Insulating Spray

Scotch 1601 / 1602 / 1603 / 1604

1. Product Description

Scotch 1601 - 1604 Insulating Spray is an acrylic-based insulating varnish that forms a flexible and durable film which protects electrical connections, switches, switchgear and components, and seal treated surfaces.

The insulating and coating spray are UV-, acid-, oil- and alkali-resistant, resistant to moisture and weather and is characterised by a high dielectric strength, with excellent adhesion to all common materials such as metal, glass, plastic, wood, etc.

Available colours:

- Scotch 1601 -> clear, transparent
- Scotch 1602 -> red
- Scotch 1603 -> black
- Scotch 1604 -> grey

2. Applications

Scotch 1601 - 1604 insulating and coating spray is used as a protective coating on electrical connections, switches, switchgear, terminal boards, electronic components, coils, and windings. It is also suitable for colour coding or for optical protection.

The substrate must be dry, free from oil and grease (*) and free of dust, loose buildup and corrosion. Shake the can intensively for approx. 2 minutes before use, until the stirring ball is clearly audible. At room temperature (approx. + 20 °C) spray at a distance of 25 - 30 cm in the cloister on the surface to be coated (vertical/horizontal) and allow to dry.

When overcoating, a self-test for compatibility is absolutely necessary.

* Note: Prior cleaning with Scotch 1626 (cleaning and degreasing spray) or Scotch 1625 (special contact cleaning spray) is recommended.

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3. Typical Properties

- UV-resistant
- Solvent resistant
- Resistant to acids, bases and oils
- Abrasion resistant
- Moisture and weatherproof

3.1 Technical Information

Base	modified acrylic resin
Propellant	propane/butane
Solvents	aliphatic / aromatized hydrocarbons
Colour	clear / black / red / grey
Dielectric strength	34 kV/mm* acc. DIN VDE 0303
Dying time at room temperature	dust dry…… after 8min dry to handle……..after 20-30 min paintable……..after 120 min dried by……after 48 hrs
Temperature resistance	after 700 Std. / +120°C -> no change
Weather resistance	Salt Spray Test 5% saline solution at 35 ° C -> 168 hrs
UV-resistance	Test based on DIN ISO 4892-3 (1000 hours) -> good
Chemical resistance	Test in accordance with DIN ISO 2812-1 -> good against solvents
Surface resistance	1 x 10^{12} Ωcm

* At layer thicknesses of only 25 µm or 45 µm (1-2x spraying), only a dielectric strength of approx. 500 V may be achieved.

3.2 Container Size

Scotch 1601 -> 400ml, 200ml
Scotch 1602–1604 -> 400ml

4. User Information

4.1 Storage

This product has a 2-year shelf life from date of manufacturing, stated on the can, when stored in a humidity-controlled area (10 °C to 27 °C and <75 % relative humidity).

⚠ 4.2 Safety Note

Container is under pressure. Protect from sunlight and protect at temperatures above 50 °C. Scotch 1601-1604 is highly flammable and should not be sprayed into flames. Only use the can when spraying vertically, do not incline more than 30°. The Insulating Spray should not be inhaled, a working environment with good ventilation must be ensured. Protect skin and eyes, use appropriate personal protective equipment.

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5. Additional information

To request additional product information, see address below.

Important Notice

All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluates the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method or application.

Values presented have been determined by standard test methods and are average values not meant to be used for specification purposes.

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