

# de Havilland Material Specification

<b>TITLE:</b>	<b>SEALING COMPOUND, FLAME RESISTANT</b>
<b>SPECIFICATION NUMBER:</b>	<b>DHMS S3.04</b>
<b>ISSUE:</b>	<b>B</b>
<b>AMENDMENT:</b>	<b>--</b>
<b>DATE:</b>	<b>November 09, 2009</b>
<b>PAGE:</b>	<b>1 of 14</b>

Information in this document is **proprietary** to de Havilland. This document must not be reproduced or distributed in the whole or in part to a third party without prior express permission in writing from de Havilland.

Prepared by:

Approved by:

**SIGNED ORIGINAL ON FILE**

---

**Shiraz Haniff**

Materials Technology

---

**Kenneth Quon**

Chief, Metals Technology

<b>de Havilland</b>	<b>Material Specification</b>	<b>DHMS: S 3.04</b>
		<b>ISSUE: B</b>
		<b>AMD.: --</b>
		<b>DATE: November 09, 2009</b>
		<b>PAGE: i of i</b>

**SEALING COMPOUND, FLAME RESISTANT****REVISION RECORD**

<b>Issue</b>	<b>Page</b>	<b>Description and Reason for Change</b>
A		This is complete revised issue. Detail changes have not been noted.
Amd. 1	6	QPL: The supplier's address has been changed.
Amd. 2	6	PR-812 removed from QPL, product discontinued.
Amd. 3	6	QPL: Courtlads Aerospace has been changed to PRC DeSoto Int.
B		This is complete revised issue. Detail changes have not been noted.
	3	Table 1, added note to specify supplier to provide Certification for flame Resistance testing for each batch.

de Havilland	<b>Material Specification</b>	DHMS: S 3.04
		ISSUE: B
		AMD.: ---
		DATE: November 09, 2009
		PAGE: 2 of 6
<b>SEALING COMPOUND, FLAME RESISTANT</b>		

**1 SCOPE**

This specification covers the requirements for a flame-resistant, synthetic rubber compounds for structural sealing.

**2 APPLICABLE DOCUMENTS**

The following document shall form the specification of the sealant defined herein.

MIL-S-38249 - Sealing Compound, Firewall

**3 REQUIRMENTS**

The sealing compound shall be supplied to meet all of the requirements of MIL-S-38249 Type 1, for applications at service operating temperatures of -65°F to + 400°F, and flash temperatures up to 2000°F.

3.0.1 Storage Life - The storage life of the material shall be a minimum of one year from the date of manufacture.

**4 QUALITY ASSURANCE****4.1 Qualification**

4.1.1 A supplier is responsible for the performance of all qualification testing, as specified in **Table 1**. Three lots/batches of material is required for qualification.

4.1.2 A supplier desk qualification shall submit one copy of a report showing actual qualification test data and a sufficient quantity of product for de Havilland evaluation tests.

4.1.3 Upon review of supplier's data and de Havilland tests, the supplier will be advised either of product qualification or reasons for disqualification.

4.1.4 Products that are qualified will be listed in the Qualified Products list of this specification.

4.1.5 No changes in the method of manufacture and/or formulation shall be made without notification and prior to written approval of Materials Technology Department of de Havilland Inc.

4.1.6 Re-qualification of the product may be requested by the purchaser if there are any changes in the method of manufacture and/or formulation.

**4.2 Qualification by Similarity**

Where a product has been qualified to another similar specification, the supplier may submit the qualification data applicable to this specification for consideration. The similar specification may be a government, company, or other specification where the requirements are similar to this specification.

**4.3 Acceptance Tests**

4.3.1 Unless otherwise specified in the contract or purchase order, the supplier is responsible for all Batch

de Havilland	<b>Material Specification</b>	DHMS: S 3.04 ISSUE: B AMD.: --- DATE: November 09, 2009 PAGE: 3 of 6
<b>SEALING COMPOUND, FLAME RESISTANT</b>		

Acceptance Tests, as specified in **Table 1** of this specification.

- 4.3.2 The supplier, performing batch Acceptance Tests, shall furnish, with each lot of product shipped, one (1) copy of the Batch Acceptance Test Report, showing actual test data conformance to the acceptance tests specified in **Table 1**. The report shall include the supplier's batch identification.
- 4.3.3 De Havilland reserves the right to perform any or all of the tests set forth in this specification to ensure that the product continues to meet specification requirements. Any product not meeting the requirements of this specification will be returned to the supplier at the supplier's expense.

