National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : SOLAR INDUSTRIES INDIA LIMITED, VILLAGE -CHAKDOH (BAZARGAON), NAGPUR, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7005 **Page No** 1 of 6

Validity 27/04/2022 to 26/04/2024 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
Permanent Facility				
1	CHEMICAL- EXPLOSIVES & PYROTECHNICS	Cyclotrimethylene trinitramine (RDX)	Melting Point, °C	MIL-DTL-398 D Test para 4.7.1
2	CHEMICAL- EXPLOSIVES & PYROTECHNICS	Cyclotrimethylene trinitramine (RDX)	Acidity, wt %	MIL-DTL-398 D Test para 4.7.5
3	CHEMICAL- EXPLOSIVES & PYROTECHNICS	Cyclotrimethylene trinitramine (RDX)	BAM Test	STANAG 4489 ED01/AOP 7 (H50>15CM)
4	CHEMICAL- EXPLOSIVES & PYROTECHNICS	Cyclotrimethylene trinitramine (RDX)	HMX content, wt %	EPA -8330B
5	CHEMICAL- EXPLOSIVES & PYROTECHNICS	Cyclotrimethylene trinitramine (RDX)	Insoluble particles retained on sieve USS 60, Numbers of Particle	MIL-DTL-398 D Test para 4.7.2
6	CHEMICAL- EXPLOSIVES & PYROTECHNICS	Cyclotrimethylene trinitramine (RDX)	RDX content, wt %	EPA -8330B
7	CHEMICAL- EXPLOSIVES & PYROTECHNICS	Cyclotrimethylene trinitramine (RDX)	Total Acetone Insoluble Materials, wt %	MIL-DTL-398 D Test para 4.7.3
8	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX (Cyclotetramethylenetetranitramine)	Melting point, °C	MIL-STD-650 Method 209.1
9	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX (Cyclotetramethylenetetranitramine)	RDX content By HPLC, wt %	EPA -8330B
10	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX (Cyclotetramethylenetetranitramine)	HMX content, By HPLC, wt %	EPA -8330B
11	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX (Cyclotetramethylenetetranitramine)	Acetone insoluble material, wt %	MIL-STD-650 Method 105.1
12	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX (Cyclotetramethylenetetranitramine)	Acidity, wt %	MIL-DTL-45444C Test para 4.7.6
13	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX (Cyclotetramethylenetetranitramine)	Alpha HMX By FTIR	DTIC, ARL-TR-233
14	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX (Cyclotetramethylenetetranitramine)	BAM Test, cm	STANAG 4489 ED01/AOP 7 (H50>15CM)
15	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX (Cyclotetramethylenetetranitramine)	Particle size micron (μ)	Mie Theory (Malvern)
16	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX compounded product (OCTOL)	HMX content, By Gravimetric, wt %	MIL-0-45445B (PA) sub-para. 4.5.1.1
17	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX Compounded Product PBXN-5	HMX content, By Gravimetric Method, wt %	MIL - E - 81111B sub-para. 4.4.4.1
18	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX Compounded Product SOKFOL (OKFOL -02)	Weight percentage of OCTOGEN, wt %	MIL-STD-650 Method 108.1

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19	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX compounded product (OCTOL	Alpha HMX by FTIR	DTIC ARL-TR-233
20	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX compounded product (OCTOL	Moisture content By Karl Fischer, wt %	MIL-STD-650 Method 101.4
21	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX compounded product (OCTOL	Vacuum Stability (+120 Deg. Celcius, 40 hours), cm3/g	MIL-STD-650 Method 503.1
22	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX compounded product (OCTOL)	Acetone insoluble, wt %	MIL-0-45445B (PA) sub-para. 4.5.4
23	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX compounded product (OCTOL)	Acidity as CH3COOH, wt %	MIL-STD-650 Method 102.3
