



 **DANAK** ISO 17025

# Polytech Test & Validation

## ACCREDITED TEST CENTERS

Our state-of-the-art test labs perform standardized as well as validated non-standardized tests customized to meet the needs and requirements of each individual customer.



The Polytech Test & Validation Test Centers based in Denmark have been accredited by DANAK (Danish Accreditation Fund) according to the ISO 17025 standard. This is your guarantee of the best quality - and of maximum protection of your development projects and test results.

When Polytech develops new products and concepts in close cooperation with our customers in the wind industry and other demanding industries, we are frequent users of our Test Centers and their facilities.

Ongoing tests of materials, surfaces and prototypes enable us to make rapid (and well-documented) decisions and thus keep momentum in our projects. The outcome of this is products with better performance, superior durability and unmatched competitiveness.

### External customers

Being an accredited test center, we offer our services to R&D projects carried through without the participation of Polytech.

**You are more than welcome to contact Polytech Test & Validation Test Centers and learn more about quality testing of your internal development projects or documentation of various product qualities.**

### POLYTECH TEST CENTER ADVANTAGES

- Accredited according to ISO 17025
- Highly qualified staff
- Able to combine different test methods in-house
- Able to adapt new standards
- For combined test, an individual test plan is produced



## Weathering Testing

Test Type	Test Method	Description
Rain Erosion	DNVGL-RP-0171	Recommended practice to test liquid impingement erosion using rotating apparatus
	ASTM G73-10	Standard test method for liquid impingement erosion using rotating apparatus
Xenon-arc Lamps	ISO 16474	Paint and varnishes – Methods of exposure to laboratory light sources
	ISO 4892-2	Plastics – Methods of exposure to laboratory light sources. Part 2: Xenon-arc lamps
	ASTM G155 – 13	Standard practice for operating Xenon Arc light apparatus for exposure of non-metallic materials
Flourescent UV	ISO 4892-3	Plastics – Methods of exposure to laboratory light sources – part 3 Flourescent UV lamps
	ISO 16474-3	Paints and varnishes - Methods of exposure to laboratory light sources. Part 3: Flourescent UV lamps
Gloss	ISO 2813	Paint and varnishes – Determination of gloss value at 20°, 60° and 85°
Offshore	ISO 20340	Paint and varnishes – Performance requirements for protective paint systems for offshore and related structures. Please note that the standard refers to the outdated ISO 11507 standard for the UV exposure. This standard has been replaced by ISO 16474 therefore, ISO 16474 is used instead of ISO 11507
Salt Spray	ISO 9227	Corrosion tests in artificial atmospheres – Salt spray tests

## Tensile Testing

Test Type	Test Method	Description
General	ISO 527 part 1, 2 and 3	Plastics – Determination of tensile properties Part 1: General principles Part 2: Test conditions for moulding and extrusion plastics Part 3: Test conditions for films and sheets
Peel Test	ASTM D 3330	Standard test method for peel adhesion of pressure-sensitive tape
	ISO 4578	Adhesives – Determination of peel resistance of high-strength adhesive bonds – Floating-roller method
Shear	ASTM D-1002	Standard test method for apparent shear strength of single-lap-joint adhesively Bonded Metal Specimens by Tension Loading (Metal-to-Metal)
Tear	ASTM D-624	Standard test method for tear strength of conventional vulcanized rubber and thermoplastic elastomers
	ISO 34	Rubber, vulcanized or thermoplastic – determination of tear strength

## Other Tests

Test Type	Test Method	Description
DSC (-90°C to 300°C)	ISO 11357 part 1, 2 and 3	Plastics - Differential scanning calorimetry (DSC) Part 1: General principles Part 2: Determination of glass transition temperature and glass transition step height Part 3: Determination of temperature and enthalpy of melting and crystallization
Density	ISO 1183	Plastics - Methods for determining the density of non-cellular plastics Part 1: Immersion method, liquid pyknometer method and titration method
Water Absorption	ISO 62	Plastics - Determination of water absorption
Shore Hardness	ISO 868	Plastics and ebonite - Determination of indentation hardness by means of a durometer (Shore hardness)
Thermal Cycling	Customer specific	
Customized Tests	Customer specific	

## Lightning Tests

Test Type	Description
Initial Leader Attachment Test	Determines likely lightning attachment points on the test sample.
Subsequent Stroke Attachment Test	Predicts possible puncture locations in or close to the swept area.
High Current Arc Entry Test	Assesses the level of damage at the possible lightning strike attachment points.
High Current Conducted Current	Assesses the impact of electro dynamical forces and heating.
Electric and Magnetic Field Immunity Test	Verifies the performance of electronic equipment and installations close to the lightning strike.
Power Frequency High Current Test	Verifies the performance of equipotential bondings and the current carrying capability of different conductor geometries.
HVDC Tests	Used for non-destructive verification tests and for simulating static discharge.