



MATERIAL TESTING LABORATORY LLP

(An NABL Accredited, BIS Recognized and ISO 9001 / ISO 45001 Certified Laboratory)

CHEMICAL TESTING

MECHANICAL TESTING

TECHNICAL TRAINING

TESTING & TRAINING



About Us

Welcome to Material Testing Laboratory LLP

Material Testing Laboratory LLP was established in 2013 with an objective to provide precise, accurate & reliable testing services to its customers in the field of Chemical & Mechanical Testing.

Material Testing Laboratory LLP accredited by NABL (National Accreditation Board for Testing and Calibration Laboratories) as per ISO/IEC 17025:2017 in the field of Chemical & Mechanical testing with the Accreditation certificate number TC-7008 & Recognized by Bureau of Indian Standards (BIS) with OSL Code 8176306. Laboratory is also certified as per ISO 9001:2015(QMS) & ISO45001:2018(OHSAS).



As an independent third party Testing Laboratory, We are committed to provide accurate, prompt and reliable testing and analytical services to our clients with impartiality and confidentiality.

Analysis /Testing carried out under the supervision of experienced technical Staff as per Norms of ISO/BIS / ASTM /JSS /or other customer specification as per requirements.

We are continuously attached with our clients to offer them various testing solutions as per our existing scope.

Services offered:

- Testing of Metallic products (Ferrous & Non – Ferrous) with Micro-structural Analysis.
- Polymers (Rubber & Rubber products, Plastic products, Plastic Pipes / Plastic Films , Foam products)
- Textiles products
- Water (Drinking, Construction and waste water)
- Hazardous & Restricted Chemicals (ELV & ROHS)
- Paper & its products
- Paint , Varnishes and Surface coatings
- Adhesives
- Leather and Its products
- Corrosion testing (NSS/AASS/CASS)
- Building Materials (Cement, Fly Ash, Aggregate, Building Lime, Gypsum Board, Admixture, Building Bricks, Marble, Soil, Paving Blocks, TMT Bars, Tiles, and Autoclaved Aerated Concrete (AAC) Blocks etc).

Training program for B.Sc, M. Sc / B. Tech Candidates

Material Testing Laboratory LLP organized training course of 15 Days / 30 days, depending upon the requirements, for the Science graduates/Post Graduates who are willing to enhance their career in the field of Industrial Quality Assurance.

This training is divided in two sections, Theoretical Section & Practical Section

The course is a complete hand's on training allowing the trainee to perform various tests and the trainee will receive individual instructions while the testing activities are being carried out.



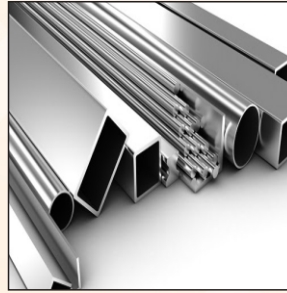
TESTING OF ENGINEERING MATERIALS



Metals (Aluminium/Brass/ Copper)

- Chemical Composition:
- Physical Testing :

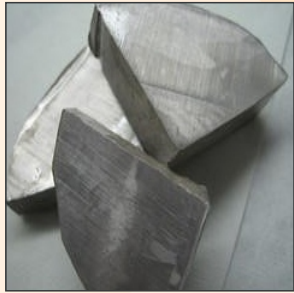
Tensile/Yield/Elongation
Hardness (HV)



Metals (Steel/Stainless Steel & Alloy Steel)

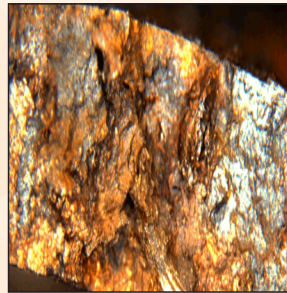
- Chemical Composition
- Physical Testing :

Tensile/Yield/Elongation
Hardness (HV/HRC/HRB)
Bend Test, Cupping Test,
Wrapping Test, Impact



Metals (Zinc / White Metals/ Solders)

- Chemical Composition:
Zinc & It's Alloy
White Metals/Solders



Corrosion Testing/Plating

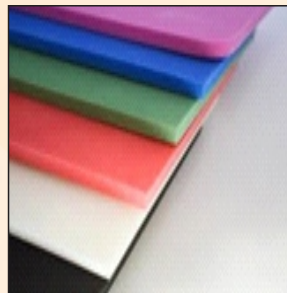
- Salt Spray Test
- CASS Test
- Humidity Test
- Plating Thickness

TESTING OF PLASTIC, RUBBER & FOAM



Plastics (Raw Materials & It's Products)

- Chemical Testing:
Identification of Polymer,
Filler/Ash, Glass content
- Physical Testing:
Tensile/Flexural Properties ,
Hardness (Shore D) , Melt Flow
Index , Heat Deflection under
load , Vicat Softening Point,
Impact, (Izod/Charpy) ,
Compressive Strength , Cross
Breaking Strength , Flammability



Foam (PE/PU/PS Based) & It's Products

- Physical Testing:
Density/Apparent Density
Tensile Strength/Elongation
Tear Strength
Compression Set
Compressive Strength
Thermal Stability
Heat Ageing/Humidity Ageing,
Flammability



Rubber/Synthetic Rubber (Raw & It's Products)

- Chemical Testing:
Identification of Polymer Ingredients:(Ash/Carbon black/Total Extract/Sulphur)
Filler Analysis, Polymer Content
- Physical Testing:
Tensile Strength/Elongation , Hardness (Shore A) , Heat Ageing, Fluid Resistance(Oil Ageing), Low Temperature Bend test, Adhesion to & Corrosion of metals, Resistance to Crystallization, Compressibility under load, Compression Set, Tear Strength, Density/Sp Gravity.

