



## **GASKET QUALITY CONFORMITY DECLARATION**

***PRODUCTA**, in order to certify and settle its extruded seal quality, has developed and improved its production and control system as required by:*

- *specific seal Standard **UNI EN 12365** – 1/2/3/4 basic for **CE marking** of doors, windows, shutters, building hardware and curtain walling*
- *specific raw material Standards **DIN 7863***

***PRODUCTA**, thanks to the respect of the above indicated **EUROPEAN STANDARDS CLASSIFICATION PERFORMANCES**,*

***DECLARES THAT***

***ITS GASKETS LIFE IS MORE THAN 10 YEARS***

*DOCUMENTATION ENCLOSED*

- *attached (A) – UNI EN 12365 Producta certifications*
- *attached (B) – DIN 7863 raw material standards*

*NOTES*

*The data indicated in this document are obtained in Producta laboratory under standard conditions, but it can not be guaranteed that the same results could be reproduced in other laboratories or under different conditions. In fact for specific performance requests, Producta suggest to make specific analysis and test performance report.*



**CERTIFICATION EN 12365 – Building hardware – Gaskets and weatherstripping for doors, windows, shutters and curtain walling.**

**Profiles and gasket certification according to UNI EN12365 is required for CE certification of doors and windows system.**

**Producta extruded gaskets are realized according to UNI EN 12365 normalization**

***This European Standard test method defines gasket performance parameters, establishing an objective gasket quality analysis recognized all over Europe.***

Test are made and gasket certificates realized in Producta Laboratory, where each extruded profile sample is taken from production and subjected to a sequence of stress tests:

- *COMPRESSION SET;*
- *DEFLECTION RECOVERY*
- *RECOVERY AFTER AGING*

## **SCOPE OF THE EN 12365 CERTIFICATION**

It is well known that a window and door system quality level of performance depends significantly on the quality of gaskets because permeability is the result of gasket dynamic behaviour on work.

Before the EN12365 normalization there were not an objective and standard method that could permit to measure quality and consequently compare the same extruded shape from different origin production and last but not least was practically impossible define quality itself because of the lack of information about aging phenomenon and consequences on gaskets and obviously on the system.

In other words, thanks to EN12365, today we have the possibility to:

- DEFINE AND QUANTIFY QUALITY LEVEL OF EACH EXTRUDED GASKET;
- COMPARE PERFORMANCES OF DIFFERENT COMPETITORS;

Our company has realized an important laboratory with technologically advanced equipments specifically installed to make all tests according to EN12365.

Tanks to this laboratory, Producta has an high level of skills and service in order to satisfy all quality requirements from its customers.



## NORMATIVE REFERENCES AND CLASSIFICATION

This normalization has been realized with the purpose to define gasket performance requirements in order to control and contain the passage of air, water, noise and energy between openable parts, fixed parts, infilling and frames.

The EN12365 consists of the following part to which specific methods and tests are connected:

- *Part 1: Performance requirements and classification;*
- *Part 2: Linear compression test method;*
- *Part 3: Deflection recovery test method;*
- *Part 4: Recovery after accelerated aging test method;*

According to EN12365, each gasket quality level is defined on the basis of 6 different and specific categories characterized by a scale of results realized.

