ATMY ANALYTICAL LABS PVT.LTD.

I-30, DLF Industrial Area, Phase-1, Faridabad (Haryana) INDIA
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• Testing
• Research
• Innovation

TEST REPORT

Report No.: **2108260013**

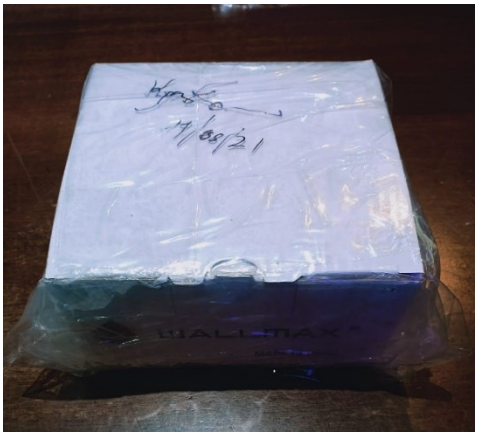
Date: 01-09-2021

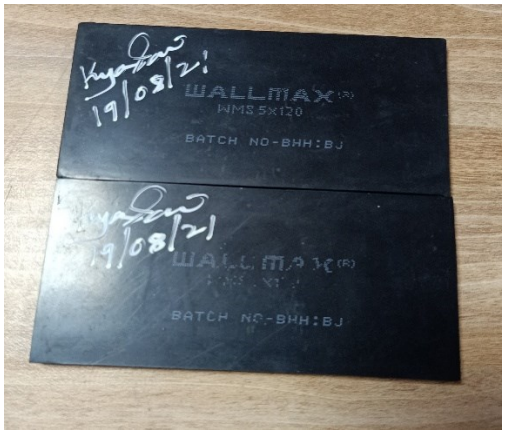
Issued To:

M/s WALLMAX INDIA ENTERPRISES PRIVATE LIMITED
12/6 GOLDEN PEAKOCK COMPLEX, MAIN MATHURA ROAD,
FARIDABAD - 121003

Sample Description	:	WALLMAX EPDM RUBBER
Client Reference No.	:	30
Sample Received Date	:	26-08-2021
Sample Drawn By	:	Client
Specification	:	--
Test Requested	:	SMOKE, TOXICITY
Test Method	:	Refer to Attached Pages.
Test Result	:	Refer to Attached Pages.

SAMPLE PICTURE





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I. Physical Test **Test Performed on : 26-08-2021 to 01-09-2021**

SMOKE DENSITY & TOXICITY TEST

(as per NF F 16-101-1988, NF F 16-102-1992)

Fire Behaviour of Materials

The actual classification used by French regulation for the classification of fire behavior of of material of components is described in:

NF F 16-101: Rolling stock- Fire behavior- Material selection- Non metallic materials.
NF F 16-102: Rolling stock- Fire behavior- Material selection- Application for electrical equipment.

These standard provided the classification of the material by reaction of fire and smoke & toxicity.

Principle:

Toxicity (ITC):

The test is conducted within a tube furnace where the temperature is generally 600°C. (in some instances this can be 400°C or 800°C). Toxic fume emission testing is then carried out in triplicate and the average of these results is used to calculate the "ITC" Value. The collection / measurement of toxic fumes takes place throughout the 20 minutes test duration. The toxic fume emission is expressed in milligrams per gram of material, on the assumption that the mass of the test piece is 1g. Toxicity index according to the below formula.

Toxicity (ITC) = 100 x TI/CCI.

Smoke Density (I.F):

The smoke density is measured using a white light beam which runs from the base of the chamber to a detector in the roof of the chamber, as smoke is produced less of the light reaches the detector. The resulting smoke density / time curve is used to calculate the smoke index. The actual values we record are: VOF4 value = a measurement of the rate of smoke production during the first four minutes of the test.

Calculation of I.F Rating:

The ITC, VOF4 and Dsmax values are combined in a weighted calculation in order to determine a Smoke Index. it is this value that is used to provide an F rating.

Smoke Index (I.F) = Dsmax/100 + VOF4/30 + ITC/2.

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Classification:

The mixed results of those tests carried-out to a classification in five classes from F0 to F5.

Classes: (F0. F1, F2, F3, F4 & F5).

Table 1: F rating according IF values

IF Value	F Rating
<5	F0
<20	F1
<40	F2
<80	F3
<120	F4
>120	F5

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Observation:

1) TOXIC GAS ANALYSIS

Parameters	Unit	Observed Value Concentration	*CCI* Concentration
CO	mg/l	80	1750
CO2	mg/l	750	90000
HCl	mg/l	4	150
HBr	mg/l	2	170
HCN	mg/l	3	55
HF	mg/l	2	17
SO2	mg/l	2	260

Toxicity Index (ITC) - 13.57

2) SMOKE OPACITY MEASUREMENT

VOF4 - 110
Dsmax - 240

Smoke Index (I.F.) - 19.57

CLASSIFICATION OF MATERIAL F1 (as per observed table-1)

----------**End of Report**----------

ATMY ANALYTICAL LABS PVT. LTD. FARIDABAD

Vishal Singh Tomar
ANALYST

Authorised Signatory

Authentication: To Check authenticity of Test report (s), Scan **QR** code to get original data.

Govt. Approved Laboratory
ISO 9001 : 2015, ISO 14001:2015 & OHAS 1800:2007 Certified Laboratory