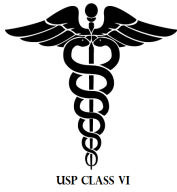




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White Food Quality NR / SBR 60° shore WJ136

Approved to: US FDA21 CFR177,2600 & EU1935/2004 and USP Class 1 V1 Compliant

PROPERTIES	TEST METHOD	VALUES		
		FPS UNITS	METRIC UNITS	
SPECIFIC GRAVITY	DIN 53508	1.5 ± 0.05	ASTM D297	1.5 ± 0.05
HARDNESS	DIN 53505	60 ± 5 SH A	ASTM D2240	60 ± 5 SH A
TENSILE STRENGTH (MIN)	DIN 53504	1140 PSI	ASTM D412	60 KG/CM2
ELONGATION AT BREAK (MIN)	DIN 53504	200%	ASTM D412	200%
COMPRESSION SET (70°C/24 HRS/25% COMPRESSION) (MAX)	DIN ISO 815-1	40%	ASTM D395 METHOD B	40%
POLYMER CONTENT		NA		NA
TEAR RESISTANCE (ANGULAR) MIN	DIN 53515	112 LBS/INCH	ASTM D624	20 KG/CM
CHANGE IN PROPERTIES AFTER HEAT AGEING FOR (72 HRS. AT 70 °C)			ASTM D573	
--- HARDNESS (PTS)		+ 5 (MAX)		+ 5 (MAX)
--- TENSILE STRENGTH (%)		+ 10 / 15		+ 10 / 15
--- ELONGATION AT BREAK (%)		+ 10 / 15		+ 10 / 15
VOLUME SWELL: AT 70°C FOR 72 HRS			ASTM D 471	
IN IRMOIL NO.1		NOT RECOMMENDED		NOT RECOMMENDED
IN IRMOIL NO.2		NOT RECOMMENDED		NOT RECOMMENDED
IN IRMOIL NO.3		NOT RECOMMENDED		NOT RECOMMENDED
CHEMICAL RESISTANCE				
--- OZONE		NOT RECOMMENDED	ASTM D 1149	NOT RECOMMENDED
--- DILUTE ACIDS AND BASES		NOT RECOMMENDED		NOT RECOMMENDED
--- 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		OFF-WHITE

TEST RESULTS: MIGRATION DATA

(TEST NO. 1-I) SENSORY VERIFICATION OF ODOUR/SMELL

(TEST NO. 1-I) SENSORY VERIFICATION OF ODOUR/SMELL TEST SPECIFICATION(S)/REGULATION(S): REGULATION (EC) NO. 1935/2004 & COUNCIL OF EUROPE RESOLUTION RESAP (2004) 4 ON RUBBER PRODUCTS INTENDED TO COME INTO CONTACT WITH FOODSTUFFS.

TEST METHOD ADOPTED: DIN 10955:2004.

SIMULANT(S) USED: DISTILLED WATER.

TEST CONDITION(S): 100 0C OR REFLUX FOR 4 HOURS.

COMPONENT NO.	TEST PARAMETER	RESULT (GRADE)	COMPLIANCE REQUIREMENT/LIMIT MAX.	CONCLUSION (PASS/FAIL) REFER REMARK 3 ON PAGE NO.2)
A	RATING	0	LESS THAN 2.5	PASS

Note:

(INTERMEDIATE GRADES ARE ALLOWED)

0 = NO PERCEPTIBLE DIFFERENCE IN ODOUR.

1 = JUST PERCEPTIBLE DIFFERENCE IN ODOUR (STILL DIFFICULT TO DEFINE).

2 = SLIGHT DIFFERENCE IN ODOUR.

3 = MARKED DIFFERENCE IN ODOUR

4 = STRONG DIFFERENCE IN ODOUR

(TEST NO. 1-II) SENSORY VERIFICATION OF TASTE

TEST SPECIFICATION(S)/REGULATION(S): REGULATION (EC) NO. 1935/2004 & COUNCIL OF EUROPE RESOLUTION RESAP (2004) 4 ON RUBBER PRODUCTS INTENDED TO COME INTO CONTACT WITH FOODSTUFFS.

TEST METHOD ADOPTED: DIN 10955:2004.

SIMULANT(S) USED: DISTILLED WATER.

TEST CONDITION(S): 100°C OR REFLUX FOR 4 HOURS.

COMPONENT NO.	TEST PARAMETERS	RESULT (GRADE)	COMPLIANCE REQUIREMENT/LIMIT MAX.	CONCLUSION (PASS/FAIL) (REFER REMARK 3 ON PAGE NO.2)
A	RATING	0	LESS THAN 2.5	PASS

Note:

(INTERMEDIATE GRADES ARE ALLOWED)

0 = NO PERCEPTIBLE DIFFERENCE IN TASTE.

1 = JUST PERCEPTIBLE DIFFERENCE IN TASTE (STILL DIFFICULT TO DEFINE).

