ABS Rules</b>	2021 ABS Rules for Building and Classing Marine Vessels: 1-1-4/7.7, 1-1-Appendix 3, 4-7-3/1.11.1, 4-6-1/7.1.3, 4-6-1/Table 2.
<b>National Standard</b>	ASTM F104-11 (2020) ASTM F152-95 (2017) ASTM F38-18 (2018) ASTM F36-15 (2021)
<b>International Standard</b>	NA

**Government Standard** USCG # 46 CFR 56.25-15 (Oct 2018)

**EUMED Standard** NA

**Others Standard** NA

<b>Model Certificate</b>	<b>Model Certificate #</b>	<b>Issue Date</b>	<b>Expiry Date</b>
PDA	21-2151070-PDA	04-AUG-2021	03-AUG-2026