



ENVIRONMENT RESEARCH LABORATORY

For Sustainable Environment...



ENVIRONMENT RESEARCH LABORATORY (ERL)

Environment Research Laboratory (ERL) is catering to the testing and validation requirements of customers through evaluation of physio-chemical properties and performance of automotive materials/components as per national/international standards. ERL is your partner in validation of polymeric materials, petroleum products.

Additionally, ERL is also engaged in research activities of national importance. ERL is actively providing consultancy services in areas of Material compatibility with alternate fuels and Air Quality Management (AQM).

What we do ?		Whom we serve ?	
Testing & validation of materials and products		Materials manufacturers, component manufacturers & product manufacturers	
	Why us ?	  	Beyond Testing..
	State-of-the-art facility, competent manpower & NABL accreditation		Research in the field of polymers for support in material development & failure analysis of components

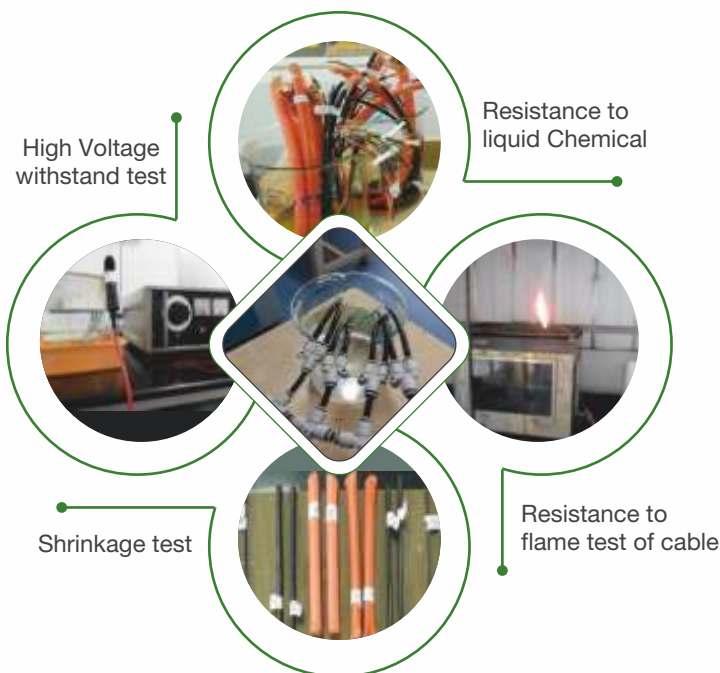


WIRING HARNESS

ISO 6722 -1 ISO 19642-9 Auto- Industry Standard

Testing of Automotive cables as per national, international and customer specific standards

- Round
- Sheathed
- Screened or unscreened
- Multi core or single core copper conductor cables

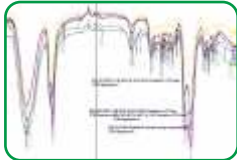


AIS-024	Safety and Procedural requirements for Type Approval of CNG Operated Vehicles
AIS-025	Safety and Procedural requirements for Type Approval of LPG Operated Vehicles
AIS-026	Code of Practice for use of LPG Fuel in Internal Combustion Engine to Power 4 Wheeled Vehicles
AIS-028	Code of Practice for use of CNG Fuel in Internal Combustion Engine Vehicles
AIS-052	Code of Practice for Bus Body Design and Approval
AIS-123	CMVR Type Approval of Electric Propulsion Kit Intended for Conversion of Vehicles for Pure Electric Operation (Part -3)
AIS-140	Intelligent Transportation Systems (ITS) - Requirements for Public Transport Vehicle Operation

POLYMER

ASTM D3677 SAE J2665 AIS-066 ASTM E1131

- Evaluation of physical, chemical, mechanical, thermal properties, and performance tests
- Identification of Base polymer, additives and reinforcing agents
- Supported with libraries for ATR polymers, additives, solvents
- Failure analysis & Presence/Absence of certain restricted substances/ionic impurities
- Measurement of Fuel Permeability of Materials by the Cup Weight Loss Method



FLAMMABILITY

IS 15061 UL 94 FMVSS 302 SAE J 369 IS 5509



Test Specimen

Flammability/ Resistance to flame propagation/ Flame resistance testing as per various national, international and customer specific standards.

- Foams
- Plastics
- Rubbers / Elastomers
- Fabrics
- Composites

RoHS SCREENING

IEC 62321



RoHS Compliance



Semiconductors



PCBs



Electrical & Electronics Devices



Toys



Sports Equipment

RoHS (Restriction of Hazardous Substances) Screening of various components for Lead, Mercury, Cadmium, Total Chromium, Hexavalent Chromium and Total Bromine, Phthalates

ENGINE COOLANT

JIS K2234 IS 5759



Engine coolant testing for physico-chemical properties, corrosion properties and performance tests as per national and international standards

BRAKE FLUID

IS 8654 SAE J1703
SAE J1704 FMVSS 116



Hydraulic brake fluid testing for physico-chemical properties and performance tests as per national and international standards

DIESEL EXHAUST FLUID (DEF)

ISO 22241-2 IS 17042-2



Testing of Diesel Exhaust Fluid (DEF), Automotive Urea Solution (AUS-32) for quality parameters and impurities.

NON-REGULATED POLLUTANTS- AMBIENT AIR AND VEHICLES

CARB METHOD EPA METHOD 610

- Determination of Carbonyl (Aldehyde and Ketone) Compounds
- Determination of Polynuclear Aromatic Hydrocarbons
- Indoor air/vehicle cabin monitoring of CO, CO₂, NO, NO₂, O₂
Total VOC, Formaldehyde.



VOCs

ISO 12219



Determination of the emissions of volatile organic compounds from vehicle interior parts and materials using GCMS

MATERIAL COMPATIBILITY & CHEMICAL RESISTANCE

SAE J 1747 SAE J 1748 ISO 16750-5



- Compatibility of materials used in fuel system components with alternate fuels like Ethanol, Methanol, DME
- Impact of chemicals on electrical and electronic equipment

FACILITY PHOTOGRAPHS



Carbon Analyser



XRF



HPLC



GC-FID



AIR QUALITY MONITORING
SAMPLING STATION AT ON-SITE

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ARAI
Progress through Research



The Automotive Research Association of India
(Affiliated to Ministry of Heavy Industries, Govt. of India)

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