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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		CHEMICAL TESTING		
I.	**INDUSTRIAL FINE CHEMICALS**			
1.	**Graphite Dry Sulphur Free**	Matter soluble in cold water Matter soluble in ethyl ether Ash Volatile matter	JSS 9620-01-2010 (Rev.2) DCI 3686-ME Dt. 03.07.2001 APPENDIX-A APPENDIX-B APPENDIX-D JSG 0112 Method 1(a)	0.01% to 0.10% 0.01 % to 0.25% 0.1 % to 1.00 % 0.01% to 0.25%
2.	**Potassium Chlorate Tech. Gr-I**	pH value Moisture Purity Insoluble matter	IS 708-1987 APPENDIX-A-3 APPENDIX-A-4 APPENDIX-A-7 APPENDIX-A-5	5.00 to 8.00 0.01 % to 0.05 % 99.0% to 99.90 % 0.01 % to 0.05 %
3.	**Pot. Nitrate Gr.I**	Moisture content Matter insoluble in water Chloride Sulphate	IS 301-1982 (RA 2003) (Sec. Rev.) APPENDIX-A APPENDIX-B(3) APPENDIX-B(9) APPENDIX-B(12)	0.01 % to 0.05 % 0.01 % to 0.05 % 0.01 % to 0.02 % 0.01 % to 0.10 %
4.	**Red Lead**	Purity Volatile matter Matter soluble in water	IS 8063-1976/(RA 2005) Edition 1.1/(2000-03) (Incorporating Amendment No.1)/APPENDIX-A-6 APPENDIX-A-2 APPENDIX-A-3	96.0 % to 99.0 % 0.01 % to 0.05 % 0.01 % to 0.30 %
5.	**Soda Ash Technical**	Volatile matter Total alkalinity Matter insoluble in water Sulphate Chloride	IS 251-1998/(IV Rev.) ANNEXURE-B ANNEXURE-C(3) ANNEXURE-C(4) ANNEXURE-C(5) ANNEXURE-C(6)	0.1 % to 2.00 % 97.0 % to 99.5 % 0.01 % to 0.15 % 0.01 % to 0.08 % 0.10 % to 1.00 %

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6.	**Barium Chromate**	Volatile matter Water soluble matter Water soluble Chloride Barium Chromate content	JSG 0112-1999 Method 1 (b) Method 3 Method 7(b) IND/ME/794(b): 2013 DC No.5177-ME Dt. 20.01.2014 APPENDIX 'B'	0.01 % to 0.10 % 0.01 % to 0.10 % 0.01 % to 0.05 % 96.0% to 99.5 %
7.	**Acetone**	Residue on evaporation Acidity in g/100 ml	IS 170 : 2004 (Fourth Rev.) ANNEXURE-A ANNEXURE-C	1 mg/100ml to 5 mg/100ml 0.001 to 0.002
8.	**Sulphuric Acid Technical Gr. A.R. Grade**	Total Acidity (as H_2SO_4)	1S 266-1993 (RA 2003) (Third Rev.) Second Reprint March -1997/ANNEXURE-A-2	97.0% to 99.0 %
9.	**Hydrochloric Acid Technical Gr.**	Total Acidity Sulphate as Sulphuric Acid	IS 265-1993 (RA 2003) (Fourth Rev.) Second reprint May-1997 (Incorporating Amendment No.1)/ANNEXURE-B-2 ANNEXURE-B-4	27.0 % to 32.0 % 0.01% to 0.10%
10.	**Sulphur Gr.-I**	V.M. content Ash on incineration Sulphur content	JSG 0112-1999 Method 1 (a) JSG 0112-1999 Method 2 (a) JSS-6810-103-2012 (Rev No.3) APPENDIX 'B'	0.01 % to 0.05% 0.01 % to0.10 % 99.0 %to 99.9%
11.	**Sodium meta bi-sulphite**	Purity % by mass Matter insoluble in water pH of 5 % solution	IS-248-1987 4th REV. APPENDIX 'A-2' APPENDIX 'A-4' APPENDIX 'A-3'	58.0% to 65.0% 0.01% to 0.10% 4.50 to 5.50

