WESPO
WESTERN POLYRUB INDIA PVT. LTD.

Data Sheet	Rail45 Silicone 70 Shore to EN45545-2

Data Sheet Type	Final
Material Reference	Rail45 Silicone
Polymer	Silicone
Date Issued	20/09/22

Description

A high performance Silicone Rubber Sheeting with excellent Flame Retardant properties, and Low Smoke and Low Toxicity performance characteristics. The material meets many of the main international Flame Retardant standards for the Rail Industry including:

EN45545-2 R22-HL2 & R23-HL2- ISO 5659-2 BS6853 Cat 1a, NF F-16-101 Catagories F1 & I2, DIN 5510-2, LUL 1-085 A2 Table 4, UL94 V0
(3mm).

Specifications	Values	Test Methods
Colour	Grey	
Compression Set(22 Hours @ 175°C)	28 %	ISO 815
Density	1.24 g/cm 3	ISO 2781
Elongation at Break	400 %	ISO 37
Highest Recommended Working Temperature	250 °C	None
Lowest Recommended Working Temperature	-60 °C	None
Shore Hardness (Shore A)	72 ° Shore	None
Tear Strength	24 KN/m	ISO 34
Tensile Strength	8 MPA	ISO 37

Purposes

Flame Retardent

High Working Temperature

Low Working Temperature

Important Notes about this Material Data Sheet

This datasheet has been carefully compiled to advise you, our customer, in the best possible way. The information,figures, test values, and data correspond to actual engineering standards and are the result of many years of tests and trials. As individual operating conditions influence the application of each product, the information supplied in this datasheet can only be seen as a rough guideline. In every case it is the sole responsibility of the customer to evaluate his individual requirements, in particular whether the specified properties of our products are sufficient for

the intended use. This datasheet is subject to alteration without prior notice . All mentioned values contained hereinare guiding values representing long-term experience averages. Please be aware that Test Results for individual Material Batches will only be provided if requested at the time of order and may be subject to additional charges and/or lead times. This Data Sheet supersedes all previous data sheets and any other data previously provided either Verbally, Electronic or Written, with reference to the above Material Grade.

Sample Description:

SILICONE TEST SLAB FOR PROFILES & GASKET,
COMPOUND NO.– WS3044/F44/M

DETERMINATION OF BURNING BEHAVIOUR BY OXYGEN INDEX

1. **Test Method: -** ISO 4589-2:2017

2. **Procedure of Ignition:** - Procedure A – Top surface Ignition

3. **Test Specimen: -** Form III (80 MM X 10 MM X 3 MM)

4. **Test Conditioning:-** 23 ± 2°C & 50 ± 5 % RH for 24 hours

5. Requirement: -

- Period of burning: 180 seconds
- Extent of burning: 50 mm below the top specimen.

6. **Observations:** - The oxygen value recorded when the extent of burning exceed 180 seconds .