Category	Value	Description	Parameter classification table		
<b>CATEGORY OF USE</b>	W / G	It defines the working behaviour of the extruded profile	W: weatherstripping – seal working dynamically G: gasket – seal working with a push fit		
<b>WORKING RANGE</b>	1 ÷ 9	It measures how far the seal can be compressed or deflected of in its position on the system	1: $X \leq 1\text{mm}$	4: $4\text{ mm} < X \leq 6\text{ mm}$	7: $10\text{ mm} < X \leq 15\text{ mm}$
			2: $1\text{ mm} < X \leq 2\text{mm}$	5: $6\text{ mm} < X \leq 8\text{ mm}$	8: $15\text{ mm} < X \leq 30\text{ mm}$
			3: $2\text{ mm} < X \leq 4\text{mm}$	6: $8\text{ mm} < X \leq 10\text{ mm}$	9: $X > 30\text{ mm}$
<b>LINEAR COMPRESSION FORCE</b>	1 ÷ 9	Force (Newton/meter) necessary to compress a metre of seal up to the limit of the field of work, at the temperature of $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$	1: $X \leq 10\text{ N/m}$	4: $50\text{ N/m} < X \leq 100\text{ N/m}$	7: $500\text{ N/m} < X \leq 700\text{ N/m}$
			2: $10\text{ N/m} < X \leq 20\text{ N/m}$	5: $100\text{ N/m} < X \leq 200\text{ N/m}$	8: $700\text{ N/m} < X \leq 1000\text{ N/m}$
			3: $20\text{ N/m} < X \leq 50\text{ N/m}$	6: $200\text{ N/m} < X \leq 500\text{ N/m}$	9: $X > 1000\text{ N/m}$
<b>WORKING TEMPERATURE RANGE</b>	1 ÷ 6	Temperature range within which the seal can be used, maintaining the specified and declared performances	1: $0^{\circ}\text{C} \text{ :-} +45^{\circ}\text{C}$	3: $-20^{\circ}\text{C} \text{ :-} +85^{\circ}\text{C}$	5: $-40^{\circ}\text{C} \text{ :-} +70^{\circ}\text{C}$
			2: $-10^{\circ}\text{C} \text{ :-} +55^{\circ}\text{C}$	4: $-25^{\circ}\text{C} \text{ :-} 100^{\circ}\text{C}$	6: $0^{\circ}\text{C} \text{ :-} +200^{\circ}\text{C}$
<b>DEFLECTION RECOVERY</b>	0 ÷ 7	Measurement of seal capability to return to its original position after a continuous compression for 22/24 hours at the maximum of the field of work and at the extreme temperature range	0: not calculated	3: $50\% < X \leq 60\%$	6: $80\% < X \leq 90\%$
			1: $30\% < X \leq 40\%$	4: $60\% < X \leq 70\%$	7: $X > 90\%$
			2: $40\% < X \leq 50\%$	5: $70\% < X \leq 80\%$	
<b>RECOVERY AFTER AGING</b>	0 ÷ 7	Capacity of seal to recover its original shape and height after continued compression for 21 days at the maximum of the field of work and at the extreme temperature range	0: not calculated	3: $50\% < X \leq 60\%$	6: $80\% < X \leq 90\%$
			1: $30\% < X \leq 40\%$	4: $60\% < X \leq 70\%$	7: $X > 90\%$
			2: $40\% < X \leq 50\%$	5: $70\% < X \leq 80\%$	

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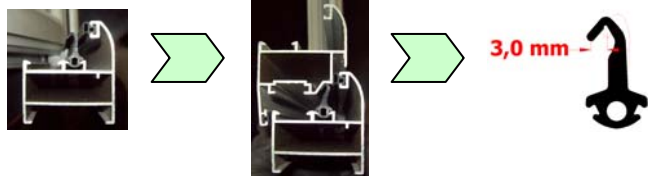


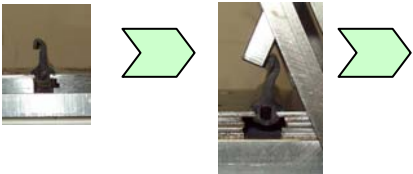

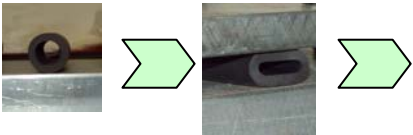

## IMPORTANT:

The goods shall be packed and stocked in such a way that they are protected from any permanent distortion which is likely to affect their performance.

In this way it is possible to guarantee the edited certification EN12365.

## EN12365 TEST PROCEDURE AND MEASUREMENT

Here below you will find an example of a specific gasket EN12365 certification:

CLASS Category	Description datasheets and Test method procedures	CLASS Value
<b>CATEGORY OF USE</b>	<p>a) THE ITEM UNDER ANALYSIS IS A MONO-EXTRUDED CENTRAL GASKET.                      b) RAW MATERIAL USED IS EPDM DIN 7863 SH-A 60 BLACK COLOUR (ref. Uni En ISO 868)                      c) OBJECT: GASKET FOR DOORS AND WINDOWS MARKET</p>	<b>W</b>
<b>WORKING RANGE</b>		<b>3</b>
<b>LINEAR COMPRESSION FORCE</b>	 	<b>4</b>
<b>WORKING TEMPERATURE RANGE</b>	<p>Otherwise requested the standard range considered for tests is <b>-5°C / +55°C</b></p>	<b>2</b>
<b>DEFLECTION RECOVERY</b>	 	<b>4</b>
<b>RECOVERY AFTER AGING</b>	 	<b>4</b>



**CERTIFICATION DIN 7863 – Building hardware – Gaskets and weatherstripping technical specifications for doors, windows, shutters and curtain walling.**

According to international standards issued by the International Organization for Standardization (ISO) – ISO 3934-1978 / ISO 5892 – 1981.

Producta extruded gaskets are realized according to DIN 7863 standars.