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12.	**Barium peroxide Gr-I**	Barium peroxide content (BaO_2) Total barium compound soluble in HCl as (Ba)	JSS 6810-96 :2011 (Rev No. 2) APPENDIX 'C' APPENDIX 'B'	86.0% to 90.0% 78.0% to 82.0%
13.	**Lead acetate (Normal)**	Chloride calculated as lead chloride	JSG 0112-1999 Method 7 (b)	0.01 % to 0.10%
14.	**Bleaching powder**	Available chlorine	IS-1065-1989 2nd REV ANNEX. (A-2)	31.0 % to 35.0%
15.	**Barytes**	Matter Soluble in Water Moisture content % by mass	JSG 0112-1999 Method 3 JSG 0112-1999 Method 1-A	0.01 % to 0.10 % 0.02 % to 0.25 %
16.	**Potassium per chlorate**	Sulphate as K_2SO_4	JSG 0112-1999 Method 8	0.01% to 0.10 %
17.	**Copper sulphate**	Copper % by mass	IS 261-1982 2nd REV. APPENDIX 'A-2'	24.50% to 26.50%
18.	**Sodium Nitrite Tech.**	Sodium Nitrite ($NaNO_2$) Content Matter insoluble in Water	JSS-6810-104-2012 (Rev No.3) APPENDIX 'B' APPENDIX 'C'	97.0 % to 99.5 % 0.01% to 0.10 %
19.	**Silver Nitrate Pure & Analytical reagent**	Silver Nitrate as $AgNO_3$	IS-2214 : 1977 1st REV. (RA 2003) APPENDIX 'A-2'	97.0% to 99.95 %
20.	**Borax**	Sodium Tetra-Borate decahydrate % by mass pH value	IS-1109-1980 (2nd REV.) (RA 2003) second reprint 1991 APPENDIX 'A-2' APPENDIX 'A-12'	99.50% to103.0 % 9.0 to 9.50
21.	**Pitch Coal Tar**	Ash, per cent by mass	JSG 0112-1999 Method 1 (b)	0.10 % to 0.50 %
22.	**Kaolin**	V.M. content Loss on ignition	JSG-0112-1999 Method 1 (a) Method 2 (a)	.01 % to 0.10 % 10.00% to 14.00 %

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23.	**Mercury**	Metallic mercury	IND/ME/21(a) MAY 1976 D.C.NO.5102-ME/27-04-13 APPENDIX 'A'	99.0 % to 99.9 %
II.	**TEXTILE & TESTILE AUXILIARIES**			
A.	**Fabrics garments and made-ups**			
1.	**Tape cotton proofed /un-proofed**	pH value Water soluble chlorides Water soluble sulphates Ash % by mass	JSG 0114-1994 Method No.6 Method No.7 Method No.8 Method No.10	5.50 to 8.50 0.01% to 0.10% 0.01% to 0.25% 0.1% to 5.0 %
2.	**Cotton textile for Ammn.**	Chlorides as NaCl % Sulphate Ash content	IS-5088-1982 1st REV. APPENDIX 'B-1' APPENDIX 'B-2' IS-199-1989 Method No.C6	0.01 % to 0.05% 0.01 % to 0.25% 0.01% to 0.50 %
3.	**Box cloth all wool Melton finish**	Volatile matter	JSG 0114-1994 Method 1 (a)	5.0 % to 10.0 %
III.	**SOAP DETERTENT & TOILETRIES SOAPS**			
1.	**Soap curd**	Fatty Acid Matter insoluble in Alcohol	IND/SL/3021(d) DC I 3054-SL(d) Dt. 23.06.1983 APPENDIX-B APPENDIX-D	60.0% to 66.0% 1.0 % to 2.50 %
IV.	**LAC & LAC PRODUCTS**			
1.	**APC-201**	Ash Content % by Mass Total Non-Volatile Matter % by Mass	JSS-8010-63-2012(Rev. 3) APPENDIX-B APPENDIX-A	0.01 % to 0.5 % 48% to 52%