2 = SLIGHT DIFFERENCE IN TASTE.

3 = MARKED DIFFERENCE IN TASTE.

4 = STRONG DIFFERENCE IN TASTE.

(TEST NO. 2) OVERALL MIGRATION

TEST SPECIFICATION(S)/REGULATION(S): COUNCIL OF EUROPE RESOLUTION RESAP (2004) 4 ON RUBBER PRODUCTS INTENDED TO COME INTO CONTACT WITH FOODSTUFFS.
TEST METHOD(S) ADOPTED: WITH REFERENCE TO EN 1186-3:2002 (FOR 3 % ACETIC ACID) & EN 1186-14:2002 (FOR 95 % ETHANOL AND ISO-OCTANE); SIMULANTS USED: REFER BELOW.
TEST CONDITION(S): REFER BELOW (NOTE: TESTS CONDUCTED UNDER REPEAT-USE CONDITIONS);

S.NO.	SIMULANT USED	TEST CONDITION(S)	COMPONENT NO.	RESULT (MG/KG)
1	3 % ACETIC ACID	100 °C OR REFLUX FOR 4 HOURS	A	ND
2	95 % ETHANOL	60 °C FOR 6 HOURS	A	ND
3	ISO- OCTANE	60 °C FOR 4 HOURS	A	ND
OVERALL CONCLUSION (PASS/FAIL)				Pass
LIMIT OF QUANTIFICATION: 12.0 MG/KG				

Note

- (1) "MG/KG" DENOTES MILLIGRAM PER KILOGRAM;
- (2) °C DENOTES DEGREES CELCIUS.
- (3) "%" DENOTES PER CENT.
- (4) "ND" DENOTES NOT DETECTED

(TEST NO. 3) Specific migration of primary aromatic amines

TEST SPECIFICATION(S)/REGULATION(S): COUNCIL OF EUROPE RESOLUTION RESAP (2004) 4 ON RUBBER PRODUCTS INTENDED TO COME INTO CONTACT WITH FOODSTUFFS.
TEST METHOD(S) ADOPTED: WITH REFERENCE TO EN 13130-1:2004 FOLLOWED BY ANALYSIS USING UV VISIBLE SPECTROPHOTOMETER.
SIMULANT(S) USED: 3 % ACETIC ACID.
TEST CONDITION(S): 100 °C OR REFLUX FOR 4 HOURS (UNDER REPEAT-USE CONDITIONS); EQUIPMENT(S) USED: UV VISIBLE SPECTROPHOTOMETER.

COMPONENT NO.	RESULT (MG/KG)	LIMIT OF QUANTIFICATION (MG/KG)	COMPLIANCE REQUIREMENT/LIMIT MAX.	CONCLUSION (PASS/FAIL)
A	ND	0.01	SUM OF PRIMARY AROMATIC AMINES SHALL BE LESS THAN 0.01 MG/KG	PASS

Note:

- (1) "MG/KG" DENOTES MILLIGRAM PER KILOGRAM;
- (2) °C DENOTES DEGREES CELCIUS.
- (3) "%" DENOTES PER CENT.
- (4) "ND" DENOTES NOT DETECTED.
- (5) "UV" DENOTES ULTRA-VIOLET

(TEST NO. 4-I) SPECIFIC MIGRATION OF PHTHALATES

TEST SPECIFICATION(S)/REGULATION(S): COUNCIL OF EUROPE RESOLUTION RESAP (2004) 4 ON RUBBER PRODUCTS INTENDED TO COME INTO CONTACT WITH FOODSTUFF.

TEST METHOD(S) ADOPTED: WITH REFERENCE TO EN 13130-1:2004 FOLLOWED BY ANALYSIS USING GC MS;
SIMULANT(S) USED: 95 % ETHANOL.

TEST CONDITION(S): 60 °C FOR 6 HOURS (UNDER REPEAT-USE CONDITIONS).
EQUIPMENT(S) USED: GC MS (GAS CHROMATOGRAPHY MASS SPECTROMETER).

S.NO	PARAMETER	CAS NO.	RESULT (MG/KG) – COMPONENT NO. A	LIMIT OF QUANTIFICATION (MG/KG)	COMPLIANCE REQUIREMENT/LIMIT MAX.	CONCLUSION (PASS/FAIL) (REFER REMARK 3 ON PAGE NO.2)
1	BENZYL BUTYL PHTHALATE (BBP)	85- 68-7	ND	0.3	NOT TO EXCEED 6 MG/KG	PASS
2	DIETHYLHEXYL PHTHALATE (DEHP)	117- 81-7	ND	0.3	NOT TO EXCEED 3 MG/KG	PASS
3	DIBUTYL PHTHALATE (DBP)	84- 74-2	ND	0.3	NOT TO EXCEED 3 MG/KG	PASS
4	DICYCLOHEXYL PHTHALATE (DCHP)	84- 61-7	ND	0.3	NOT TO EXCEED 6 MG/KG	PASS
5	DIETHYL PHTHALATE (DEP)	84- 66-2	ND	0.3	NOT TO EXCEED 12 MG/KG	PASS
OVERALL CONCLUSION (PASS/FAIL)						PASS

Note

(1) "MG/KG" DENOTES MILLIGRAM PER KILOGRAM:

(2) "ND" DENOTES NOT DETECTED.

