

<b>Laboratory</b>	<b>Materials Engineering Lab, Tata Motors Limited, Chinhat Industrial Area, Deva Road, Lucknow, Uttar Pradesh</b>		
<b>Accreditation Standard</b>	<b>ISO/IEC 17025: 2005</b>		
<b>Discipline</b>	<b>Mechanical Testing</b>	<b>Issue Date</b>	<b>31.03.2015</b>
<b>Certificate Number</b>	<b>T-1847</b>	<b>Valid Until</b>	<b>30.03.2017</b>
<b>Last Amended on</b>	<b>-</b>	<b>Page</b>	<b>1 of 3</b>

<b>S.No.</b>	<b>Product / Material of Test</b>	<b>Specific Test Performed</b>	<b>Test Method Specification against which tests are performed</b>	<b>Range of Testing / Limits of Detection</b>
--------------	-----------------------------------	--------------------------------	--	---

**MECHANICAL PROPERTIES OF MATERIALS**

<b>1. Ferrous &amp; Non Ferrous</b>	<b>Tensile Strength</b>		
	Yield Strength	IS 1608: 2005 ISO 6892: 1998	20 N to 400 kN
	Ultimate Tensile Strength		
	% Elongation		0 to 40%
	<b>Hardness Test</b>		
	Brinell Hardness Test	IS 1500: 2005 ISO 6506: 1999	105 HBW to 450 HBW 2.5/187.5, 5/750, 10/3000
	Rockwell Hardness Test	IS 1586: 2000 (RA 2006)	20 HRA to 88 HRA 20 HRB to 100 HRB 20 HRC to 70 HRC
	Vicker's Hardness Test	IS 150: 2002 ISO: 6507-1: 1997	20HV to 1000 HV 0.2, HV 1.0, HV 5 & HV10
	Determination of Case Depth by Hardness Method	IS 6416: 1988 (RA 2003)	Upto 2 mm Effective case depth at 550 HV
<b>2. Plywood</b>	Flammability Test	IS 1734 (Part 3): 1999 & IS 5509: 2000	Qualitative
	Flame Penetration Test	IS 1734 (Part 3): 1999 & IS 5509: 2000	Qualitative

**Laboratory** Materials Engineering Lab, Tata Motors Limited, Chinhat Industrial Area, Deva Road, Lucknow, Uttar Pradesh

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

**Discipline** Mechanical Testing **Issue Date** 31.03.2015

**Certificate Number** T-1847 **Valid Until** 30.03.2017

**Last Amended on** - **Page** 2 of 3

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Rate Of Burning	IS 1734 (Part 3): 1999 & IS 5509: 2000	Qualitative Upto 600 g
3	Automotive Electrical Materials	Horizontal Burning Test	IS 15061: 2002	Qualitative Upto 100mm/min
		Vertical Burning Test	IS 15061: 2002	Qualitative Upto 100mm/min
		Melting Behavior Test	IS 15061: 2002	Qualitative

**-X-X-X-X-X-X-X-X-X-X-X-X-**

**Laboratory** Materials Engineering Lab, Tata Motors Limited, Chinhat Industrial Area, Deva Road, Lucknow, Uttar Pradesh

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

**Discipline** Mechanical Testing **Issue Date** 31.03.2015

**Certificate Number** T-1847 **Valid Until** 30.03.2017

**Last Amended on** - **Page** 3 of 3

---

<b>S.No.</b>	<b>Product / Material of Test</b>	<b>Specific Test Performed</b>	<b>Test Method Specification against which tests are performed</b>	<b>Range of Testing / Limits of Detection</b>
--------------	-----------------------------------	--------------------------------	--	---

---