



Tti Testing Laboratories

OVER 30 YEARS OF EXCELLENCE IN QUALITY ASSURANCE



SERVICES • CERTIFICATION

Certification **services**

ZDHC MRSL certification, and CE and UKCA certification support for PPE.

Specialised expertise for certification, regulatory acceptance and global market access. Tti Labs certifies chemical formulators to the ZDHC MRSL, and prepares PPE for CE and UKCA marking with Notified Bodies.

ZDHC MRSL V3.1 • Level 1

Regulation (EU) 2016/425

Intertek • CIMAC • SATRA

ISO/IEC 17025 • PNAC

01 Two routes

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05 CE / UKCA

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www.ttilabs.net



ZDHC APPROVED

An approved ZDHC MRSL V3.1 certifier, Level 1.

Tti Labs certifies chemical formulators on analytical testing, screening and Safety Data Sheet review.

SINCE 1995 • LAHORE

Two routes to a certificate buyers accept.

ROUTE 1 • CHEMICAL INPUTS

ZDHC MRSL conformance

Tti Labs issues the certificate. Dyes and chemical auxiliaries are tested and their Safety Data Sheets reviewed against MRSL V3.1.

- ISO/IEC 17025 accredited laboratory, PNAC LAB 022
- ISO/IEC 17020 inspection body, PNAC IB-006 (Tti Inspections Pvt Ltd)

ROUTE 2 • PPE FOR THE EU AND UK

CE / UKCA marking

A Notified Body issues the certificate. Tti Labs tests to the harmonised EN standards, prepares the technical file and coordinates with Intertek, CIMAC or SATRA.

- ZDHC approved wastewater laboratory; tests to Guidelines V2.2
- 1,500+ global brands served

ZDHC MRSL V3.1 • LEVEL 1 CONFORMANCE

Cleaner chemical inputs, certified to MRSL V3.1.

A chemical conforms when it contains no substance on the ZDHC MRSL above the set limit. ZDHC defines three conformance levels; the higher the level, the more confidence that a formulation meets the latest MRSL.

01

**Analytical
testing**

02

Screening

03

**Safety Data
Sheet review****→ Certificate, Level 1**

Why it matters

- Cleaner inputs, safer outputs
- Brand compliance trusted by global buyers
- One standard across textiles, leather, polymers and synthetics
- Supports the ZDHC Roadmap to Zero

Current version

MRSL V3.1 is the current version. The ZDHC Gateway has accepted only V3.1 products since 1 November 2023.

For chemical formulators, manufacturers, exporters and brand owners.

ZDHC MRSL TESTING SEGMENTS

Five chemical families, from dye houses to polymer plants.

For chemical formulators, manufacturers, exporters and brand owners in textiles, leather, polymers and synthetics.



01

All dyes

Reactive, disperse, direct, vat, acid, basic and specialty dyes



02

Chemical auxiliaries

Surfactants, detergents, finishing agents, softeners and lubricants



03

Textile & apparel chemicals

Manufacturing chemicals for textiles and apparel



04

Leather chemicals

Tanning, finishing, waterproofing and coatings



05

Polymers & synthetics

Auxiliaries used in plastics, coatings and man-made fibres



06

Wastewater, the other end

ZDHC approved wastewater laboratory; tests to Guidelines V2.2



Inputs and outputs, one laboratory: MRSL certification for what goes into the process, and ZDHC wastewater testing for what comes out.



ISO/IEC 17025 • PNAC LAB 022

Every certificate rests on accredited analysis.

MRSL certification is decided on test data. These are the signature analyses behind it, each on the accredited scope.

SIGNATURE ANALYSIS	TECHNIQUE	ACCREDITED METHOD
Total fluorine	CIC	ASTM D7359 • EN 14582 • EN 17813
PFAS in wastewater	LC-MS/MS • GC-MS	DIN 38407-42 • BS EN 12673
Disperse dyes	LC-MS	DIN 54231:2022-09
Organic solvents (DMAC, DMFa, NEP, NMP)	GC-MS	ISO/TS 16189 • USEPA 5021A
Chromium VI in chemicals	IC	Tti/INORG/SOP-23
Heavy metals in chemicals	ICP • AAS	Tti/INORG/SOP-008a

Beyond the certificate

- Chemical inventory audit
- MRSL adherence
- RSL and MRSL screening
- ZDHC green chemical management
- Supplier mapping, Tier 1 to Tier 3



Ion chromatography
Chromium VI



Combustion IC
Total fluorine



Headspace GC-MS
Organic solvents



ICP-MS
Heavy metals

REGULATION (EU) 2016/425

CE marking opens the EEA to your PPE.

