

## DEPARTMENT OF CHEMICAL ENGINEERING

University of Engineering and Technology, G.T. Road, Lahore, 54890 (PAKISTAN)

Ref. No. Chem. Engg 18

Mr. Hamid Ali Resident Engineer, NESPAK M. Garh ~ D.G Khan Road, Package- I

Subject:

Testing of Elastomeric Bearing Pad, (M/s Interbuna, Spain) Dualization of Road Muzaffargarh~D.G Khan, Package-I

With reference to your letter No. 3949/HA/01/84 dated 02-05-2018 on the subject cited above. The result of provided sample is as under:

Description / Test	Unit	Result	Standard N. a
Ozone resistance, 20% strain, 100hrs @38°C ± 1°C (except 100 ±20 Parts per 100,000,000)	Obs	No deformation No cracking (satisfactory)	ASTM D-1149 Rubber deteriorate Cracking in an ozone
Low temperature brittleness, 5 hrs. @ 40°C	Obs	No Brittle No shape change	D-736
Low temperature stiffness Young's Modulus @35°C	Kgs/cm <sup>2</sup>	292	D-797
Compression set, 22 hrs. @ 67°C Tear strength	%	19.12	D-395 (Method B)
rear strength	Kgs/cm <sup>2</sup>	25.92	D-624 (Die C)

Description	Unit	Before aging	After aging @100°C, 70 hrs.	Change	Standard ASTM
Hardness (Shore A)	Points	60	64	1	D 2240
Tensile strength	Kgs/cm <sup>2</sup>	198	181	-8.59%	D-2240 D-412
Elongation at break	%	483	440	-8.90%	D-412

(Fayyaz A. Kirmani) Supervisor (Lab.)



(Prof. Dr. Ing- Naveed Ramzan) Chairman

Note: This test report is based on sample provided by the client. As sampling has not been performed by the Chemical Engineering Department. The authenticity of sample lies with the client. After completion of the report the sample will be reserved for fifteen days until negotiated otherwise. Non-negotiable results cannot be challenged.