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2.	**APC-202**	Ash Content % by Mass Total Non-Volatile Matter % by Mass	JSS-8010-63-2012(Rev. 3) APPENDIX-B APPENDIX-A	0.02 %to 0.60 % 58% to 62%
3.	**APC-211**	Ash Content % by Mass Total Non-Volatile Matter % by Mass	JSS-8010-63-2012(Rev. 3) APPENDIX-B APPENDIX-A	0.01 % to 0.10 % 13% to 15%
4.	**APC-212**	Ash Content % by Mass Total Non-Volatile Matter % by Mass	JSS-8010-63-2012(Rev. 3) APPENDIX-B APPENDIX-A	0.01 % to 0.40 % 37% to 40%
5.	**APC-218**	Ash Content % by Mass Total Non-Volatile Matter % by Mass	JSS-8010-63-2012(Rev. 3) APPENDIX-B APPENDIX-A	0.01 % to 0.40 % 30 to 32%
6.	**APC-221**	Ash Content % by Mass Volatile Matter % by Mass	IS-197-1969(RA1976) METHOD16 METHOD15	0.10 % to 0.50 % 45 % to 50 %
7.	**APC-222**	Ash Content % by Mass Total Non-Volatile Matter % by Mass	JSS-8010-63-2012(Rev. 3) APPENDIX-B APPENDIX-A	0.01 % to 0.05 % 5.5 % to 6.5%
8.	**APC-223**	Ash Content % by Mass Total Non-Volatile Matter % by Mass	JSS-8010-63-2012(Rev. 3) APPENDIX-B APPENDIX-A	0.01 % to 0.10 % 13% to 14%
9.	**APC-224**	Ash Content % by Mass Total Non-Volatile Matter % by Mass	JSS-8010-63-2012(Rev. 3) APPENDIX-B APPENDIX-A	0.01 % to 0.20 % 19 % to 21%
10.	**APC-226**	Ash Content % by Mass Total Non-Volatile Matter % by Mass	JSS-8010-63-2012(Rev. 3) APPENDIX-B APPENDIX-A	0.05 % to 0.40 % 37% to 40%
11.	**APC-219**	Total Solid pH	JSS-8010-48-2012(Rev. 2) APPENDIX-A APPENDIX-E	12 % to 14.0 % 4.0 to 7.5

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V.	**PAINT & SURFACE COATING**			
A.	**Paints and Enamels**			
1.	**Paint Ready Mixed Air drying Brushing Paint Olive Green, Paint Deep Bronze Green, Paint Light Brunswick Green**	Viscosity at 27@2°C byFlow Cup No. 4	IS 101 (Part I / Sec V) 1989	60 Sec to 120 Sec.
		Water Content By Dean & Stark Apparatus	IS 168-1993 & IS 101 (Part II / Sec I) 1988	0.1 % to 0.5 %
		Mass in Kg Per 10 Litres	IS 101 (Part I / Sec VII) 1987	11.0 Kg to 13.0 Kg
VI.	**EXPLOSIVE AND PYROTECHNICS**			
A.	**Pyrotechnics**			
1.	**Composition priming**	Zn Stearate Charcoal Mg Powder Barium Peroxide	IND/ME/934 APPENDIX-B1 APPENDIX-B2 APPENDIX-B3 APPENDIX-B4	0.40% to 0.60 % 1.30% to 1.90 % 12.70% to 14.70 % 82.20% to 86.20 %
2.	**Composition Illuminating**	Zn Stearate	IND/ME/935 APPENDIX-B1	1.50% to 2.50 %
3.	**Composition SR-372 AB**	Bees Wax	JSS:1365-42:2014 (Rev No.1) Method B	3.80% to 5.80 %
4.	**Compositions-1**	APC (above 100%) Potassium Per Chlorate Barium Chromate Antimony Sulphide	IND/ME/795(c) APPENDIX-C1 APPENDIX-C.3.1 APPENDIX-C.4.2 APPENDIX-C.4.3	1.50% to 2.50 % 14.00% to 16.00 % 68.00% to 72.00 % 14.00% to 16.00 %
5.	**PN-196**	$KClO_3$ Charcoal	IND/ME/391(a) APPENDIX-A APPENDIX-A II	84.00 % to 88.00 % 12.00 % to 16.00%