(3) °C DENOTES DEGREES CELCIUS.

(4) "%" DENOTES PERCENTAGE.

(Test No. 4-ii) Specific migration of phthalates

Test Specification(s)/Regulation(s): Council of Europe Resolution ResAP (2004) 4 on rubber products intended to come into contact with foodstuff.

Test method(s) adopted: With reference to EN 13130-1:2004 followed by analysis using GC MS; Simulant(s) used: Iso-octane.

Test Condition(s): 60°C for 4 hours (under repeat-use conditions).

Equipment(s) used: GC MS (Gas Chromatography Mass Spectrometer).

S. No.	Parameter	CAS No.	Result (mg/kg) - Component No. A	Limit of Quantification (mg/kg)	Compliance Requirement / Limit Max.	Conclusion (Pass/Fail)
1	Benzylbutyl phthalate (BBP)	85-68-7	ND	0.3	Not to exceed 6 mg/kg	Pass
2	Diethylhexyl phthalate (DEHP)	117-81-7	ND	0.3	Not to exceed 3 mg/kg	Pass
3	Dibutyl phthalate (DBP)	84-74-2	ND	0.3	Not to exceed 3 mg/kg	Pass
4	Dicyclohexyl phthalate (DCHP)	84-61-7	ND	0.3	Not to exceed 6 mg/kg	Pass
5	Diethyl phthalate (DEP)	84-66-2	ND	0.3	Not to exceed 12 mg/kg	Pass
Overall Conclusion (Pass/Fail)						Pass

Note: "mg/kg" denotes milligram per kilogram; (2) "ND" denotes Not Detected; (3) °C denotes degrees Celsius; (4) "%" denotes percentage.

(TEST NO. 5) Migration of N-Nitrosamines & N-Nitrosatable substances

TEST SPECIFICATION(S)/REGULATION(S): COUNCIL OF EUROPE RESOLUTION RESAP (2004) 4 ON RUBBER PRODUCTS INTENDED TO COME INTO CONTACT WITH FOODSTUFF.
TEST METHOD ADOPTED: BASED ON BS EN 12868:1999.
EQUIPMENT(S) USED: GAS CHROMATOGRAPHY MASS SPECTROMETER (GC MS).

TEST PARAMETER	COMPONENT NO.	TEST RESULT (MG/KG)	LIMIT OF QUANTIFICATION (MG/KG)	COMPLIANCE REQUIREMENT/LIMIT MAX.	CONCLUSION (PASS/FAIL)
MIGRATION OF N-NITROSAMINE S	A	ND	0.01	SHALL BE LESS THAN 0.01 MG/KG	PASS
MIGRATION OF N-NITROSATABLE SUBSTANCES	A	ND	0.1	SHALL BE LESS THAN 0.1 MG/KG	PASS

Note:

(1) "ND" denotes NOT Detected.

(2) mg/kg denotes Milligram per Kilogram

(TEST NO. 6) SPECIFIC MIGRATION OF BUTADIENE (1,3-BUTADIENE) (CAS NO. 106-99-0)

TEST SPECIFICATION(S)/REGULATION(S): COUNCIL OF EUROPE RESOLUTION RESAP (2004) 4 ON RUBBER PRODUCTS INTENDED TO COME INTO CONTACT WITH FOODSTUFF;

TEST METHOD(S) ADOPTED: WITH REFERENCE TO EN 13130-1:2004 FOLLOWED BY ANALYSIS AS PER DD CEN/TS 13130- 15:2005; SIMULANTS USED: 3 % ACETIC ACID; TEST CONDITION(S): 100 °C OR REFLUX FOR 4 HOURS (UNDER REPEAT-USE CONDITIONS); EQUIPMENT(S) USED: GAS CHROMATOGRAPHY MASS SPECTROMETER (GC MS);

COMPONENT NO.	RESULT (MG/KG)	METHOD DETECTION LIMIT	COMPLIANCE REQUIREMENT/LIMIT MAX.	CONCLUSION (PASS/FAIL)
A	ND	0.2 MG/KG	SHALL BE LESS THAN 0.02MG/KG	PASS

Note:

(1) "MG/KG" DENOTES MILLIGRAM PER KILOGRAM:

(2) °C DENOTES DEGRESS CELCIUS.

(3) "%" DENOTES PERCENTAGE

(4) DENOTES NOT DETECTED

END OF TEST REPORT

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