

TASC

TAPE ASSESSMENT of SURFACE CONTAMINANTS

A methodology for determining the amount of dust and other contaminants on any surface (i.e. concrete, steel, wood, sheetrock, etc.) has been developed utilizing a double sided adhesive coated foam tape and a percentage pictorial report. Percentage amounts from 2% to 57% may now be observed visually and retained for inspection reports, even failure analysis or litigation that may result from a coating failure. Percentages have been determined by the Engineering Department at the University of Utah using the Olympus Microscope imaging software.

The Farlex Free Dictionary defines clean as “free from dirt, stain, foreign matter, impurities”. In the industrial surface preparation/coating application arena, a clean surface is of the utmost importance for coating adhesion and life expectancy. Manufacturers of high performance coating materials recognize this requirement and make a statement on their product data sheets similar to “ surface must be clean and free of ALL dirt, dust, laitance(concrete), oil, grease and any other contaminants”. Obviously, they are cognizant that correct surface preparation, anchor profile, proper coating selection and a clean surface, when combined in a project can produce desired results. .

Although many test methods are discussed and taught in coating inspection classes (NACE, SSPC) it has been this author’s experience that in the USA, this test method or any other test method for surface cleanliness is rarely inserted into coating specifications. It could be possible that the boilerplate specifications, used so frequently by specifying engineers, never contained any method to test for surface cleanliness or the assumption is that the contractor/coating applicator will clean the surface as directed by the coating manufacturers data sheets. Even certified coating inspectors, unless otherwise directed, may skip this test as well. It would certainly behoove these individuals writing the surface preparation/coating application specifications to require a cleanliness test to be taken and recorded. Inspectors should, if possible at a pre-job meeting, ask about any tests that should be taken to ensure that the surface is properly cleaned and then recorded for future reference. As of now, this author is not aware of any test kit on the market that is available for other surfaces, such as non-ferrous materials, plastic, sheetrock or concrete.

The ISO 8502-3 clear tape test has been available for approximately 30 years and was written ONLY for steel surfaces. The “TASC” Tape Assessment of Surface Contaminants for ANY surface employs:

1. The use of a two-sided adhesive foam tape, white in color, usable on any desired substrate such as steel, concrete, plastics, sheetrock, etc..
2. A roller to press tape into the surface profile being tested.
3. A visual percentage chart employing six (6) visual graduated percentage amounts that allow both immediate visual comparison and recording/retention of results. (Percentage results have been verified by the Utah State University)
4. Understandable pass/fail results for documentation by contractor/inspector/owner/QA/QC
5. Savable/recordable results for present and future interdiction

In contrast to a clear tape test that was designed for steel and sits on the top of the anchor profile, the foam tape utilized by “TASC” removes contaminants from within the profile, thus providing a true visual picture of the surface cleanliness. This method, if stipulated by coating manufacturer, specifying engineer or owner within the specification, will definitely aid in achieving a specified surface cleanliness, aid in coating adhesion, system longevity and customer satisfaction.