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B.	**Explosives Chemicales and Allied Material**			
1.	**RD-1302**	Moisture Content Lead styphnate	JSS-1375-06-2013 (Rev. No.2) APPENDIX-A APPENDIX-B	0.05 % to 0.15 % 97.0 % to 99.0%
2.	**RD-1303**	Moisture Content Lead styphnate	JSS-1375-06-2013 (Rev. No.2) APPENDIX-A APPENDIX	0.05 % to 0.15 % 97.0 % to 99.0%
3.	**RD-1337**	Total DNR content	IND/ME/752 APPENDIX-B	47.00% to 50.00%
4.	**Lead Azide**	Lead Azide Content	JSS: 1376-09:2013 (Rev No. 3) APPENDIX-B	94.0 % to 99.0 %.
5.	**Basic Lead Azide**	Moisture Content Lead Azide Content	IND/ME/916(Prov) APPENDIX-A APPENDIX-B	0.01 % to 0.1 % 66.00% to 75.00 %
6.	**Mercury Fulminate**	Fulminate Content as Mercury Fulminate	JSS : 1376-07:2015 APPENDIX-J	98.0 % to 99.8 %
7.	**Comp. NTT-43**	Moisture Content Lead Azide Lead Styphnate	IND/ME/910 APPENDIX-A APPENDIX-B APPENDIX-C	0.01 % to 0.05 % 82.00% to 84.00 % 16.00% to 18.00 %
8.	**Comp. L-Mix.**	Volatile matter % Barium Nitrate %	IND/ME/1019 APPENDIX-7.3 APPENDIX-7.4.1	0.01 % to 0 .50 % 42.80 to 47.20
9.	**Composition CU-1**	Nitro Cellulose Red Lead Zirconium Powder	IND/ME/950(a) APPENDIX-7.3.A APPENDIX-7.3.B APPENDIX-7.3.C	1.60 % to 2.40% 75.40 % to 76.60% 23.60 % to 24.40%
10.	**Composition Z-103**	Lead Chromate	IND/ME/940 APPENDIX-B	53.00 % to 57.00%
11.	**Composition Amatol**	TNT Ammonium Nitrate	IND/ME/358 APPENDIX-B APPENDIX-C	14.00% to 16.00 % 63.00% to 67.00 %

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VII.	**METALS & ALLOYS**			
A.	**Iron,steel and ferro-alloys**			
1.	**Ferrous Alloys (a) Low alloy Steel (b)Plain Carbon steel**	C Mn Si Ni Cr Mo S P V	ASTM-E 415:2017	0.1% to 0.5 % 0.7% to 1.50 % 0.2% to 0.30 % 0.01% to 0.10 % 0.06% to 2.0 % 0.01% to 0.2 % 0.03% to 0.20 % 0.007% to 0.03 % 0.002% to 0.005 %
B.	**Aluminium & its Alloy**			
1.	**Non Ferrous (Aluminium & its Alloy)**	Mn Cu Fe Si Zn Mg Ni Cr Ti	ASTM-1251:2017a	0.01% to 0.40 % 0.006% to 4.0 % 0.4% to 0.8 % 0.25% to 0.50 % 0.20% to 0.50 % 0.07% to 2.20 % 0.01% to 1.50 % 0.006% to 0.30 % 0.008% to 0.25 %
C.	**Copper & its Alloy**			
1.	**Non Ferrous (Copper & its Alloy)**	Mn Al Pb P Ni Fe Zn	BS EN-15079:2015	0.0008% to 0.08 % 0.0005% to 0.2 % 0.01% to 6.5 % 0.002% to 0.15 % 0.1% to 0.2 % 0.09% to 1.0 % 5.0% to 32.0 %

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MECHANICAL TESTING

I.	**MECHANICAL PROPERTIES OF MOTELS**			
1.	**Metal & Alloys**	Ultimate Tensile Strength	IS 1608-2005(2nd Rev.)	70 MPa to 2000MPa
				Max 1000 Kgf L.C. 2 Kgf
				Max 3000 Kgf L.C. 10 Kgf
				Max 5000 Kgf L.C. 10 Kgf
				Max 40000 Kgf (Computerised Machine)
		% Elongation	IS 1608-2005(2nd Rev.)	5 % to 60 %

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