24	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX compounded product (OCTOL)	Alkalinity as Na2CO3, wt %	MIL-STD-650 Method 102.3
25	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX compounded product (OCTOL)	Insoluble particles retained on ASTM sieve No. 60, numbers	MIL-0-45445B (PA) sub-para. 4.5.3
26	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX compounded product (OCTOL)	Melting Point for Beta HMX, °C	MIL-DTL-45445C sub-para. 4.7.2
27	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX compounded product (OCTOL)	TNT content, By Gravimetric, wt %	MIL-0-45445B (PA) sub-para. 4.5.1.2 (see 4.5.1.1)
28	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX compounded product (OCTOL)	Viscosity By Efflux + 85°C, Sec.	MIL-STD-650 Method 212.1
29	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX Compounded Product - SOMA	Weight percentage of OCTOGEN, wt %	MIL-STD-650 Method 108.1
30	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX Compounded Product - SOMA	Acidity, as Acetic Acid, wt %	MIL-STD-650 Method 102.1
31	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX Compounded Product - SOMA	Moisture content by Karl Fischer percent	MIL-STD-650 Method 101.5
32	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX Compounded Product - SOMA	Weight Percentage of Ceresin Wax, wt %	MIL-STD-650 Method 108.1
33	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX Compounded Product - SOMA	Weight Percentage of Graphite, wt %	MIL-STD-650 Method 108.1
34	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX Compounded Product PBXN-5	Explosion Temperature (Min.), °C	MIL-STD-650 Method 506.1
35	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX Compounded Product PBXN-5	Moisture Content, wt %	MIL - STD-286 Method 101.5
36	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX Compounded Product PBXN-5	Vacuum Stability (120°C, 48 Hrs.), wt %	MIL-STD-650 Method 503.1.1
37	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX Compounded Product PBXN-5	Vitone-A content By Gravimetric Method, wt %	MIL - E - 81111B sub-para. 4.4.4.1

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38	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX Compounded Product SOKFOL (OKFOL -02)	Weight percentage of Ceresin Wax, wt %	MIL-STD-650 Method 108.1
39	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX Compounded Product SOKFOL (OKFOL -02)	Weight Percentage of Acidity , wt %	MIL-STD-650 Method 102.1
40	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX Compounded Product SOKFOL (OKFOL -02)	Weight Percentage of Insoluble substance in Benzene and Acetone, wt %	MIL-STD-650 Method 105.1
41	CHEMICAL- EXPLOSIVES & PYROTECHNICS	HMX Compounded Product SOKFOL (OKFOL -02)	Weight Percentage of Moisture, wt %	MIL-STD-650 Method 101.5
42	CHEMICAL- EXPLOSIVES & PYROTECHNICS	PENTAERYTHRITE TETRANITRATE (PETN)	Acetone insoluble material, wt %	MIL-P-387 C sub-para.4.5.5
43	CHEMICAL- EXPLOSIVES & PYROTECHNICS	PENTAERYTHRITE TETRANITRATE (PETN)	Melting Point, °C	MIL-STD-650 Method 209.1
44	CHEMICAL- EXPLOSIVES & PYROTECHNICS	PENTAERYTHRITE TETRANITRATE (PETN)	Granulation passing through U. S. Standard Sieve No. (Class 2) USSS 100, wt %	MIL-P-387 C sub-para. 4.5.8
45	CHEMICAL- EXPLOSIVES & PYROTECHNICS	PENTAERYTHRITE TETRANITRATE (PETN)	Acidity as HNO3, wt %	MIL-P-387 C sub-para. 4.5.6
46	CHEMICAL- EXPLOSIVES & PYROTECHNICS	PENTAERYTHRITE TETRANITRATE (PETN)	Granulation passing through U. S. Standard Sieve No. (Class 1) USSS 100, wt %	MIL-P-387 C sub-para. 4.5.8