**Table 1: Qualification and Batch Acceptance Tests**

Test	Qualification as per MIL-S-38249	Acceptance as per MIL-S-38249
Colour	x	
Specific Gravity	x	
Non-Volatile Content	x	
Flow	x	
Application Time	x	x
Tack-Free Time	x	x
Curing Rate	x	x
Resistance to Thermal Rupture	x	
Low Temperature Flexibility	x	
Peel Strength	x	
Corrosion Resistance	x	
Flame Resistance *	x	x *
Oil Resistance	x	
Accelerated Storage Stability	x	

\* Manufacturer to provide certification with each batch

#### **4.4 Definitions**

- 4.4.1 **Batch** is defined as the end product of all the raw materials mixed and/or manufactured at the same time and place. The weight and volume may vary, depending upon the capacity of the manufacturer's facilities.
- 4.4.2 **Lot** is defined as the total quantity of product in a shipment taken from the same batch.

<b>de Havilland</b>	<b>Material Specification</b>	<b>DHMS: S 3.04</b>
		<b>ISSUE: B</b>
		<b>AMD.: ---</b>
		<b>DATE: November 09, 2009</b>
		<b>PAGE: 4 of 6</b>
<b>SEALING COMPOUND, FLAME RESISTANT</b>		

**5 PROCUREMENT DOCUMENTS**

Procurement documents shall specify the following:

- Title, Number, Issue and Amendment Number of this Specification
- Manufacturer's Name and Product Identification (Trade Name or Code Number)
- Type or Size of Containers
- Total Quantity

**6 PREPARATION FOR DELIVERY****6.1 Packaging and packing**

The sealant shall be packaged and packed for shipping in accordance with MIL-S-38249.

**6.2 Marking**

Each kit shall be legibly marked with the following information:

- DHMS S3.04
- Manufacturer's Name and Product Identification
- Total Kit Content (Net)
- Date of Manufacture
- Certificate of compliance number

**6.3 Shipping Documentation**

Shipping document shall show:

- de Havilland Purchase Order Numbers
- Specification Number
- Number of Containers
- Batch Number
- Total Quantity (Imperial or U. S. measure)
- Batch Acceptance Test Report

<b>de Havilland</b> <b>Material Specification</b>	<b>DHMS:</b> S 3.04 <b>ISSUE:</b> B
<b>SEALING COMPOUND, FLAME RESISTANT</b>	<b>AMD.:</b> --- <b>DATE:</b> November 09, 2009 <b>PAGE:</b> 5 of 6

**7 HEALTH AND SAFETY DATA**

When supplying samples for qualification per **Para.4.1.2**, the supplier shall submit a Material Safety Data Sheet as per the Ontario Occupational Health & Safety Act, Workplace Hazardous Material Information System (WHMIS) Regulations, which complies with the Canada Hazardous Products Act, Controlled Products Regulations.

Materials Technology, de Havilland Inc. must ensure that copies are provided to, and approved by, the Materials Safety Committee, Industrial Hygiene and Safety, de Havilland Inc. before testing the product.

These requirements are prerequisites to inclusion of any product on the Qualified Products List.

Any changes in the formulation of materials require the re-submission of the Material Safety Data Sheet.

# BOMBARDIER

de Havilland	<b>Material Specification</b>	DHMS: S 3.04
		ISSUE: B
		AMD.: ---
		DATE: November 09, 2009
		PAGE: 6 of 6
<b>SEALING COMPOUND, FLAME RESISTANT</b>		

## QUALIFIED PRODUCTS LIST

MANUFACTURER'S NAME AND ADDRESS	MANUFACTURER'S PRODUCT IDENTIFICATION NO.	MSDS	DE HAVILLAND QUALIFICATION SHEET NO.	DATE OF PRODUCT APPROVAL
------------------------------------	---	------	--	--------------------------------

Manufacturer: Pro-Seal 700 0184 PQS #1 May 4, 1973

PRC DeSoto International  
11601 United Street  
Mojave, CA 93501

### Distributors:

PRC DeSoto International  
5676 Timberlea Blvd.  
Mississauga, Ontario  
L4W 4M6  
Tel: (905) 629-7999