7. **Result: - Oxygen Index value is 29.4 %**

Smoke Density as per ISO 5659-2

Sample Size:
75X75mm

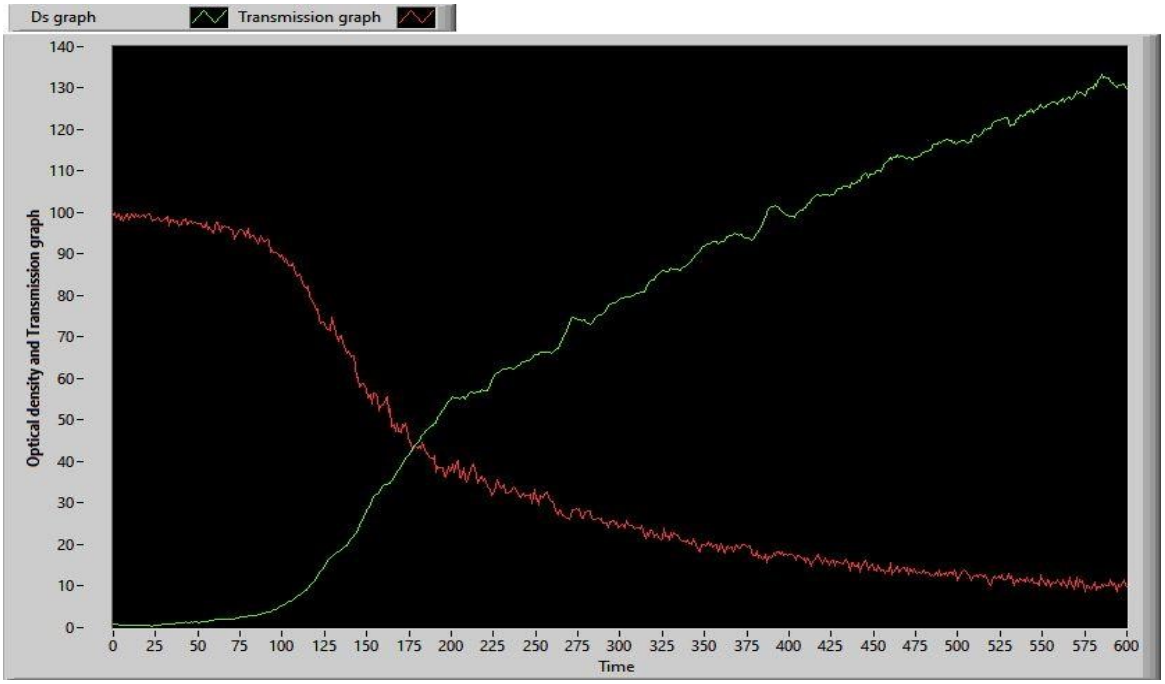
Purpose of Test:
To assess the performance of specimens of SILICONE TEST SLAB FOR PROFILES & GASKET, COMPOUND NO. – WS3044/F44/M when tested in accordance with the procedure specified in **"ISO 5659-2, determination of the optical density of smoke produced from a horizontally positioned test specimen subjected to a specific thermal radiation in a sealed chamber"**.

Test Procedure
The test was performed in accordance with the procedures specified in **"ISO 5659-2, determination of the optical density of smoke produced from a horizontally positioned test specimen subjected to a specific thermal radiation in a sealed chamber" at 25 kW/m^2.** Number of specimens of size 75mm in length and 75mm in width have been tested in a Smoke density chamber. All the observations like **D_s Max, CITg** were recorded.

Test Results

Parameter		Sample -1	Sample -2	Sample -3	Average
Smoke Density & Toxicity as per ISO 5659-2	**D_s Max.**	115.7	122.6	133.4	**123.9**
	CITg,240 sec	0.32	0.36	0.38	**0.35**
	CITg,480 sec	0.39	0.41	0.40	**0.40**

Graph



***Note:** Graphs given above is of one of the three samples only, it should not be treated as graph of average result.*

Photographs

Before Test

After Test

Summary of Result:

Test method	Parameter	Results	Requirement as per R22; HL2 of EN 45545-2	Requirement as per R23; HL2 of EN 45545-2
Smoke Density & Toxicity	D_s Max	123.9	Maximum 300	Maximum 600
	CIT_G	0.40	Maximum 0.90	Maximum 1.8
Limited Oxygen Index(as per attached report ISO 4589)	Oxygen content %	29.4	Minimum 28	Minimum 28

Conclusion: Tested specimen SILICONE TEST SLAB FOR PROFILES & GASKET, COMPOUND NO. – WS3044/F44/M (Name Declared by test sponsor) complies with the requirement of **R22; HL2 &R23;HL2 of EN 45545-2.**

Note: *These test results relate only to the behaviour of the product under the particular conditions of this test and they are not intended to be the sole criterion for assessing thepotential fire hazard of the product in use.*