



Product Service

**Choose certainty.  
Add value.**

## Electromagnetic Compatibility (EMC) & Environmental (ENV) Consulting and Assurance Services for the Defence Industry

TÜV Product Service Ltd has worked with the defence industry sector for over 50 years in the pursuit of compliant system performance and reliability to ensure that systems operate as intended in hostile military environments.

Our Technical Consultants offer defence teams and contractors an unparalleled range of technical support, test and evaluation services throughout the acquisition cycle to help ensure projects meet specification and are delivered on time and within cost.

### Strategy and Planning

We provide compliance strategies for system solutions utilising bespoke design, military off the shelf (MOTS) or commercial off the shelf (COTS) equipment.

It is common for these strategies to be documented in a Control or Management Plan containing:

- Management organisation
- Requirements management
- Documentation plan
- Design policy
- Risk assessment
- Qualification and Verification plan

### Requirements Management

The key to successfully addressing EMC and Environmental reliability contract requirements is to involve subject matter experts conversant with these disciplines and their technical standards. TÜV Product Service works closely with defence contractors to prepare performance specifications, define compliance statements and to ensure that risks are managed throughout the duration of the project.

### Qualification & Verification

We assist in the qualification and verification of a design by the recommendation of suitable test and analysis programmes and the development of Test Plans. The integration of MOTS and COTS equipment is assessed by TÜV Product Service for compliance against the contract requirements by a “Gap Analysis”.

This enables the cost benefit of a MOTS and COTS solution to be realised whilst managing the residual risk by additional testing or design measures.

### Accreditations and Registrations

TÜV Product Service Ltd is an ISO9001 registered consultancy, UKAS accredited for permanent laboratory and site test and a DTI appointed EMC Competent Body / Notified Body under the EMC Directive.

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C O N S U L T I N G



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[www.tuvps.co.uk](http://www.tuvps.co.uk)

TÜV Product Services security arrangements are approved by government security services.

#### Consulting Solutions

Our Technical Consultants have extensive experience of the specifications that defence products must comply with. We provide authoritative guidance on the selection of standards, test methods, limits and performance criteria.

TÜV Product Service provides assistance in many specialised fields including:

- Electromagnetic Environment Effects (E3)
- Electromagnetic Compatibility (EMC)
- Electromagnetic Pulse (EMP)
- Radiation Hazards (RADHAZ)
- Radiation security (TEMPEST)
- Nuclear survivability
- Mechanical environments – Shock and Vibration
- Climatic environments – Temperature, Humidity and Altitude
- Highly Accelerated Life Testing (HALT)
- Sand and Dust testing

#### Project Experience

- Revision of UK DEF STAN 59-41 for EMC and production of new Defence Standard DEF STAN 59-411.
- Eurofighter – Environmental Simulation, EMC Nuclear Hardening
- BOWMAN – Environmental Simulation, EMC, TEMPEST, Automotive
- CVF – EMC requirements management
- SKYNET 5 - Environmental Simulation, EMC
- T45 and Astute - Environmental Simulation, EMC
- Vanguard - EMC Site Surveys
- RAF Fylingdales - RADHAZ Site Surveys

#### Knowledge Transfer

TÜV Product Service offers a range of training courses in EMC, RADHAZ and Environmental Simulation. These courses can be delivered at our dedicated training facilities or at your own premises.

#### RELEVANT STANDARDS

EMC Standards	Environmental Simulation Standards
DEF STAN 59-41 (59-411)	DEF STAN 00-35
MIL STD 461	DEF STAN 81-41
SPE-J-000-E-1000	MIL STD 810
European and International	EN/IEC 60068 series
(EN/IEC) Commercial Standards	BS EN 60529

TÜV Product Service Ltd • TÜV SÜD Group  
 Octagon House • Concorde Way • Segensworth North • Fareham  
 Hampshire • PO15 5RL • United Kingdom  
 Tel: +44 (0)1489 558100 • Fax: +44 (0)1489 558101 • Email: [info@tuvps.co.uk](mailto:info@tuvps.co.uk)

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