

CENTRAL MATERIAL TESTING LABORATORY

CONTRACT NO :				DATE : 03.04.02				
CONTRACTOR :				MANUFACTURER : AL Ashwaq Rubber Products Ind:				
CONSULTANT :				SUPPLIER :Al Reem				
MATERIAL REVIEW REPORT C #								
RUBBER FENDER								
SL NO	PROPERTIES			SPECIFIED	PROPOSED	DCIL MEASURED	EVALUATION	REMARKS
1	Hardness	(Number)	[ASTM D 2240]	80 ± 5	82	-	OK	Acceptable
2	Tensile Strength	(MPa)	[ASTM D 412]	≥ 16.0	17	-	"	
3	Ultimate Elongation	(%)		≥ 300.0	320	-	"	
4	Change in durometer Hardness (max)	(Points)	[ASTM D 573]	$\leq + 8$	6	-	"	Acceptable
5	Change in tensile strength (max)	(%)		≤ -20	-12	-	"	"
6	Change in ultimate elongation (max)	(%)		$\leq - 20$	-12	-	"	"
Compression set								
7	@ 22hrs, 100 C (max)	(%)	[ASTM D 395] Method B	≤ 28.0	< 32.0	-	OK	
Ozone								
8	100 pphm ozone in air by volume , 20 % strain , 37.7 ° C \pm 1 C, 100 hours mounting	(-)	[ASTM D 1149]	No Cracks	No Cracks	-	OK	
Adhesion to Steel								
9	Bond made during vulcanization	(%)	[ASTM D429]	NA	NA	-	OK	
	Bond Strength	(Kn/m)	[ASTM D429,A]	NA	NA	-	"	
	Peel Strength	(Kn/m)	[ASTM D429,B]	NA	NA	-	"	
10	Ultimate Breakdown (Compression)	(kg/cm ²)	[ASTM D 1752]	<u>NA</u>	NA	NA	"	
11	Recovery	(%)		NA	NA	NA	-	@ 40°C, 24 hrs.
12	Water Absorption	(%)	[ASTM D570]	NA	NA	NA	-	@ 24hrs ,96 hrs respectively.
Effects of liquids								
13	Δ Diesel	(%)	[ASTM D471]	N/S	?	17.330	-	@ 96 hrs.
	Δ Detergent	(%)		N/S	?	0.270	-	@ 96 hrs.
	Δ 10% Hcl	(%)		N/S	?	-0.160	-	@ 96 hrs.
REMARKS:								