

Laboratory **Quality Assurance Establishment (Military Explosives), Khamaria,
Jabalpur, Madhya Pradesh**

Accreditation Standard **ISO/IEC 17025: 2005**

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Validity **06.10.2017 to 05.10.2019** Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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CHEMICAL TESTING

I.	EXPLOSIVES & PYROTECHNICS			
1.	Explosives Chemical & Allied Materials			
a.	Lead Styphnate RD 1302	Moisture content	JSS 1375-06: 2013 Rev. 2	0.01 % to 0.15 %
		Lead Styphnate	JSS 1375-06: 2013 Rev. 2	97 % to 99 %
		Bulk Density	JSS 1375-06: 2013 Rev. 2	1.40 g/cm ³ to 1.70 g/cm ³
b.	Lead Styphnate RD 1303	Moisture content	JSS 1375-06: 2013 Rev. 2	0.01 % to 0.15%
		Lead Styphnate	JSS 1375-06: 2013 Rev. 2	97 % to 99 %
		Bulk Density	JSS 1375-06: 2013 Rev. 2	0.8 g/cm ³ to 1.40g/cm ³
c.	Composition RD 1337	Total DNR content	IND/ME/752: 2000	47.0 % to 50.0 %
		Bulk Density g/ml	IND/ME/752: 2000	0.8 to 1.1
d.	Lead Azide (Service)	Lead Azide content	JSS 1376-09:2013 Rev 3	94 % to 97.5 %
e.	Basic Lead Azide	Moisture content	IND/ME/916 (Prov.): 2003	0.01 % to 0.1 %
		Lead Azide content	IND/ME/916 (Prov.): 2003	66 % to 75 %
f.	Tetrazene	Moisture content	JSS 1376-08: 2013 Rev. 3	0.05 % to 0.15 %
		Settling test volume in ml	JSS 1376-08: 2013 Rev. 3	6.5 to 11.0
g.	Mercury Fulminate	Fulminate content As Mercury fulminate	JSS 1376-07: 2009 Rev. 2	98 % to 99.8 %
h.	Initiator Composition NTT-43	Moisture content	IND/ME/910 (Prov.): 1995	0.01 % to 0.05 %
		Lead Azide	IND/ME/910 (Prov.): 1995	81 % to 85 %
		Lead Styphnate	IND/ME/910 (Prov.): 1995	15 % to 19 %
i.	Composition Detonating BLASA	Moisture content	IND/ME/953 (Prov.): 2004	0.01 % to 0.05 %
		BLA content	IND/ME/953 (Prov.): 2004	76.5 % to 83.5 %
		Lead Styphnate	IND/ME/953 (Prov.): 2004	16.5 % to 21.5 %
		Aluminum Powder	IND/ME/953 (Prov.): 2004	0.8 % to 1.2 %

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j.	Compo L-Mixture (RD-1651)	Moisture content	IND/ME/1019:2013	0.1 % to 0.5 %
		Barium Nitrate %	IND/ME/1019:2013	42.8 % to 47.2 %
k.	Compo Delay No. 81	Volatile matter	IND/ME/930 (Prov.): 1994	0.01 % to 0.05 %
		Barium chromate	IND/ME/930 (Prov.): 1994	69 % to 75 %
		Potassium Perchlorate	IND/ME/930 (Prov.): 1994	7 % to 9 %
		Antimony Sulphide	IND/ME/930 (Prov.): 1994	18 % to 22 %
		Bonosol B-40	IND/ME/930 (Prov.): 1994	0.4 to 0.6 over 100
l.	Composition Initiatory No. 48	Lead Azide	IND/ME/931 (Prov.): 1997	14 % to 16 %
		Tetrazene	IND/ME/931 (Prov.): 1997	4.5 % to 5.5 %
m.	Initiatory Compo. No. 69 for Igniferous Detonators.	Tetrazene	IND/ME/933 (Prov.): 1997	4.5 % to 5.5 %
n.	Initiatory Compo. No. 66 for Delay Pellet	Potassium Chlorate	IND/ME/932 (Prov.): 1993	59 % to 61 %
o.	Delay Composition ME 101	Potassium Perchlorate	JSS 1365-40: 2009	38.5 % to 41.5 %
p.	Delay Composition 107 C	Moisture Content	JSS 1365-41: 2012 Rev. 1	0.01 % to 0.05 %
q.	Delay Composition 107 E	Moisture Content	JSS 1365-41: 2012 Rev. 1	0.01 % to 0.05 %
r.	Trinitro Tolune (TNT) Grade Special, 1E, 1A, 1 B and Grade 2.	Setting Point	JSS 1376-02 :2012 Rev. 4	80.0 °C to 80.6 °C
s.	Composition Torpex-4A	RDX	IND/ME/1014: 2013	17.0 % to 21.5 %
		TNT	IND/ME/1014: 2013	51 % to 56 %
		Aluminum Powder Heavy Grade I	IND/ME/1014: 2013	22 % to 26 %

