



FULL-SERVICE EMI / EMC, DYNAMICS, & CLIMATIC SIMULATION TESTING

WHO ARE WE

Element Tinton Falls is a full-service environmental test facility with more than 15 different chambers, shakers, a catapult, drop towers, and impact test platforms (hail, stone, and small caliber fragments). Our team of experts in EMC/EMI, environmental and dynamics testing serve the mid-Atlantic region performing the tests you need in a timely and cost-effective manner.

We have extensive experience in electromagnetic radiation and susceptibility testing, product safety, dynamics and environmental testing — to name just a few. With a mastery of current test and conformity requirements for domestic and international, we can assist you with product assessment and program test requirements to assure maximum customer acceptance.

EMI/EMC/ESD TESTING

Element Tinton Falls provides EMI/EMC/ESD testing services to a wide variety of industries with expertise in testing to Defense, Aerospace, Space, Consumer Electronics, Telecom, Medical Device and Automotive Industries.

Our EMI/EMC/ESD testing capabilities include:

- Radiated Susceptibility ~ 200 V/m, frequency range 10 kHz to 40 GHz
- Radiated Emissions ~ 30 Hz to 40 GHz
- Two three-meter FCC listed, semi-anechoic chambers
- Two-meter semi-anechoic chambers
- MIL/AERO semi-anechoic chambers
- AC & Telecom port surge, Electrical Fast Transients, Ring-wave, and bust testing

EMI/EMC/ESD TESTING (continued)

- Electrical power characteristics testing
- Airborne acoustic noise and structure-borne noise
- Antenna characterization
- Shielding effectiveness, transfer impedance
- Electrostatic discharge up to 30 kV

TELECOMMUNICATIONS (NEBS) TESTING

Element Tinton Falls also provides certification of Telecommunications products to Network Equipment Building System requirements (NEBS) as well as international standards. We also provide complete certification of information technology, industrial, and other commercial electronic products to global EMC, and Product Safety regulatory standards.

Primary EMI / EMC testing specifications:

- | | |
|-----------------------------|-----------------|
| - MIL-STD-461/462 | - EN 55011 |
| - RTCA/DO-160 | - EN 60601-1-2 |
| - GR 1089-CORE | - EN 61000-4-xx |
| - FCC parts 15, 18, 22 & 24 | - EN 61000-3-x |
| - EN 300386 | - EN 61000-6-x |
| - EN 55024 | - EN 61326-1 |
| - EN 55022 | |

DYNAMICS TESTING

Vibration capabilities include sine, random, sine on random, random on random, gunfire vibration and synthesized shock. Additional dynamic testing capabilities include hail and stone impact testing,

DELIVERING INNOVATIVE PRODUCT TESTING AND CERTIFICATION SOLUTIONS

DYNAMICS TESTING (continued)

acceleration testing, impact and drop and shock towers. NTS dynamics testing capabilities encompass:

- Electrodynamics shaker systems: T-1000, T-514; up to 1" stroke, 9,000 – 16,000 force pounds, 5 Hz – 3,000 Hz.
- Catapult and drop towers: Up to 100msec, 55Gs
- Ballistics (hail/stone impact)

Primary specifications for dynamic testing include:

- MIL-STD-810
- MIL-STD-202
- RTCA/DO-160
- ISTA
- ASTM
- FAA
- GR 63-CORE
- GR 487 CORE
- ETSI 300-019-xx
- IEC 60068-2-xx

ENVIRONMENTAL SIMULATION TESTING

Environmental testing performed by Element Tinton Falls is the answer to overcoming the risks involved when bringing a new product to market. To reduce costly reworking and even costlier product recalls, manufacturers smartly opt to test their prototypes for performance throughout their intended lifecycle.

In addition, our team members are always ready to share their expertise - so you get precisely the type of environmental tests your products need to be reliable and meet all relevant industry standards.

Our facility offers a variety of climatic chambers, including:

- Temperature/humidity chambers ranging in size from two cubic feet to 8' x 8' x 8' walk-in chambers.
- Combined temperature, altitude and humidity chamber can reach up to is 90,000 feet.
- Acoustic noise
- Wind and rain up to 100 mph
- Salt fog
- Solar load
- Thermal shock
- Fluids susceptibility
- Sand and dust testing

Primary specifications for environmental testing include:

- MIL-STD-810
- MIL-STD-202
- MIL-PRF-28800
- RTCA/DO-160
- ISTA
- ASTM
- IEC 60529
- NEMA 250
- GR 63-CORE
- GR 487-CORE
- ETSI 300-019-xx
- IEC 60068-2-xx

FUNGUS TESTING

Tinton Falls is a USDA approved fungus lab with an on-staff mycologist. Our fungus resistance testing - also known as non-nutrient growth testing - is ideal for products intended for use in warm and humid climates. Since fungal growth is known to impede mechanical, electrical and optical functions - as well as pose certain infection and health risks - it is an imperative test to conduct. And with soil burial testing available, we offer wide-range fungal testing so there's no shortage of what we can test for you.

Our fungus testing services are designed to meet a myriad of US and European standards including:

- MIL-STD-810 Method 508
 - RTCA-DO-160 Section 13
 - ASTM G-21
 - ASTM C1338 and other ASTM standards
 - MIL-PRF-28800
 - SAE J1455
 - AATCC TM 30 Test I, Test II, Test III and Test IV
 - ANSI A136.1 Section 6.4
 - GM 9328P
 - IPC-TM-650 and other IPC test methods for circuit board materials
 - Whirlpool T331
 - Whirlpool TCP-126
 - JSS 55555
 - Tappi T487
 - IEC 60068-2-10
 - ISO 846
 - JSS 55555
 - SAE J1455
- and other custom fungus tests

HAIL/STONE IMPACT TESTING

When you consider the damage hail impact can cause to vital equipment like aircraft windshields, you understand the importance of hail/stone impact testing. At Element Tinton Falls, we have the capability of simulating real-world impacts that can occur at speeds in excess of 600 mph and at temperatures of -20°C or lower. In addition, our high-speed video system allows us to conduct all necessary fracture and failure analyses to aid in the robust design and development of your product.

Our hail/stone impact testing methods are designed to comply with ASTM F320, ASTM E822, ASTM E1038, FM 4470 and FM 4473 standards.