*This International Standard test method defines elastomeric raw material characteristics for the non cellular extruded profiles production used for air and water resistance.*

**NORMATIVE REFERENCES AND CLASSIFICATION**

Tests are made on final gasket and in Producta Laboratory, where each extruded profile sample is taken from production and subjected to a sequence of stress tests:

- *Part 1: Admitted variation of hardness – IRHD (international rubber hardness);*
- *Part 2: Compression recovery after 25°C and 100°C – DIN 53617;*
- *Paet 3: Tensile strength and elongation at break – DIN 53604;*
- *Part 4: Aging after warm and cold conditions – DIN 53508;*

According to DIN7863, here below we report the table requirements for the material:.

Category	U.M.	Requirements					
		A	B	C	D	E	F
<b>Hardness</b>	IRHD	50	60	70	80	75	85
<b>Admitted Tolerances</b>	IRHD	± 5	± 5	± 5	± 5	± 5	± 5
<b>Tensile Strength</b>	N / mm <sup>2</sup>	7,5	7,5	7,5	7,5	12	12
<b>Elongation at break</b>	%	300	200	200	150	175	175
<b>Compression set at 100°C</b>	%	35	35	35	35	35	35
<b>Compression set at 25°C</b>	%	60	70	80	90	80	90
<b>a) Variation of hardness</b>	IRHD	+15 -5	+15 -5	+10 -5	+10 -5	+10 -5	+10 -5
<b>b) Variation of tensile strength</b>	% of initial value	-25	-25	-25	-25	-25	-25
<b>c) Variation of elongation at break</b>	% of initial value	-50	-50	-50	-50	-50	-50
<b>Variation of hardness after cold treatment</b>	IRHD	+10	+10	+10	+10	+10	+10

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## Object : PHYSICAL AND MECHANICAL TESTS ON PRODUCTA EPDM ACCORDING TO DIN 7863 STANDARD

<u>PRODUCTA EPDM</u>	<u>DIN 7863/1</u>	<u>TEST METHOD</u>	<u>VALUES</u>	
<u>Hardness</u>	Shore A3	64,5	DIN 53505 - UNI 4916	60 ± 5
<u>Tensile test</u> - tensile strength - elongation at break	Mpa	8,4 360	DIN 53504 - type S2 UNI 6065 - type 2	min 7,5 min 200
<u>Compression set</u> <u>compression of 25% for 22</u> <u>hours at 100 °C</u>	%	15,5	DIN 53517 - type 1 UNI 4913 - type B	max.35
<u>Compression set</u> <u>compression of 25% for 22</u> <u>hours at -25 °C</u>			DIN 53517 - type 1 UNI 7533 - type B	max.70
<u>BEHAVIOUR AT A</u> <u>TEMPERATURE OF -10°C FOR</u> <u>7 DAYS</u>			DIN 53541	
<u>Hardness</u> - variation from t.q.	Shore A3 Shore A3	70,0 +5,5		max +10
<u>AGING</u> <u>FOR 7 DAYS AT 100°C</u>			DIN 53508 UNI-ISO 188	
<u>Hardness</u> - variation from t.q.	Shore A3 Shore A3	67,0 +2,5		+10/-5
<u>Tensile strenght</u> - resistenza a rottura Variation from t.q. - allungamento a rottura variazione da t.q.	Mpa % % %	9,3 +11 375 +4		max.-25 max.-5

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L' OPERATORE  
  
M. D'Inca

IL DIRETTORE  
  
F. Casa

Test results on Producta EPDM raw material at low temperatures:

COMPRESSION SET ( 22 ore a -25°C; DIN 7863)	%	55	(<70)
DEFLECTION RECOVERY ( 22 h at -25°C; AFNOR 85-301)	%	45	(>30)
CLASH-BERG (UNI 9122)	°C	<-60	(-40)



IL DIRETTORE  
  
F. Casa

## CERISIE

Laboratorio per la Certificazione e Ricerca  
sui Sistemi Elastomerici

UNDER THE PATRONAGE OF **C.N.R.** (National Research Centre)

N°010114

LA GUARNIZIONE E' STATA CERTIFICATA NEI LABORATORI PRODUCTA SECONDO QUANTO RICHIESTO DALLA NORMATIVA **EN12365**  
QUESTO CERTIFICATO **GARANTISCE IL COSTRUTTORE DI INFISSI** SULLA QUALITA' E LIVELLO PRESTAZIONALE DELLA GUARNIZIONE  
LA GUARNIZIONE PUO' ESSERE UTILIZZATA PER LA **MARCATURA CE** DEL SERRAMENTO

