



Paul N. Gardner Company

ASSESSMENT OF SURFACE CLEANLINESS ADHESION

Instructions for using the
Assessment of Surface Cleanliness.



Assessment of Surface Cleanliness



The Assessment of Surface Cleanliness test uses Cleanliness Test Tape (1 inch x 72 yards / 25 mm x 65.8 m) and a contrasting display board to determine the quantity and size of dust particles remaining on prepared steel surfaces before coating, in accordance with ISO 8502-3.

Required but sold separately: An illuminated 10x magnifier is required to accurately view and grade the dust particles during this test and must be purchased separately.

Note: Optional accessories, including a spring-loaded roller and ISO replacement tape, are available. Refer to the last page of this manual for a complete list.

Instructions for Use

Cleanliness Test Tape

1. Discard the first three turns of tape from the roll so only clean, uncontaminated tape is used for testing.
2. Cut or tear a piece of tape approximately 8 inches (about 20 cm) long.
3. Touch the adhesive side only at the ends. Press about 6 inches (about 15 cm) of freshly exposed tape firmly onto the surface to be tested.
4. Place your thumb across one end of the tape and move your thumb along the tape at a constant speed and pressure. Make this motion three times in each direction, and make each stroke take approximately 5 to 6 seconds.

Note: While a test procedure in which pressure is applied to the tape using the thumb is subjective, it is usually adequate, especially in situations where surfaces free from dust are required. In disputed cases, except when a rust grade C or D is involved, pressure may be applied to the back of the adhesive tape using a spring-loaded roller. Refer to ISO 8502-3 for the roller method.

If using the Gardco Cleanliness Test Tape Spring Roller, see proceeding page for detailed instructions.

5. Remove the tape from the test surface.
6. Place the tape on an appropriate contrasting background card, tile, or paper and rub with your thumb so the tape adheres and the dust pattern is clearly visible.
7. Determine the quantity of dust on the tape by visually comparing an area of the tape equal to the reference area shown in the **Dust Quantity Rating Chart** on the proceeding page, then select the rating that best matches the amount of dust on the tape.
8. Determine the predominant dust particle size on the tape by referring to the standard's particle size table, which defines six dust particle size classes designated 0, 1, 2, 3, 4, and 5.
9. Complete a sufficient number of tests to properly characterize the surface. Perform at least three separate tests for each surface of a particular type or aspect, and for any result that has a dust quantity rating of 1 or less, perform at least two additional tests on that surface to confirm the low dust level.

Note: For the exact procedure, rating images, and acceptance criteria, refer to ISO 8502-3.

Instructions for Use (continued)

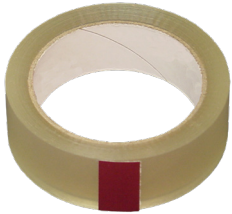
Cleanliness Test Tape Spring Roller

1. Discard the first three turns of tape from the roll so only clean, uncontaminated tape is used for testing.
2. Cut or tear a piece of tape approximately 8 inches (about 20 cm) long.
3. Touch the adhesive side only at the ends. Press about 6 inches (about 15 cm) of freshly exposed tape firmly onto the surface to be tested. Make sure the tape is firmly pressed onto the surface and the test area is not touched by your fingers
4. Place the spring roller on top of the tape so the roller is in full contact with the tape.
5. Press down on the roller until the red indicator ring reaches the desired mark. The top of the ring corresponds to approximately 4 kg (about 8.8 lb) of force and the bottom corresponds to approximately 5 kg (about 11.0 lb) of force, which matches the force range specified for dust tape rollers in ISO 8502-3.
6. While maintaining the selected force, roll the roller along the length of the tape at a steady, constant speed, then return to the starting point. Repeat this motion as needed to ensure the tape is pressed firmly and uniformly against the surface.
7. Carefully remove the tape from the surface and place it on a contrasting background card, tile, or paper. Rub with your thumb so the tape adheres and the dust pattern is clearly visible, then evaluate it using the **Dust Quantity Rating Chart** below.

Dust Quantity Rating Chart (ISO 8502-3)

Class	Description of Dust Particles
0	Particles not visible under X 10 magnification
1	Particles visible under X 10 magnification but not with normal or corrected vision (particles < 2 mils in diameter).
2	Particles just visible with normal or corrected vision (particles 2 mils to 40 mils in diameter)
3	Particles clearly visible with normal or corrected vision (particles up to 40 mils).
4	Particles between 40 mils to 100 mils
5	Particles larger than 100 mils
Pictorial references corresponding to dust quantity ratings 1, 2, 3, 4 and 5. NOTE: The use of intermediate half-steps is permissible if required to give a more detailed report. Report any overall discoloration as quantity rating 5, size class 1.	

Available Accessories



ISO Replacement Tape

Transparent, pressure-sensitive tape (1 inch x 72 yards / 25 mm x 65.8 m) used in both ISO 8502-3 dust/cleanliness tests and ISO 2409 cross-cut adhesion tests.

[Buy at gardco.com](https://gardco.com)



Illuminated Magnifier 10X

Compact 10x magnifier with built-in lighting that improves visibility of fine dust particles on the tape and contrast card, helping inspectors make consistent, reliable cleanliness ratings.

[Buy at gardco.com](https://gardco.com)



Cleanliness Test Tape Spring Roller

Use this spring-loaded roller to apply a consistent, controlled pressure to the back of the tape during the ISO 8502-3 cleanliness test.

[Buy at gardco.com](https://gardco.com)