



Fusion® 665

Sealing Systems

Compound No./Material Name: Fusion® 665	Rubber Classification: (ASTM D1418): FKM	Service Temperature Range: -70°F to 450°F (-57°C to 232°C)	Color: Black
---	--	--	------------------------

Description	ASTM Method	Units	Typical	
Original Properties				
Specific Gravity	D792	-	1.82	
Hardness, Type A, Buttons	D2240	Points	75	
Hardness, Type A, O-ring	D2240	Points	74	
Tensile Strength @ Break	D1414	psi [MPa]	1515 [10.4]	
Elongation	D1414	%	170	
Modulus @ 100% Elongation	D1414	psi [MPa]	935 [6.4]	
Tear Strength	D624, Die B	lb/in[kg/cm]	147 [26.3]	
Tear Strength	D624, Die C	lb/in[kg/cm]	68 [12.1]	
TR-10/50, O-ring	D1329	°F [°C]	-49 [-45]	
Glass Transition	D3418	°F [°C]	-50 [-46]	
Coefficient of Linear Thermal Expansion, -22°F to 122°F [-30°C to 50°C]	E831	µin/in-°F [µm/m-°C]	130.2 [234.4]	
Coefficient of Linear Thermal Expansion, 122°F to 302°F [50°C to 150°C]	E831	µin/in-°F [µm/m-°C]	143.8 [258.8]	
Coefficient of Linear Thermal Expansion, 302°F to 482°F [150°C to 250°C]	E831	µin/in-°F [µm/m-°C]	172.6 [310.6]	
Air Aging				
70 Hours @ 518°F [270°C] in Air	Hardness Change, Type A, O-ring	D573	Points	-3
	Tensile Strength Change	D573	%	-35
	Elongation Change	D573	%	17
	Weight Change	D573	%	-5
22 Hours @ 392°F [200°C] in Air	Compression Set @ 25% Def.	D1414	% of Original Def	10
336 Hours @ 392°F [200°C] in Air	Compression Set @ 25% Def.	D1414	% of Original Def	46
Fluid Aging				
70 Hours @ 73°F [23°C], at ASTM Reference Fuel B	Hardness Change, Type A, O-ring	D471	Points	-2
	Tensile Strength Change	D471	%	-22
	Elongation Change	D471	%	-1
	Volume Change	D471	%	5
70 Hours @ 392°F [200°C], in SAE 3085 Fluid (Reference Oil 300)	Hardness Change, Type A, O-ring	D471	Points	-5
	Tensile Strength Change	D471	%	-11
	Elongation Change	D471	%	-4
	Volume Change	D471	%	7
	Compression Set @ 25% Def.	D1414	% of Original Def.	10



TYPICAL PROPERTIES

Compound No./Material Name: Fusion® 665	Rubber Classification: (ASTM D1418): FKM	Service Temperature Range: -70°F to 450°F (-57°C to 232°C)	Color: Black
---	--	--	------------------------

Description	ASTM Method	Units	Typical	
Fluid Aging Continued				
336 Hours @ 392°F [200°C], in SAE 3085 Fluid (Reference Oil 300)	Compression Set @ 25% Def.	D1414	% of Original Def	19
70 Hours @ 275°F [135°C], in MIL-PRF-83282 Fluid	Hardness Change, Type A, O-ring	D471	Points	-1
	Tensile Strength Change	D471	%	-12
	Elongation Change	D471	%	2
	Volume Change	D471	%	3
	Compression Set @ 25% Def.	D1414	% of Original Def.	10
336 Hrs. @ 275°F [135°C], in MIL-PRF-83282 Fluid	Compression Set @ 25% Def.	D1414	% of Original Def	12
70 Hours @ 275°F [135°C], in MIL-PRF-87257 Fluid	Hardness Change, Type A, O-ring	D471	Points	0
	Tensile Strength Change	D471	%	-15
	Elongation Change	D471	%	4
	Volume Change	D471	%	4
	Compression Set @ 25% Def.	D1414	% of Original Def.	10
336 Hrs. @ 275°F [135°C], in MIL-PRF-87257 Fluid	Compression Set @ 25% Def.	D1414	% of Original Def	12
70 Hours @ 275°F [135°C], in MIL-PRF-5606 Fluid	Hardness Change, Type A, O-ring	D471	Points	-1
	Tensile Strength Change	D471	%	-13
	Elongation Change	D471	%	4
	Volume Change	D471	%	4
	Compression Set @ 25% Def.	D1414	% of Original Def.	10
336 Hrs. @ 275°F [135°C], in MIL-PRF-5606 Fluid	Compression Set @ 25% Def.	D1414	% of Original Def	13
Notes				
<ol style="list-style-type: none"> Material is tested to specification AMS7379 and AMS7410. For customers who require full certification to these specifications, AMS7379 or AMS7410 compliance must be specifically identified at time of quote, and purchase orders must state that AMS7379 or AMS7410 compliance is required. Unless otherwise noted, all tests performed on -214 O-rings. 				

This document contains information of Greene, Tweed & Co., Inc. that may be confidential, proprietary, copyrighted, and/or legally privileged, and is intended solely for the use of the individual or entity named in this document. The information contained herein is believed to be reliable, but no representation, guarantees, or warranties of any kind are made to its accuracy or suitability for any purpose. The information presented herein is based on laboratory testing and does not necessarily indicate end-product performance. Full-scale testing and end-product performance are the responsibility of the user.

Greene Tweed

1684 South Broad Street, PO Box 1307 | Lansdale PA 19446 USA | Phone: (+1) (215) 256-9521 | www.gtweed.com

Statements and recommendations in this publication are based on our experience and knowledge of typical applications of this product and shall not constitute a guarantee of performance nor modify or alter our standard warranty applicable to such products.

© 2022, Greene Tweed all rights reserved. All trademarks are property of their respective owners.

01/23-GT TPS-US-AS-035