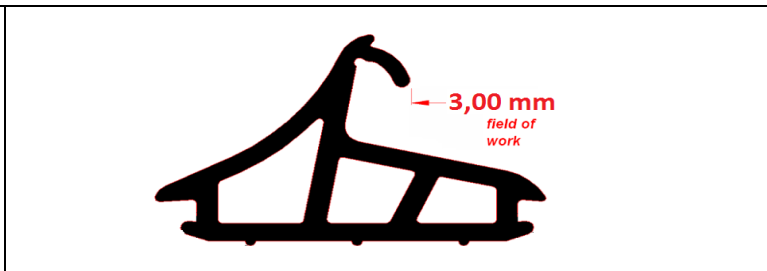
THE GASKET HAS BEEN TESTED IN PRODUCTA LABORATORY AND CERTIFIED IN CONFORMITY TO THE **EN12365** NORMALIZATION  
THIS CERTIFICATE **GUARANTEES THE WINDOW MANUFACTURER** ABOUT QUALITY AND PERFORMANCES OF THE GASKET  
THE GASKET IS CONFORMABLE FOR THE **CE CERTIFICATION** OF THE WINDOW

**1** **Descrizione guarnizione / gasket description**

CODICE ARTICOLO / ITEM CODE	<b>MO11.11</b>
DESCRIZIONE ARTICOLO / DESCRIPTION ITEM	CENTRAL GASKET
SERIE / SYSTEM	ALUMIL serie M11000
MATERIA PRIMA / RAW MATERIAL	EPDM DIN7863
DUREZZA / HARDNESS ----- STANDARD Uni En ISO 868	COMPACT BLACK MATERIAL SHORE-A 60 +/-5

**2** **Valori riscontrati secondo EN12365 / Performance Conformity Card EN 12365**

RAPPRESENTAZIONE GRAFICA DELLA GUARNIZIONE  
GRAPHIC REPRESENTATION OF THE GASKET



Requisiti prestazionali e classificazione del prodotto secondo la norma  
Performance requirements and classification according to

**EN 12365**

Classi prestazionali identificative  
Performance identification card

**W 3 5 2 4 4**

**3** **Valori riscontrati secondo classi EN12365 / Values according EN 12365 related table**

CATEGORIA DI UTILIZZO USE CATEGORY	central gasket	W	W: Weatherstripping – seal working 'dynamically' G: Gasket – seal working with a push fit	PARAMETER CLASSIFICATION TABLE UNI EN 12365		
CAMPO DI LAVORO FIELD OF WORK	3 mm	3	Measure of how far the seal can be compressed or deflected in its position of use on the profile.	1: X ≤ 1mm 2: 1 mm < X ≤ 2mm 3: 2 mm < X ≤ 4mm	4: 4 mm < X ≤ 6 mm 5: 6 mm < X ≤ 8 mm 6: 8 mm < X ≤ 10 mm	7: 10 mm < X ≤ 15 mm 8: 15 mm < X ≤ 30 mm 9: X > 30 mm
COMPRESSIONE LINEARE LINEAR COMPRESSION FORCE	110 N/M	5	Force (Newton/metre) necessary to compress a metre of seal up to the limit of the field of work, at a temperature of 23°C +/-2°C	1: X ≤ 10 N/m 2: 10 N/m < X ≤ 20 N/m 3: 20 N/m < X ≤ 50 N/m	4: 50 N/m < X ≤ 100 N/m 5: 100 N/m < X ≤ 200 N/m 6: 200 N/m < X ≤ 500 N/m	7: 10 mm < X ≤ 15 mm 8: 15 mm < X ≤ 30 mm 9: X > 30 mm
TEMPERATURA DI UTILIZZO OPERATING TEMPERATURE OF RANGE	from -10°C to +55°C	2	Temperature range within which the article can be used, maintaining the specified performance	1: 0° -:- + 45° 2: -10° -:- + 55°	3: -20° -:- + 85° 4: -25° -:- + 100°	5: -40° -:- + 70 6: 0° -:- + 200°
RITORNO ELASTICO ELASTICITY RECOVERY	67%	4	Measurement of the product's capacity to return to its original position after continued compression for 22/24 hours at the maximum of the field of work and at the extreme temperatures of the temperature range	0: NOT CALCULATED 1: 30% < X ≤ 40% 2: 40% < X ≤ 50%	3: 50% < X ≤ 60% 4: 60% < X ≤ 70% 5: 70% < X ≤ 80%	6: 80% < X ≤ 90% 7: X > 90%
RITORNO DOPO INVECCHIAMENTO RECOVERY AFTER AGEING	61%	4	Capacity of a sample of specific material from which the seal is produced, to percentage recover its original height after continued compression for 21 days at the maximum of the field of work and at the extreme temperatures of the temperature range	0: NOT CALCULATED 1: 30% < X ≤ 40% 2: 40% < X ≤ 50%	3: 50% < X ≤ 60% 4: 60% < X ≤ 70% 5: 70% < X ≤ 80%	6: 80% < X ≤ 90% 7: X > 90%