



International Standards

ISO 8502-3

Dust Test

ISO 8502-3. Preparation of steel substrates before application of paints and related products – Tests for the assessment of surface cleanliness – Part 3: Assessment of dust on steel surfaces prepared for painting (pressure-sensitive tape method)

Assess the quantity and size of dust particles on steel surfaces prepared for painting. Dust particles on blast-cleaned steel surfaces may reduce the adhesion of applied coatings, and by absorbing moisture may promote the corrosion of the steel surface.

Accumulation of dust particles occurs more naturally on horizontal surfaces, the interior of pipes and in structural cavities. Inspection should be carried out to ensure that such areas are adequately cleaned and free from dust particles before painting.

The pressure-sensitive adhesive tape is pressed on to the steel surface prepared for painting. The tape with the dust particles adhering to it is removed and placed on the Dust Test Chart in a section which contrasts to that of the dust particles and is examined visually.

The quantity of dust particles adhering to the tape and the dust particle size are then compared.

The Dust Test Comparator Chart shows 5 classifications of dust particles and four sections of contrasting backgrounds where the tape can be applied. All details necessary to identify the surface tested can be written on the Chart.

Packing: Dust Test Tape (60m roll), Dust Test Charts (pack of 50) and X10 Illuminated Magnifier.

All items are supplied in a industrial foam filled carrying case.

Dust Test Specifications						
Part No	Product	Tape Adhesive Strength	Tape Width	Tape Length	Dust Tape Conformance Cert Part No	Dust Charts Conformance Cert Part No
P4001	Dust Test	190nN / metre	25mm / 1"	60 metres	NPC05	NPC06
PS201	Spare Dust Test Tape	190nN / metre	25mm / 1"	60 metres	NPC05	
PS202	Spare Dust Test Comparator Charts (pack 50)					NPC06

Operation

Application

At the beginning of each series of tests, remove and discard the first three turns of the Dust Test Tape from the roll.

Remove a piece of tape about 250mm long. Holding the tape only at the ends, press about 200mm of the freshly exposed tape onto the blast-cleaned surface.

Place your thumb across one end of the tape and move the thumb along the tape whilst maintaining a firm pressure and constant speed along the tape. Carry out this procedure three times in each direction.

Remove the tape from the blast-cleaned surface and place it on the Dust Test Comparator Chart in a section which contrasts to the colour of the dust (adhere the tape with thumb pressure). Excess tape can be folded around the back of the chart or cut off.

Assessment

Assess the quantity and size of dust particles on the tape by visually comparing an area of the tape with equivalent-sized areas of the pictorial references shown on the chart. Record the rating corresponding to the reference that is the closest match.

It is not unusual after carrying out the test to find that the tape displays an overall discolouration, usually reddish-brown or black, sometimes with the presence of discrete visible particles, depending on the abrasive used. The discolouration is caused by microscopic dust particles from the blast-cleaned surface (particles less than 50µm) that can cause low paint adhesion. Report any overall discolouration as quantity rating 5, size class 1.

For every surface of one particular type, carry out not less than three separate tests. If the results do not have a spread of 1 or less quantity rating, carry out at least two additional tests to establish the mean.

Report

Record on the Dust Test Chart the following information:


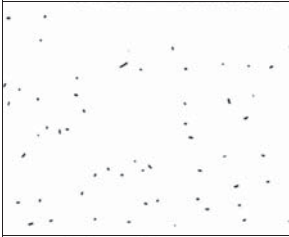
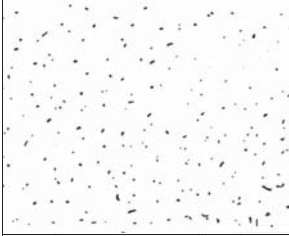
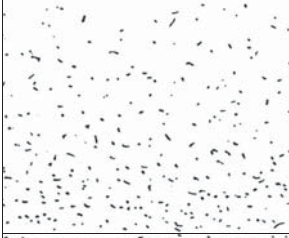

All details necessary to identify the surface tested, with reference to specific features (ledges, beams, web or flange faces) and attitude of the test area (vertical, horizontal).

The dust particle quantity rating and dust particle size class.

Date and, if applicable, the time of each test.

The Dust Test Chart can be kept as a permanent record for the inspection carried out.

Dust Particle Size Classes

	1. Particles not visible under X10 magnification.
	2. Particles visible under X10 magnification but not with normal or corrected vision (usually particles less than 50µm in diameter).
	3. Particles just visible with normal or corrected vision (usually particles between 50µm and 100µm in diameter).
	4. Particles between 0.5mm and 2.5mm in diameter.
	5. Particles larger than 2.5mm in diameter.

Practical Advice

The Dust Test is suitable for the assessment of dust particles retained after blast-cleaning on rust grades A, B and C. Because of the limited elasticity of the tape, it is not possible to penetrate into the deep pits present on blast-cleaned steel rust grade D.

Tape Shelf Life

Do not expose the Adhesion Test Tape to any extremes of temperature or daylight. We would recommend that the tape is used within a 12-month period from date of purchase.