To place PPE on the European market, manufacturers must show compliance with Regulation (EU) 2016/425 and obtain certification through an authorised Notified Body. CE marking confirms the essential health and safety requirements are met, and the product may be sold across the European Economic Area.

Tti Labs tests, compiles the technical file and coordinates with your Notified Body: Intertek, CIMAC or SATRA. The Notified Body issues the EU type-examination certificate. UKCA covers Great Britain.

CAT.	DESIGN AND RISK	MODULE
I	Simple design, minimal risks	A
II	Intermediate	B + C
III	Complex design, mortal or irreversible risk	B + C2 or D

Who it serves: gloves, clothing and footwear for occupational health and safety, motorcycle riders and healthcare professionals.



ROADMAP TO THE CE CERTIFICATE

Six steps from product review to the certificate.

Tti Labs tests and prepares the file; the Notified Body examines and certifies. Updates and renewals follow the same route.

01

Product review & evaluation

PPE expertise

Category, intended use, risk class and harmonised standards set the scope and the assessment route.

02

Proposal and product testing

ISO/IEC 17025 testing

The EN standards for the category and risk class, tested for results Notified Bodies accept.

03

Technical file to the Notified Body

File preparation

Documentation, test reports, specifications, labelling and records, compiled and reviewed.

04

Examination & technical inspection

Independent evaluation

Construction, labelling, workmanship, dimensions and markings checked on the product.

05

Draft certificate

Preliminary review

Scope, standards, model references, labelling and technical details checked in the draft.

06

Final type-examination

Certificate & renewals

Coordination to the CE/UKCA certificate, with follow-up and help with updates and renewals.



THE NOTIFIED BODY ISSUES THE EU TYPE-EXAMINATION CERTIFICATE. TTI LABS TESTS, PREPARES THE TECHNICAL FILE AND COORDINATES.

13 EN standards • 100+ test clauses

Gloves

EN 388:2016+A1:2018 • EN 407:2020 •
EN 12477:2001+A1:2005 • EN 13594:2015
• EN 511:2006 • EN 659:2003+A1:2008

Garments

EN 17092:2020 • EN 1621 •
EN ISO 11611:2024 • EN ISO 11612:2015
• EN 469:2020 • EN ISO 20471:2013
/ ANSI 107

Footwear

EN 13634:2017 • and EN ISO 20344,
20345 and 20346 for safety and
occupational footwear



Blade cut

EN 388



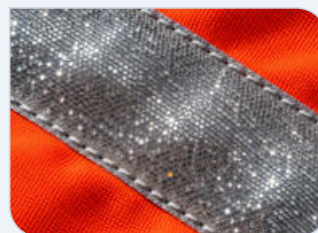
Contact heat

EN 407



Toecap impact

EN ISO 20344



Retroreflective tape

EN ISO 20471

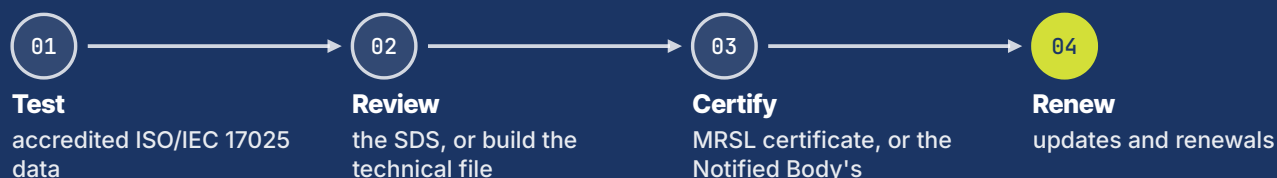
Start with a product review: quotations@ttilabs.net • UAN 111 786 001.



Tti Testing Laboratories



Certificates that open the EU, UK and brand supply **chains**.



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Images are for illustrative purposes only. CE and UKCA certificates are issued by the Notified Body; Tti Labs tests and coordinates.

