





Paint Laboratory

Weathering & Lightfastness Testing Service

Organizational member of



Weathering & Lightfastness

The weathering & lightfastness laboratory conducts tests of customer samples and tests of paint samples prepared in our laboratory as part of formulation development.

We test the impact of artificial weather conditions in accelerated conditions in laboratory chambers and in natural conditions at field stations around the world.

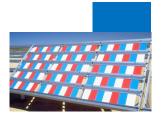
We always choose the course of the exhibition for the individual needs of our clients. If you don't know which standard to use, don't worry. Our team of scientists will help you choose the right course of the exposure.



We also develop test programs in accordance with the individual needs of clients, as well as conduct research to correlate results from laboratory chambers with natural exposure in various parts of the world.



Accelerated artificial weathering



Natural outdoor weathering



Accelerated outdoor weathering



Testing Service

Artificial accelerated weathering Accelerated lightfastness

We conduct weathering and lightfastness tests of coatings and other materials in laboratory chambers in accordance with the cycles described in international standards:













Materials	Fluorescent UV lamp chamber	Xenon-arc chamber
Architectural paints and plasters	ASTM D4587 ISO 16474-3	ASTM D6695 ISO 16474-2
Wood coatings	EN 927-6 ASTM D4587	ASTM D6695
Transportation coatings		ASTM D7869
Automotive coatings	SAE J2020 ASTM D4587	
Plastics	ASTM D4329 ISO 4892-3	ASTM D4459 ASTM D2265 ISO 4892-2
Bituminous materials	ASTM D4799	ASTM D4798
Liquid roof membranes		ASTM D6083
Textiles	AATCC TM189	AATCC TM169
Plastic lumber decking		ASTM D6662

Laboratory light sources

We have the right types of lamps for each cycle to ensure the correct exposure. Our **fluorescent UV chambers** are equipped with all types of UV lamps:

- UVA-340 general purpose
- UVA-351 to simulate exposure to UV rays through a window glass
- UVB-313 for testing coatings with very high durability

and condensation and water spray.

Xenon-arc chamber is equipped with all types of filters to simulate solar radiation and water spray (also cold water spray)

1.60 Direct Sunlight, Noon Summer Sunlighter Through Window Q SUN Extended UV - Q/B 1.70 Q SUN Returded UV - Q/B 1.70 Q SUN Returded UV - Q/B 1.70 Q SUN Returded UV - Q/B 1.70 Q SUN Northerded UV - Q/B 1.70 Q SUN Returded UV - Q/B 1.70 Q SUN Northerded UV - Q/B 1.70 Q SUN Returded UV - Q/B Q SUN Returded UV - Q/B







Specimens evaluation after exposure

The exposure of samples in the chamber is the first part of the test. We only get to know the result by assessing whether it is for reference samples or specific requirements.

We assess changes in accordance with international standards. Photographic documentation is standard with us.

Depending on the resulting changes, we make assessments visually or instrumentally. If the customer needs, we also evaluate changes in the coating properties (e.g. hardness, elasticity, adhesion).

We work on all color systems, we measure using a spectrophotometer or reflectometer.

Outdoor exposure

We also run tests in natural weather conditions: natural weathering, as well as accelerated outdoor weathering (e.g. on concentrators, AIM boxes, black boxes, etc.).







Tests are carried out according to ASTM G7, ASTM G24, ASTM D4141, ASTM D4364, ISO 877-2, ISO 877-3 and others.

Climate stations cooperating with us are located all over the world in different climate zones, e.g. Florida, Arizona, India, Russia, France, Germany, China, Japan, Australia, Brasil, and other.

Where weathering tests are useful?













Facade paints

Plasters

Interior paints

Wood coatings

Roofings











Plastics

Automotive coatings

Garden hoses

Metal coatings

Pigments







Window profiles



Industrial coatings



Clear varnishes



Aerospace coatings

Spektr*<u>G</u>***chem**

Paint R&D and Testing Laboratory Poland | 39-400 Tarnobrzeg | 15 Dabrowskiej Str.

Phone: +48 15 822 45 22

E-mail: CustomerService@spektrochem.pl

Website: www.spektrochem.pl