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t.	Delay Composition ME 412 (M)	Barium Chromate	IND/ME/820 :2013	70.5 % to 73.5 %
		Potassium Perchlorate	IND/ME/820 :2013	7 % to 9 %
		Volatile Matter content	IND/ME/820 :2013	0.01 % to 0.15 %
u.	Composition Illuminating No. 47	Bonosol	IND/ME/938 (Prov.): 1995	3.5 to 4.5 over 100
		Potassium Nitrate	IND/ME/938 (Prov.): 1995	78 % to 82 %
		Boron	IND/ME/938 (Prov.): 1995	18.5 % to 21.5 %
v.	Composition Priming ME 436	NC content	IND/ME/939 (Prov.): 1994	2.0 % to 4.0 %
		Potassium Perchlorate	IND/ME/939 (Prov.): 1994	46.5 % to 50.5 %
		LFCN	IND/ME/939 (Prov.): 1994	46.5 % to 50.5 %
w.	Composition Igniting No. 45.	Aerosil	IND/ME/937 (Prov.): 1994	1 % to 3 %
		Barium Chromate	IND/ME/937 (Prov.): 1994	81 % to 84 %
		Boron	IND/ME/937 (Prov.): 1994	13 % to 16 %
x.	Igniter Composition (First Fire Charge No. 4) for 30 mm Ammn.	VM at 60°C for 2 hours.	IND/ME/992 (Prov.): 2005	0.02 % to 0.65 %
y.	Delay Composition CU-1	Volatile matter	IND/ME/950 (Prov.): 2009	0.01 % to 0.1 %
		NC %	IND/ME/950 (Prov.): 2009	1.6 % to 2.6 %
		Red lead	IND/ME/950 (Prov.): 2009	74 % to 77 %
		Zirconium Powder	IND/ME/950 (Prov.): 2009	23.6 % to 25.4 %
z.	Tracer Composition No. 243 for 30 mm Ammunition.	Volatile matter	IND/ME/993: 2013	0.01 % to 0.65 %
II.	PAINTS AND SURFACE COATING			
1.	R/M, A/D, Paints	Water content	IS 101 (Part 2/Sec I): 1988	0.1 % to 0.5%

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	for General Purpose Colours to IS 168: 1993 (RA 2002) & Paint R/M Priming Red Oxide Zinc Chrome Ammn. A/D, M/F, JSS 8010-68: 1994	Flash Point.	IS 101 (Part 1/Sec VI): 1987	30 °C to 50 °C
2.	Ammunition Protective Composition- 224	Total Non Volatile matter.	JSS 8010-63: 2012 Rev. 3	19 % to 21 %
		Ash % by mass	JSS 8010-63:2012 Rev. 3	0.01 % to 0.20 %
3.	Aluminum Powder Heavy Grade I	Volatile matter % at 105 °C	JSS 1370-03: 2007 Rev. 3	0.002 % to 0.05 %
		Apparent Density g/cc	JSS 1370-03: 2007 Rev. 3	0.4 g/cc to 1.0 g/cc
4.	Magnesium Powder For Explosive and Pyrotechnics composition.	Moisture content	IS 2307: 2004	0.006 % to 0.05 %
5.	Barium Chromate	Volatile matter % by mass	IS 7886 : 1997 Rev 1	0.002 % to 0.10 %
		Apparent Density	IS 7886 : 1997 Rev 1	0.35 g/cc to 0.65 g/cc
6.	Strontium Nitrate for Pyrotechnic Composition	Moisture content % by mass	IS 5671: 1984	0.002 % to 1.0 %
		Water Soluble Chlorides as NaCl % by mass	IS 5671: 1984	0.01 % to 0.1 %