

4.3 Full analysis of Physical & Mechanical characteristics of Rubber Parts / suitable sample is to be carried out. If results of checks are not satisfactory for any of the characteristics, then repeated checks are to be carried out on Double Number of samples. Even if a single result of the repeated test is unsatisfactory, then the rubber stores stand rejected. Joints should have sufficient strength to withstand end use / as per parameters.

5. ADHESIVE :

Adhesive of Russian grade Y-425-3 adhesive consists of rubber stock in benzene with ethyl acetate in the ratio 1:1 as per weight. If this adhesive is used concentration of adhesive of grade Y-425 - 3 should be within the limits of 21+4% of dry residue. Bond strength of two non-vulcanized strips of calico should be at least one Kg/cm. The supplier may use indigenous suitable adhesive to give specified bond strength.

6. MARKING :

A label should be attached giving details of :

- i) Part No. ii) Grade of Material iii) Shore Hardness. iv) OFPM, S.O.No. v) Manufacturer's Name vi) Batch No. vii) Batch Quantity viii) Date of manufacture etc.

7. PACKAGE & TRANSPORTATION :

Items should be supplied in suitable packages convenient for handling & protecting the supplies from contamination, moisture, specially from light and heat deformation and loss during transportation. They should be impregnated with chalk powder / preservatives, as appropriate.

7.1 Each package should have a label containing the details as explained at para 6.

8. All other conditions to be maintained as per tender documents / Supply Order.

IMPORTANT :

9. Application of these rubber components is for Army Vehicles. Supplier should ensure supply of quality material to the above specification.

10. This being an extract, all supplies are to be governed as per full specification Ty 005 - 216 - 75. Full specification will be reference specification for all purposes of Inspection, supply & properties etc.

Annexure 'A'

PHYSICAL AND MECHANICAL

Code No. of Rubber	Type of raw Material	Apparent density g/cm ³	Rigidity during compression by 50% in kg/cm ²	Residual deformation during compression by 50% max.		Frost-resistance		
				20°C 22Hrs.	70°C 22Hrs.	Brittleness temperature in 0°C max.	Elastic reduction coefficient minimum at a temperature in 0°C Minus 45 Minus 50	
CB - 105	Grade-D IS:1741-60	0.50 - 0.80	1.5 - 3.0	30	70	Minus 45	-	0.20
CB - 141	Grade - D IS:1741-60	0.50 - 0.85	2.6 - 5.0	-	30	Minus 40	0.05	-

Annexure 'A'

PHYSICAL & MECHANICAL PROPERTIES EXTRACT OF SPECIFICATION TY 005216 - 75

Sl. No.	Grade of rubber	Type of rubber	Ultimate strength during breakage kgf/cm ²	Relative elongation during breakage % Min.	Relative residual elongation after breakage % Max	Hardness	Density gr/cm ³
01	637	Chloropene + butadiene	45	250	35	45 - 65	1.35
02	638	Nitrile + Chloropene	45	500	-	30 - 50	-
03	640	Chloropene + nitrile	100	350	25	50 - 65	1.27
04	10643	Natural Rubber	40	350	25	40 - 55	1.24
05	B-14	Nitrile	90	160	8	70 - 80	1.28
06	360	Chloropene + Butadiene	45	250	35	45 - 65	1.28
07	648	Chloropene Rubber	80	500	60	50 - 65	1.51
08	51-2059	Chloropene Rubber	80	500	1	40 - 55	1.27
09	HO-68-1	Nitrile + Chloropene	90	250	12	55 - 70	1.24
10	ERP-1266	Vinyl Silicon	25	100	-	38 - 58	1.19
11	10676	Chloropene Rubber	50	300	30	50 - 65	1.21
12	1847	Natural	160	600	32	35 - 50	1.05
13	3311	Natural	150	700	25	30 - 45	0.98
14	51-3029	Nitrile	100	140	6	71 - 82	3.5
15	783-2	Nitrile	125	250	10	65 - 80	1.21
16	1078	Nitrile	110	130	6	75 - 85	-
17	2462	Chloropene	100	300	30	60 - 75	1.4
18	R-35	Latex foam Rubber	-	-	-	15 - 35	-
19	98-1	Chloropene	50	160	8	50 - 65	1.16

