TECHNICAL DATA SHEET
ALCON INSULATING TRANSPARENT SPRAY

Description

Alcon Insulating Transparent Spray is a highly insulating coating with excellent arc and corona resistance. This low viscosity, one-part varnish coating is easy to use and adheres well to many substrates.

Applications & Usages

Insulates transformers, coils, armature, motor windings, and various electric generator parts against arc and corona. As well, it protects these parts from corrosion and moisture.

Features & Benefits

- **High dielectric strength**—3 000 V/mil (dry)
- **Excellent oil and moisture resistance**
- **Excellent finish**—tough, flexible, glossy, and durable transparent coat
- **Good water and salt water resistance**
- **Good adhesion**
- **High gloss**

Usage Parameters

Properties	*Value*
Tack Free Recoat Time Dry to Handle	10 min 4 h 30 min
Drying Time @25 °C [77 °F] Drying Time @80 °C [176 °F]	1 d 1 h
Theoretical coverage [a] per gal for 25 µm [1.0 mil]	<800 000 cm^2 <850 ft^2
Recommended Thickness	25 to 38 µm [1 to 1.5 mil]
Shelf Life	2 y

a) Estimated based on dip method and assuming a 90% transfer efficiency. Spray methods typically have transfer efficiency less than 65%. Actual coverage will be somewhat less than the theoretical values.

Temperature Ranges

Properties	*Value*
Constant Service Temperature Storage Temperature [b]	-40 to 135 °C [-40 to 275 °F] 25 °C [77 °F]

b) The product should not be exposed to direct sunlight.

Properties of Cured Product

Physical Properties	*Method*	*Value*
Color Gloss @60° Moisture Resistance Oil Resistance Salt Water Resistance Acid Resistance Alkali Resistance	Visual	Transparent 80 minimum Excellent Excellent Good Good Fair for low concentrations
Electrical Properties	***Method***	***Value***
Dielectric strength @1.5 mil (dry)	ASTM D149	3 000 V/mil

a) After conditioning in air at 25 °C for 24 h; coat thickness 33 μm
b) After conditioning in water at 25 °C for 24 h; coat thickness 33 μm

Properties of Uncured Product

Physical Properties	*Method*	*Value*
Viscosity @25 °C [77 °F] Solids Content (w/w) Density Flash Point Odor	ASTM D2196 ASTM D93	370 cP [0.37 Pa·s] 52% 1.06 g/ml 15 °C [59 °F] Aromatic

a) Brookfield viscometer with spindle LV1

Compatibility

Adhesion—Alcon Insulating Transparent Spray insulation coating adheres well to copper and steel; however, it is not compatible with contaminants like water, oil, and greasy flux residues that may affect adhesion. If contamination is present on the substrate, clean the surface first.

Adherence Compatibility

Substrate	Note
Copper Steel and Iron	Excellent Excellent

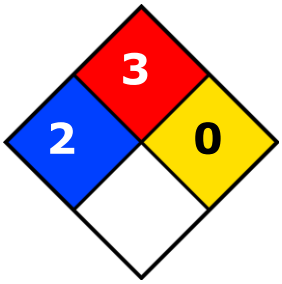
Health, Safety, and Environmental Awareness

Please see the **Safety Data Sheet** (SDS) for more details on transportation, storage, handling and other security guidelines.

Environmental Impact: The formulation has a volatile organic content of 49% (w/w) [or 514 g/L]. The coating is RoHS compliant.

Health and Safety: The liquid is flammable and should be kept away from flames and other ignition sources. As with most paint materials, avoid breathing in fumes or direct contact with the material. Solvents therein can cause irritation and other symptoms like headaches, pain, as well as having long term exposure effects.

HEALTH:	* 2
FLAMMABILITY:	3
PHYSICAL HAZARD:	0
PERSONAL PROTECTION:	



Approximate HMIS and NFPA Risk Ratings Legend:
0 (Low or none); 1 (Slight); 2 (Moderate); 3 (Serious); 4 (Severe)

Use in the open air, in fume hoods, or in well-ventilated area. For short or long term (8 hours) at levels of exposures exceeding 100 ppm of xylene, use NIOSH approved respirator with organic vapor cartridges rated for this order of concentrations.

Wear safety glasses or goggles and disposable gloves to avoid exposures. Wash hands thoroughly after use.

The cured coating presents no known hazard.

Application Instructions

Can be easily applied by dip or spray gun. Follow the procedure below for best results. The product may be diluted with xylene or other similar low cost solvents.

Prerequisites

- Ensure that the substrate if free of scratches, gouges, and raised metal burrs
- Ensure surface to be coated is clean: oil free, dust free, and rust free

ATTENTION: Using excessive coat thickness can cause defects. Do not heat cure between coats because this causes wrinkling.

To air dry the electric insulation coating

- Let air dry 24 hours

While this product can be air dried, it is highly recommended that you bake the product for optimal dielectric properties.

To heat cure

- Wait 1 h or more at room temperature for the coating to dry
- Put in an oven 110 °C [230 °F] for 30 min.
  OR
- Put in an oven at 80 °C [176 °F] for 60 min.

Packaging and Supporting Products

- M- 9012 400 Ml can (24 pieces per box)

Disclaimer

This information is believed to be accurate. It is intended for professional end users having the skills to evaluate and use the data properly. *ALCON* does not guarantee the accuracy of the data and assumes no liability in connection with damages incurred while using it.