



Date, June 22<sup>nd</sup>, 2021  
 TR n° **385-B-(eng) / 2021**  
 Ref. Your confirm dated 04.05.2021

To

ORINGONE S.r.l.

Via Tribolina, 14/18

24064 Grumello del Monte (BG)

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Start tests 07.06.2021

End tests 22.06.2021

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## T E S T R E P O R T

**Subject:** TEST ON A VULCANIZED RUBBER COMPOUND ACCORDING TO "3-A SANITARY STANDARDS OF A MULTIPLE-USE RUBBER AND RUBBER-LIKE MATERIALS USED AS PRODUCT CONTACT SURFACES IN DAIRY EQUIPMENT, NUMBER 18-03"

**VULCANIZED RUBBER  
COMPOUND**
**CODICE Z535 –  
EPDM BLACK  
RDM FDA**
Tests Methods
Requirements  
Class II
Table

<u>Original physical properties</u>					C 3.1
• Tensile strength	psi	2360	ASTM D 412:2006	min 1100	
• Elongation	%	215	ASTM D 412:2006	min 100	
• Hardness	Shore A <sup>3</sup> points	72	ASTM D 2240:2005	---	
<u>Change in properties after air aging for 166 hours at 212°F (100°C)</u>				ASTM D 573:2004	C 2.2.3
• Change in Hardness	Shore A <sup>3</sup> points	+2	ASTM D 2240:2005	max ±10	
<u>Change in properties after immersion in butter oil for 22 hours at 158°F (70°C)</u>				ASTM D 471:2006	C 2.1.1 Low fat
• Change in Hardness	Shore A <sup>3</sup> points	-10	ASTM D 2240:2005	max ±15	
• Change in Mass	%	+16		max ±25	
• Change in Volume	%	+21		max ±25	
<u>Change in properties after immersion in distilled water for 22 hours at 158°F (70°C)</u>				ASTM D 471 :2006	C 2.2.2
• Change in Hardness	Shore A <sup>3</sup> points	+1	ASTM D 2240:2005	max ±5	
• Change in Mass	%	0.86		max ±10	
• Change in Volume	%	1.0		max ±10	

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**T E S T R E P O R T**


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**VULCANIZED RUBBER  
COMPOUND**
**CODICE Z535 –  
EPDM BLACK  
RDM FDA**
Tests Methods
Requirements Table  
**Class II**
Change in properties after  
immersion in nitric acid for 22  
hours at 180°F (82°C)

ASTM D 471:2006

D 4.6

• Change in Hardness	Shore A <sup>3</sup> points	+1	ASTM D 2240:2005	max ±10
• Change in Mass	%	1.3		max ±15
• Change in Volume	%	1.4		max ±15
• Visual Change	Observation	None		None

Change in properties after  
immersion in alkaline cleaner  
for 22 hours at 180°F (82°C)

ASTM D 471:2006

D 4.8

• Change in Hardness	Shore A <sup>3</sup> points	0	ASTM D 2240:2005	max ±10
• Change in Mass	%	1.0		max ±10
• Change in Volume	%	1.1		max ±10
• Visual Change	Observation	None		None

Change in properties after  
immersion in chlorine sanitizer  
for 22 hours at 70°F (21°C)

ASTM D 471:2006

D 4.9

• Change in Hardness	Shore A <sup>3</sup> points	0	ASTM D 2240:2005	max ±5
• Change in Mass	%	0.21		max ±10
• Change in Volume	%	0.18		max ±10
• Visual Change	Observation	None		None

**STATEMENT:** THE RESULTS OF THE TESTS ON THE VULCANIZED RUBBER COMPOUND MARKED **CODICE Z535 – EPDM BLACK RDM FDA** **ARE IN COMPLIANCE** WITH THE REQUIREMENTS OF THE **3-A SANITARY STANDARDS NUMBER 18-03-CLASS II.**

The sampling has been carried out by the Customer.

The contained results refer only to the tested sample.

This report cannot be partially reproduced without the laboratory approval.

*Operator*  
  
 F. Messina

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