



# DEPARTMENT OF CHEMICAL ENGINEERING

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

Ref. No. Chem. Engg 13/2016

Dated: 24-10-2016


SEOL Jeong Ho  
Team Leader/The Engineer (E-35)  
DOHWA Engineering Co. Ltd.  
Islamabad

Subject: Testing of Elastomer Bearing Pad (Interbuna) (5178)  
(Construction of Hassanabdal-Havelian Section of E-35-ICB-E-35-I Burhan to Jarikas (Km 0 + 000 to Km 20 + 400))

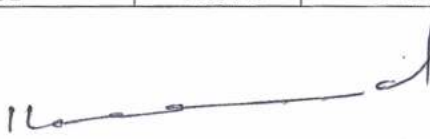
With reference to your letter No. Dohwa/NHA/E-35/2016/2468 dated 04-10-2016 on the subject cited above. The result of provided sample is as under:

Description / Test	Unit	Result	Standard Method (ASTM)
Ozone resistance, 20% strain, 100hrs @38°C ± 1°C (100 ± 20 Parts per 100,000,000)	Observation	No deformation No cracking	ASTM D-1149 Ruber deteriorator Cracking in an ozone controlled (satisfactory)
Low temperature brittleness, 5 hrs. @-40°C	Observation	No Brittle No shape change Satisfactory	D-736
Low temperature stiffness Youngs Modulus @35°C	Kg/cm <sup>2</sup>	289	D-797
Compression set, 22 hrs @ 67°C	%	16.5	D-395 (Method B)
Tear strength	Kg/cm <sup>2</sup>	22.7	D-624 (Die C)

Description	Unit	Before aging	After aging @100°C, 70 hrs.	Change	Standard ASTM
Hardness (Shore A)	Points	62	64	2	D-2240
Tensile strength	Kg/cm <sup>2</sup>	195	178	-8.72%	D-412
Elongation at break	%	490	432	-11.84%	D-412

  
(Fayyaz Ahmad Khan)  
Supervisor



  
(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 one month until negotiated otherwise. Non-negotiable results can not be challenged.