

Annex - I

RAIL COACH FACTORY (KAPURTHALA)

No. MD 35131

Dated: 31.1.04

SUB: Specification for EPDM sponge Rubber
to MDS 046 Rev-3

REF: Above spec. is approved by CDE at pp-15 of
MD 22241 Vol - II

With reference to above please find enclosed a copy of Specification or it's related information as
deal point-wise below, for information and necessary action at your end.

Above spec. revised in clause 3.5, 30%. Value of
compression set at 50% deflection was 15%.
compression set at 50% deflection.

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SME/DEVA

COM, CPLE, CWE, CMM, CMT,

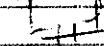
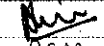


SSE / LIB. DESIGN,
SSE / RECORD. [With Original Specification]
TE-I / DESIGN / RCF / TKJ.

Copy for kind information to:

DY. CME / TOT, DY. CME / D, DY. CME / IT / P
CDE.

MDTS046 REV.3
DATED 13.1.2003

SPECIFICATION FOR EPDM SPONGE

NAME	DESIGNATION	SIGNATURE	DATE	LEVEL
R. Duggal	SSE/FD		29-1-4	Prepared
Pradeep Sharma	ADE/DI		29.1.04	Agreed
Ravi Kumar	Dy CME/D		30.1.2004	Reviewed
Divya Vikas	CDE		31.1.2004	Approved

ISSUE	DETAILS OF CHANGE	DATE
0.0	FIRST ISSUE	11.7.97
1.0	1. TENSILE STRENGTH DELETED 2. REDUCTION IN TENSILE STRENGTH AFTER HEAT AGEING DELETED	24.9.99
2.0	1. HEAT AGEING REPLACED BY OVEN AGEING 2. LOW TEMPERATURE TEST ADDED 3. IN CL.3.4 70 HRS. & 10x MAGNIFICATION WERE 100 HRS. & 7X MAGNIFICATION AND TESTING PROCEDURE ADDED 4. IN CL.3.5 15% VALUE OF COMPRESSION SET AT 50% DEFLECTION WAS 40% AT 50% COMPRESSION. 5. IN CL.2.1 FLAME RESISTANT ADDED.	08.3.2000
3.0	In Clause 3.5, 30% value of compression set at 50% deflection was 15% compression set at 50% deflection	13.1.2004



1.0 SCOPE:

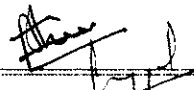
1.1 This specification covers the requirement of Ethylene-Propylene-Diene Terpolymers (EPDM) sponge for sealing purpose.

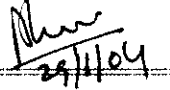
2.0 GENERAL REQUIREMENTS:

2.1 The material shall be ozone resistant, weather resistant, chemical resistant, operate, between temperature range of -40 to +80°C and shall have good stability against atmospheric degradation.

3.0 REQUIREMENTS:

3.1	Oven ageing	7 days at 70°C, change from original compression deflection: ±20% (testing as per ASTM:D1056)
3.2	Compression deflection (at 25% deflection)	14 to 35 Kpa (testing as per ASTM:D1056)
3.3	Rubber content	30% (minimum)
3.4	Ozone resistance	70 hrs. at 40°C, 50 PPHM concentration, 30% elongation: No visible cracks at 7x magnification (testing as per ASTM:D1171, Method-B).
3.5	Compression set	22 hrs. at 70°C with 50% deflection - 30% Max (testing as per ASTM:D1056)
3.6	Manufacturing process (curing)	Hot air/Microwave heating for uniform curing
3.7	Low Temperature Test	Change from original deflection values at -40°C = 50% (testing as per ASTM:D1056)


 Prepared by


 Agreed by