EXTRACT OF SPECIFICATION TY 005216-75

Sl. No.	Grade of rubber	Type of rubber	Ultimate strength during breakage kgf/cm ²	Relative elongation during breakage % Min.	Relative residual elongation after breakage % Max	Hardness (Shore)	Density gr/cm ³
20	7842	Chloropene	175	450	27	50 - 65	1.13
21	632	Chloropene +butadine	50	300	40	45 - 65	1.35
22	4326-1	Nitrile	80	170	12	65 - 80	1.26
23	8797	CKMC - 30	60	300	20	45 - 65	1.15
24	4-16	Natural	125	300	25	64 - 75	1.21
25	ERP 1357-2	CKE-3 CKD	100	350	20	57 - 70	1.19
26	310	Nitrile	50	500	40	35 - 50	1.22
27	360	Chloroprene + Butadiene	45	250	35	45 - 65	1.28
28	B14-1	Nitrile	120	140	8	75 - 85	1.28
29	93	Natural	170	300	45	70 - 85	1.38
30	3825	Chloroprene	100	120	10	80 - 95	1.31
31	783-2	Nitrile	125	250	10	65 - 80	1.21
32	URP-1287	CKO - 26	120	120	10	70 - 82	2.10
33	51-1452	Chloroprene	100	140	10	72 - 82	1.29
34	343	Chloroprene +Butadiene	45	250	23	45 - 65	1.32
35	4 - 63		50	300	20	45 - 65	-
36	633	Chloroprene	110	400	35	50 - 65	1.30
37	3824-C (3824)	Nitrile	65	320	20	40 - 55	1.19
38	ERP-1316	CKO - 26	160	500	5	76 - 88	1.95
39	ERP-1347 - 2	CKE - 3 CKD	170	500	25	47 - 60	1.15

ORDNANCE FACTORY MEDAK
YEDDUMAILARAM - 505 205.
500, all items
collected
This drawing is upto date
Items on date of issue based on CDA (CIV) / Col. 1-16
MSF authorized dtd held at PDO station
1. Application
2. Date of issue
3. Issued to
4. No. of prints
5. Ref. Lt. No.
Issued by PDO
Sarath Vehicle/Variants
12/8/2017
Hnm
4 - 31690
JWM / PDO
General Manager

EXTRACT OF
SPECIFICATION FOR RUBBER ITEMS
Ty 005 - 216 - 75

1. SCOPE :

This document is Extract of Specification for Rubber Materials to grades as specified in Annexures and part Nos. as indicated on T.E.

2. MATERIAL AND PROPERTIES :

- Material & Properties are enclosed at Annexure.
- Other details are as per drawing.

3. INSPECTION :

Authorised Inspector :- Rep of GM, OFPM.

3.1 PILOT :

Fitment trials / performance trials to be carried out and B.P.C. to be obtained from Ordnance Factory, Medak. Fitment trials to be carried out by OFPM / CQAICV. Necessary samples / test slabs (test slabs should necessarily be forwarded from the same production mix, where bulk Production Qty. is manufactured) to be forwarded for Pilot sample approval.

3.2 BULK INSPECTION :

Quality acceptance & sampling should be carried out at the discretion of inspector, but not less than 10 % of total quantity.

3.3 INSPECTION AT OFPM :

Quality assurance & sampling should be carried out at the discretion of inspector according to criticality of the item.

3.4 TESTING :

- 1) Testing of rubber to be done as per specification at any government approved laboratory / OFPM.
- 2) If not mentioned on the drawing, pressure testing is not required

4. ACCEPTANCE RULES :

4.1 Quality Assurance tests are carried out for each batch of Rubber items. The characteristics to be checked are :

- a) External appearance / visual Inspection.
- b) Dimensions as specified in the drawings.
- c) Physical & Mechanical characteristics.

4.2 Cracks, depressions, sponginess and projections, foreign inclusions, clotted ingredients, cuts on butt ends are not allowed. Ovality, wall thickness difference depending upon applications are allowed within the tolerances of dimensions. (Joints if specified and permitted on drawing should, not get disjointed at joint by the hand pulling force).