

SPRAYABILITY, SCI, AND RESISTANCE MEASUREMENT KIT

Sprayability

The sprayability meter measures whether materials normally considered being electrically non-conductive could be electrostatically sprayed or whether they need to be treated with solutions to make the surface conductive. The meter measures the surface resistance and indicates the degree of sprayability in $M\Omega$ or $G\Omega$. The target being sprayed must be low enough in resistance to dissipate the electrostatic charge. In some cases the internal resistance of a target is lower than the surface resistance. This might allow a target that does not have a suitable surface resistance reading to be coated electrostatically without additional surface preparation. An example of this is certain types of wood which on the surface are not conductive but due to moisture content (12%-13%) may be sprayable.

Since many non-conductive products must be pre-treated with a conductive solution to make them sprayable, the ITW Ransburg Multi-Function Electrostatic Spray Meter is useful to monitor and maintain consistency in that application, once a suitable reading is determined.

CAUTION

Ensure that meter's scale is properly set for the function in which it is being used. Damage to equipment may result if improperly set.

Operation

1. Set the meter dial to the $M\Omega$ or $G\Omega$ scale (see Figure 2). Check the meter calibration by touching the metallic end of the (2) probes on the meter to the stripped bare ends of a single 12" long wire (see Figure 2). (If desired the continuity of the wire may be verified by using a Volt-Ohm meter). If the meter reads zero,

the meter is in calibration. If it does not read zero, verify the continuity of the wire and re-perform the check. If the meter still does not read zero, consult the factory for repair of the meter.

2. With the metallic part of the meter probes pressed firmly and perpendicular against the surface of the article to be tested, the meter automatically reads the resistance of the part. Table 1 lists the readings from an 8333-00 meter and compares it to the readings of the Multi-Function Meter.

Meter Readings

0 Ω to 1.0 $G\Omega$ - The article is suitable for spraying using the electrostatic process.

1.0 $G\Omega$ to 1.5 $G\Omega$ - The article is questionable for spraying using the electrostatic process. In such cases, paint a trial sample article to determine if a conductive primer or conductive solution for the part surface is required.

1.5 $G\Omega$ to Infinity - The article is **not** suitable for spraying. A conductive primer or conductive solution is required to treat the surface of the part.

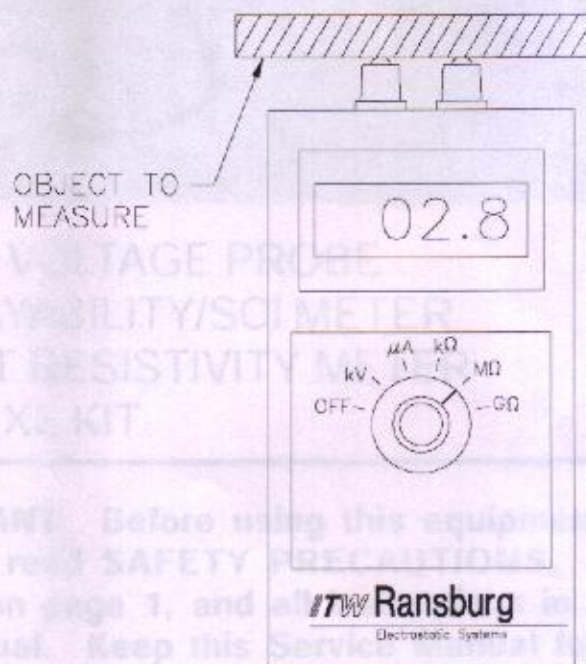


Figure 2: Sprayability Test Meter