47	CHEMICAL- EXPLOSIVES & PYROTECHNICS	PENTAERYTHRITE TETRANITRATE (PETN)	Granulation passing through U. S. Standard Sieve No. (Class 1) USSS 140, wt %	MIL-P-387 C sub-para. 4.5.8
48	CHEMICAL- EXPLOSIVES & PYROTECHNICS	PENTAERYTHRITE TETRANITRATE (PETN)	Granulation passing through U. S. Standard Sieve No. (Class 1) USSS 200, wt %	MIL-P-387 C sub-para. 4.5.8
49	CHEMICAL- EXPLOSIVES & PYROTECHNICS	PENTAERYTHRITE TETRANITRATE (PETN)	Granulation passing through U. S. Standard Sieve No. (Class 1) USSS 80, wt %	MIL-P-387 C sub-para. 4.5.8
50	CHEMICAL- EXPLOSIVES & PYROTECHNICS	PENTAERYTHRITE TETRANITRATE (PETN)	Granulation passing through U. S. Standard Sieve No. (Class 2) USSS 200, wt %	MIL-P-387 C sub-para. 4.5.8
51	CHEMICAL- EXPLOSIVES & PYROTECHNICS	PENTAERYTHRITE TETRANITRATE (PETN)	Granulation passing through U. S. Standard Sieve No. (Class 3) USSS 200, wt %	MIL-P-387 C sub-para. 4.5.8
52	CHEMICAL- EXPLOSIVES & PYROTECHNICS	PENTAERYTHRITE TETRANITRATE (PETN)	Granulation passing through U. S. Standard Sieve No. (Class 3) USSS 30, wt %	MIL-P-387 C sub-para. 4.5.8

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53	CHEMICAL- EXPLOSIVES & PYROTECHNICS	PENTAERYTHRITE TETRANITRATE (PETN)	Granulation passing through U. S. Standard Sieve No. (Class 4) USSS 100, wt %	MIL-P-387 C sub-para. 4.5.8
54	CHEMICAL- EXPLOSIVES & PYROTECHNICS	PENTAERYTHRITE TETRANITRATE (PETN)	Granulation passing through U. S. Standard Sieve No. (Class 4) USSS 30, wt %	MIL-P-387 C sub-para. 4.5.8
55	CHEMICAL- EXPLOSIVES & PYROTECHNICS	PENTAERYTHRITE TETRANITRATE (PETN)	Vacuum Stability (+120 deg. celcius, 20 hours), cm3/g	MIL-STD-650 Method 503.1
56	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (RDX : TNT- 60 : 40-B)	TNT Content, wt %	MIL-C- 401E Test para 4.4.1
57	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (A5)	RDX content, wt %	MIL-DTL- 14970D Test para 4.6.1
58	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (A5)	Stearic Acid, wt %	MIL-DTL- 14970D Test para 4.6.1
59	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (A5)	Granulation Passing through-USSS 200, Max., wt %	MIL-DTL- 14970D Test para 4.6.6
60	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (A5)	Bulk Density, Min. g/cc	MIL-DTL- 14970D Test para 4.6.5
61	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (A5)	Granulation Passing through-USSS 12, Min., wt %	MIL-DTL- 14970D Test para 4.6.6
62	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (A5)	Insoluble No. Particles retained on USSS 60, Max., number of particles	MIL-DTL- 14970D Test para 4.6.2
63	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (A5)	Insoluble particles No. Particles retained on USSS 40, Max. number of particles	MIL-DTL- 14970D Test para 4.6.2
64	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (A5)	Moisture, wt %	MIL-DTL- 14970D Test para 4.6.3
65	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (CH - 6)	Acid / Alkali Content i) No NaOH : colorless ii) NaOH added : Pink Color	MIL-C-21723B sub-para 4.6.4
66	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (CH - 6)	Calcium Stearate, wt%	MIL-C-21723B, sub-para 4.6.1.2
67	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (CH - 6)	Granulation Passing through USSS 100, wt% Max.	MIL-C-21723B sub-para 4.6.3
68	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (CH - 6)	Granulation Passing through USSS 30, wt% Min.	MIL-C-21723B sub-para 4.6.3
69	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (CH - 6)	Graphite Content, wt%	MIL-C-21723B sub-para 4.6.1.4