TESTING OF PAINT & BUILDING MATERIALS



Paints/Varnishes/Adhesives

Enamel Paint, Ready Mixed Paint,
Ready Mixed Paint for Road
Making, General Use & Air
Drying Red Oxide
APC-2, APC-217, APC-221/201/
211/212/218/223/224/225/226
Synthetic Adhesives Zinc
Chrome Priming.



Building Materials (Chemical & Physical Tests)

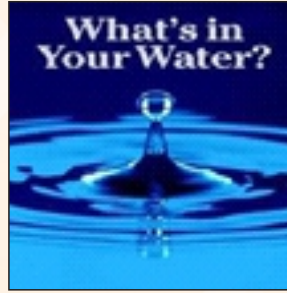
- Cement, Admixture, Fly Ash
- Soil, Building lime, Granite
- Gypsum Plaster/Board
- Building Bricks, Aggregate
- Marble (Block/Slab/Tiles)
- Steel Channel/Beam/Angel
- Steel Bar (TMT)

TESTING OF TILES, TEXTILE, WATER & PAPER



Tiles Testing

Cement Concrete Flooring tiles
Clay flooring tiles
Chequered cement concrete flooring tiles
Ceramic tiles



Water

- Water for Drinking, Waste Swimming Pool, Construction, Industrial Purpose



Textile (Fabric/Yarn)

- Chemical Testing (pH/ Cl/SO₄/Pb/Ash/Fabric Composition /Moisture/ Azo Compound/Phthalates/ Formaldehyde/Colour fastness, Pilling Test)
- Physical Testing (Mass/Breaking load/Tear Strength/Thread count/ Bursting Strength/ Flammability)



Paper & Packaging Material (Kraft Paper, Bond Paper, Corrugated Boxes)

- Chemical Testing (pH/Cl/SO₄/Pb/Ash/Acidity/ Moisture), Brightness.
- Physical Testing Thickness/Mass/Breaking load/Elongation/Tear Strength Water penetration/Bulk/Bulk factor/Bursting Strength)

TESTING OF MINERALS, GLASS, COAL, CARBON & HAZARDOUS



Minerals, Ores & Glass

- Lime Stone , Iron Ore , Glass
- Manganese Ore, Feldspar
- Fluorspar, Gypsum/Gypsum Plaster, Quartzite/High Silica
- Sand , Rutile/Titanium Oxide
- Alkalinity of Glass



Carbon black for Rubber

- Chemical Testing:
Ash Content
pH of Water Extract
Relative Density
Sulphur Content
Volatile Matter
Water Soluble Chlorides/Sulphates
Particle Size Distribution



Coal/Coke

- Proximate Analysis
- Ultimate Analysis
- Gross Calorific Value (GCV)
- Net Calorific Value
- Bulk Density
- Sieve Analysis
- Ash-Chemical Analysis, GCV,
- Moisture, Unburnt Carbon
- Ash Deformation Temp.



Hazardous & Restricted Chemicals:

- RoHS (Pb/Cd/Hg/Cr+6/PBB/PBDE/ DEHP/ BBP/DBP/DIBP)
- ELV (Pb/Cd/Hg/Cr+6)
- Nickel Release Test
- Migration of Certain Elements
- Azo Compounds, Phthalates

TESTING OF HARDLINE/SOFTLINE & HANDICRAFT



Hardlines/Softlines Products (Toys, Cosmetics, Metal Handicrafts, Candle Stands, Candles)

- RoHS (Pb/Cd/Hg/Cr+6/PBB/PBDE/ DEHP/ BBP/DBP/DIBP)
- ELV (Pb/Cd/Hg/Cr+6)

Major Testing Equipments

CHEMICAL TESTING

- Atomic Absorption Spectro-photometer
- FT-IR Spectrometer
- Gas Chromatography
- Differential Thermal Analyser (Oxidation Induction tester)
- Corrosion Chamber (NSS/CASS/AASS)
- UV-Visible Spectro-photometer
- Flame Photometer
- Electrolysis Apparatus
- Melting Point Apparatus
- BOD Incubator
- COD Apparatus

- Humidity Chamber
- Humidity under condition of Condensation Chamber
- Flash Point
- Viscosity
- Pencil Hardness
- Gloss meter
- Centrifuge Apparatus
- Water test kit (PH/Turbidity/TDS/conductivity)
- Impact and Bend test apparatus for Painted panels
- Coating thickness meter
- Deep freezer up to minus 40 degree C

MECHANICAL TESTING

- Compression testing machine (CTM)
- Universal Testing machine (UTM)
- Tensile Testing Machine (TTM)
- Tear tester (Elmendorf type)
- Hardness Tester (Vickers / Rockwell / Brinell)
- Hydrostatic Pressure testing Machine
- Environmental Stress Cracking Resistance tester (ESCR Apparatus)
- Notch Cutter for Pipes, Impact tester for pipes
- Humidity Chamber, Conditioning Chamber
- Melt Flow Apparatus
- HDT/VST Apparatus
- Opacity tester
- Thickness tester (For Paper / Soft materials and Fabrics)

- Rubber Hardness (Shore /IRHD)
- Impact tester (Izod / Charpy) for Metals and Plastics
- Ericson Cupping Apparatus
- Wrapping / Torsion tester
- Profile Projector
- Metallurgical Microscope
- Cement Autoclave, Vibration machine, Water Bath, Length comparator.
- Washing Fastener tester ,Rubbing apparatus, Wrap reel apparatus,
- MOR Apparatus
- CBR Apparatus
- Abrasion testing (Los Angel Apparatus)



Accreditations, Approval & Major Clients



Material Testing Laboratory LLP

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