

# LEATHER, PPE & FOOTWEAR

## TESTING SERVICES

[www.ttilabs.net](http://www.ttilabs.net)



### **Tti Testing Laboratories**

ISO/IEC 17025 Accredited Testing Laboratory

ISO/IEC 17020 Accredited Inspection Body

CPSC Accredited Testing Laboratory

EPA Certified Testing Laboratory

OGRA Approved Lab

PSQCA Approved Inspection Agency



# ABOUT Tti

Tti is a world class, globally recognized, ISO/IEC 17025 accredited testing facility and ISO/IEC 17020 Accredited and PSQCA Approved Inspection body having the honor of being the first lab approved by US Consumer Product Safety Commission (CPSC) for consumer safety testing in Pakistan. In addition to OGRA Lab approval, Tti is also approved from the Environmental Protection Agency as an EPA certified lab. Tti has a country-wide network of Labs and customer centers including a state of the art purpose built main testing facility in Lahore followed by liaison offices in Karachi, Faisalabad and Sialkot. We at Tti have been in service since 1995 serving a wide range of Industries including Leather, PPE & Footwear, Environmental Protection, government sector, Textiles, Chemical, Oil and Gas, Food and Paint/Coatings. We provide our clients a one stop comprehensive spectrum testing services which helps them add more value to their complex Supply chain, Regulatory Compliance and Brand Integrity.

## Physical Test

- Ball burst test (Bursting/Grain crack)
- Measurement of thickness
- Flex resistance (Leather / whole Shoes / outsole)
- Finish heat resistance test
- Cold crack of leather
- Tensile strength / percentage of Elongation
- Tear load (Single Edge / Double Edge)
- Stitch tear strength
- Determination of shrinkage temperature
- Taber Abrasion test
- Abrasion resistance
- Water Repellency test (Spray test)
- Determination of moisture of leather

## Color Fastness Test

- Color fastness to machine washing
- Color fastness to mild washing
- Color fastness to water
- Color fastness to perspiration
- Color fastness to water spotting
- Small sample to solvent (dry cleaning)
- Color fastness to crocking
- Color fastness to saliva and perspiration
- Color fastness to rubbing (to-and-fro-rubbing)
- Color fastness to light – Xenon lamp (20 hours)

## Performance Test (PPE)

### Gloves

- EN 388 ( Updated Version)
- EN 420
- EN 407
- EN 659
- EN 374
- EN 12477
- EN 13594

### Protective Clothing

- EN 469
- EN 13595
- EN 17092
- ISO 11611
- ISO 11612
- ISO 14116

### Footwear

- EN 344
- EN 20345
- EN 20346
- EN 20347
- EN 13634



# CHEMICAL TESTS

Test	Natural Leather	Coated Leather	Coated Fabric	Natural Textile	Synthetic Textile	PVC, TPR, PU, Rubber & Polymers	Ink, Paint	Metals, Buckles, Trims
pH Value	•	•	•	•	•			
Formaldehyde Content	•	•	•	•				
Chromium Content	•	•	•					
Azo Dyes	•				•		•	
Disperse Dyes								
Allergic Dyes	•	•	•		•	•	•	
Carcinogenic Dyes								
Chlorinated Phenols								
PCP		•	•	•		•	•	
TeCP								
TriCP								
OPP								
Determination Phenols	•	•	•			•		•
Heavy Metals	•	•	•	•	•	•	•	•
APs & APEOs	•	•	•	•	•	•	•	•
Polycyclic Aromatic Hydrocarbons ( PAH)		•	•				•	
DMF (DMFu / DMFa)	•	•	•			•		•
Organotins (TBT, TPhT, DBT, DOT)	•	•	•		•	•	•	
PFOS & PFOA	•	•	•	•	•			
Total Lead		•	•		•	•	•	•
Total Cadmium		•	•		•	•	•	•
SCCP & MCCP	•	•	•			•	•	
VOCs						•	•	
Pesticides	•	•	•	•				
Nickel							•	•
REACH Screening (SVHC)	•	•	•	•	•	•	•	•

# INSPECTION SERVICES

- Pre Production Inspections
- Supervision of Loading
- Vendor Assessment
- During Production Inspections
- Post Delivery Inspections
- Sample Evaluation Services

## Sectors We Serve:



Leather



Textile/  
Apparel



Power  
Generation



Oil & Gas



Food  
Processing



Cement



Chemical  
Manufacturing



Engineering



Housing/  
Construction



Sugar



# Our Services

Textile Testing  
Apparel Testing  
Leather Testing  
Environmental Testing  
Petroleum Testing  
Paints & Coatings  
Food & Pharmaceutical Testing  
Restricted Substances Testing  
Inspections & Audits  
Trainings



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### Lahore

Head Office: 347-S, Quaid-e-Azam Industrial Estate,  
Kot Lakhpat, Lahore-54770, Pakistan.  
Call Us: (92-42) 111 786 001  
Emails: marketing@ttilabs.net

### Karachi

Office: 3rd Floor, Plot No 7c, Sunset Commercial St. No 1,  
Phase 4 DHA, Karachi-75500, Pakistan.  
Call Us: (92-21) 111 786 001  
Emails: marketing@ttilabs.net

### Faisalabad

Office: Office # 145, 1st Floor, Center Point Plaza,  
Jaranwala Road, Faisalabad, Pakistan.  
Call Us: (92-41) 87 33 001  
Emails: marketing@ttilabs.net

### Sialkot

Office: Shaheen Street, Allama Iqbal Town,  
Deffence Road, Sialkot, Pakistan.  
Call Us: (92-52) 357 3367  
Emails: marketing@ttilabs.net

## Global Presence

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