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70	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (CH - 6)	Moisture Content, wt%	MIL-C-21723B sub-para 4.6.2
71	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (CH - 6)	PIB Content, wt%	MIL-C-21723B sub-para 4.6.1.3
72	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (CH - 6)	RDX Content, wt%	MIL-C-21723B, sub-para 4.6.1.1
73	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (Dentex)	Aluminium Content, wt%	ERDL/HE I/PS/137 Revision 1
74	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (Dentex)	Density, (Min.), g/ml	MIL-STD-650 Method 201.2
75	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (Dentex)	Paraffin Wax, wt %	ERDL/HE I/PS/137 Revision 1
76	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (Dentex)	RDX Content, wt %	ERDL/HE I/PS/137 Revision 1
77	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (Dentex)	TNT Content, wt%	ERDL/HE I/PS/137 Revision 1
78	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (Dentex)	Volatile Matter, wt%	ERDL/HE I/PS/137 Revision 1
79	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (RDX : TNT- 60 : 40-B)	Bees Wax, wt %	MIL-C- 401E Test para 4.4.1
80	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (RDX : TNT- 60 : 40-B)	Insoluble particles retained on USSS no.60, number of particle	MIL-STD-650 Method 106.1
81	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (RDX : TNT- 60 : 40-B)	RDX Content, wt %	MIL-C- 401E Test para 4.4.1
82	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (Torpex)	Volatile matter,wt %	ERDL/HE I/PS/137 , Appendix 1, Clause No. 1
83	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (Torpex)	Aluminium Content, wt %	IND/ME/1014
84	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (Torpex)	Density, g/cc	MIL-STD-650 , Method 201.2
85	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (Torpex)	Paraffin Wax, wt %	IND/ME/1014
86	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (Torpex)	RDX Content, wt %	IND/ME/1014
87	CHEMICAL- EXPLOSIVES & PYROTECHNICS	RDX Compounded Product (Torpex)	TNT Content, wt %	IND/ME/1014
88	CHEMICAL- EXPLOSIVES & PYROTECHNICS	Trinitrotoluene (TNT) Type- I	Form- Flake or Crystalline	MIL-DTL-248D W/Amendment 1 sub- para 4.4.1.1

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89	CHEMICAL- EXPLOSIVES & PYROTECHNICS	Trinitrotoluene (TNT) Type- I	Acidity, (as H2SO4) wt %	MIL-DTL-248 D W/Amendment 1 sub- para 4.4.4
90	CHEMICAL- EXPLOSIVES & PYROTECHNICS	Trinitrotoluene (TNT) Type- I	Alkalinity	MIL-DTL-248 D W/Amendment 1 sub- para 4.4.5
91	CHEMICAL- EXPLOSIVES & PYROTECHNICS	Trinitrotoluene (TNT) Type- I	Color, No darker than color No. 30257	MIL-DTL-248D W/Amendment 1 (FED-STD-595)
92	CHEMICAL- EXPLOSIVES & PYROTECHNICS	Trinitrotoluene (TNT) Type- I	Insoluble Matter, wt %	MIL-STD-650 Method 105.1
93	CHEMICAL- EXPLOSIVES & PYROTECHNICS	Trinitrotoluene (TNT) Type- I	Moisture, wt %	MIL-STD-650 Method 101.4
94	CHEMICAL- EXPLOSIVES & PYROTECHNICS	Trinitrotoluene (TNT) Type- I	Sodium content, wt %	MIL-DTL-248 D W/Amendment 1 sub- para 4.4.7
95	CHEMICAL- EXPLOSIVES & PYROTECHNICS	Trinitrotoluene (TNT) Type- I	Solidification Point, °C	MIL-STD-650 Method 210.1
96	CHEMICAL- EXPLOSIVES & PYROTECHNICS	Trinitrotoluene (TNT) Type- I	Thickness of Flake - Average, inch	MIL-DTL-248 D W/Amendment 1 sub- para 4.4.8
97	CHEMICAL- EXPLOSIVES & PYROTECHNICS	Trinitrotoluene (TNT) Type- I	Thickness of Flake - Individual, inch	MIL-DTL-248 D W/Amendment 1 sub- para 4.4.8