



## WILLIAM JOHNSTON & COMPANY LIMITED

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### White Super Soft High Abrasion Natural Rubber 38 Shore WJ138

FDA 21 CFR177-2600 and EU 1935/2004 compliant

PROPERTIES	TEST METHOD	VALUES FPS UNITS	TEST METHOD	VALUES METRIC UNITS
SPECIFIC GRAVITY	DIN 53508	0.98 ± 0.05	ASTM D297	0.98 ± 0.05
HARDNESS	DIN 53505	38 ± 5 SH A	ASTM D2240	38 ± 5 SH A
TENSILE STRENGTH (KG/CM2)	DIN 53504	2986 PSI	ASTM D412	240 KG/CM2
ELONGATION AT BREAK (MIN)	DIN 53504	810%	ASTM D412	810%
ABRASION RESISTANCE (MAX)	DIN 53516	80 MM3	ASTM D5963	80 MM3
COMPRESSION SET (70 °C/24 HRS/25% SET) (MAX)	DIN 53517	15 %	ASTM D395 METHOD	15 %
POLYMER CONTENT (%)		100		100
TEAR RESISTANCE (ANGULAR) MIN	DIN 53515	224 LBS/INCH	ASTM D624	40 KG/CM
RESILIENCE		75%		75%
CHANGE IN PROPERTIES				
HEAT AGEING (72 HRS. AT 70°C)			ASTM D573	
--- HARDNESS (PTS)		+ 3 (MAX)		+ 3 (MAX)
--- TENSILE STRENGTH (%)		+10 / - 15		+10 / - 15
--- ELONGATION AT BREAK (%)		+10 / - 15		+10 / - 15
FOOD GRADE COMPLIANCE	US FDA 21 CFR 177.2600	YES		YES
CHEMICAL RESISTANCE				
--- OZONE		FAIR		FAIR
--- DILUTE ACIDS AND BASES		GOOD		GOOD
--- CONCENTRATED ACIDS AND BASES		NOT RECOMMENDED		NOT RECOMMENDED
--- OILS		NOT RECOMMENDED		NOT RECOMMENDED
--- SOLVENTS		NOT RECOMMENDED		NOT RECOMMENDED
TEMPERATURE RANGE		-30° TO + 70° C		-30° TO + 70° C
COLOUR		OFF WHITE		

SR. NO	NAME OF PARAMETER	RESULT	UNIT	MAX LIMIT	TEST METHOD
1	N-HEXANE EXTRACT FOR FIRST 7 HRS.	29.5	MG/INCH <sup>2</sup>	175 MG/INCH <sup>2</sup>	LIMIT AND TEST METHOD AS PER US-FDA 21.CFR.177.2600
2	N-HEXANE EXTRACT FOR SUCCEEDING 2 HRS	3.50	MG/INCH <sup>2</sup>	4 MG/INCH <sup>2</sup>	
3	DISTILLED WATER EXTRACT FOR FIRST 7 HRS	1.3	MG/INCH <sup>2</sup>	20 MG/INCH <sup>2</sup>	
4	DISTILLED WATER EXTRACT FOR SUCCEEDING 2 HRS	0.60	MG/INCH <sup>2</sup>	1 MG/INCH <sup>2</sup>	

**Notes:**

1. For Sr. No1 & 2 sample extracted with n-Hexane at reflux temperature.
2. For SR. No. 3 & 4 sample extracted with distilled water at reflux temperature

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