



Chemical Resistance Tests

Test Name	Purpose	ISO Standard
Water Resistance Test	Evaluates how w paint withstands water exposure.	ISO 2812-1
Acid and Alkali Resistance Test	Determines resistance to chemicals like acids, bases, and solvents.	ISO 2812-1
Salt Spray Test	Assesses corrosion resistance, especially for coatings used in marine or industrial environments	ISO 9227
Acid Salt Spray Test	Simulates acid rain or harsh acidic environments to test corrosion resistance	ISO 9227 (modified for acetic acid salt spray, ASTM G85 used)



Durability and Weathering Tests

Test Name	Purpose	ISO Standard
UV Resistance Test	Simulates sunlight exposure to check for fading and degradation.	ISO 16474-2
Abrasion Resistance Test	Tests the wear resistance of dried paint using tools like Taber Abraser.	ISO 7784-2
Humidity Resistance Test	Evaluates how well paint holds up in high-humidity conditions.	ISO 6270-1
Freeze-Thaw Stability Test	Ensures the paint maintains its properties after exposure to extreme temperature cycles	ISO 11997-1



Performance Tests

Test Name	Purpose	ISO Standard
Adhesion Test	Assesses how well paint sticks to a surface (e.g., cross-cut test, pull-off test)	ISO 2409 (cross-cut)
Hardness Test	Measures the cured paint's resistance to deformation (e.g. pencil hardness).	ISO 15184 (pencil, ISO 15-18-1 (scratch)
Flexibility Test	Determines if the paint can bend without cracking (e.g, mandrel bend test).	ISO 1519
Gloss and Reflectance Test	Tests paint durability against sudden force or impact.	ISO 6272-1
Gloss and Reflectance Test	Measures the shininess of dried paint using a gloss meter	ISO 2813



Physical Property Tests

Test Name	Purpose	ISO Standard
Viscosity Test	Measures the thickness or flow of paint using a viscometer (e.g., Ford Zahn Cup).	ISO 2431
Density Test	Determines the mass per unit volume of the	ISO 2811-1
Specific Gravity (NVM) Test	Compares the density of the paint to that of water.	ISO 2811-2
Non-Volatile Matter (NVM) Test	Determines the amount of solid content left after the liquid portion evaporates.	ISO 3251
Pigment Volume Concentration (PVC) Test	Measures the ratio of pigment volume to the total volume of non-volatile components.	ISO 3233-1
Critical Pigment Volume Concentration (CPVC) Test	Identifies the threshold at which there is just enough binder to wet all pigments	No specific ISO, calculated based on PVC and binder volume