4226HV

High Voltage Insulating Varnish

4226HV is a highly insulating coating with excellent arc and corona resistance. This low viscosity varnish coating is easy to use and adheres well to many substrates.

This product insulates transformers, coils, motor windings, and various electric generator parts against arc. As well, it protects these parts from corrosion and moisture.



Features & Benefits

Material Group I (CTI ≥600 V, PLC=0)

Excellent finish—gives an orange coat that's tough, flexible, durable and glossy

Good adhesion

Resistant to transformer oil and moisture

Low VOC and HAP-free

Does not contain toluene, xylene and MEK

Cure Instructions

Allow to dry at room temperature for 10 hours, or after letting sit for 30 minutes, cure the coating in an oven at:

Temperature	80 °C
Time	2 h

Storage and Handling

Store between -5 and 25 ˚C in a in a dry area, away from sunlight (see SDS).

Available Packaging

Part #	Packaging	Net Vol.	Net Wt.
4226HV-850ML	Can	850 mL	834 g
4226HV-3.6L	Can	3.6 L	3.53 kg
4226HV-18.9L	Pail	18.9 L	18.5 kg
4226HV-205L	Drum	205 L	201 kg

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Liquid Properties

Binder System	Acrylic, modified alkyd	—
Dry Time to Handle	1 h	—
Recoat Time	15 min	—
Recommended Film Thickness	25–38 µm	—
Density	1.0 g/mL	ASTM D1475
Viscosity @ 25 ˚C	100 cP	Brookfield Engineering labs Inc. IPCTM-65- Method 2.4.24.4
Percent Solids	41%	—
Theroretical Coverage @ Recommended Thickness *(based on 100% transfer efficiency)*	162 017 cm^2/L	Calculated
Calculated VOC	565 g/L	—
Shelf Life	5 y	—

Cured Properties

Color	Orange	—
Breakdown Voltage Dielectric Strength	6 100 V 5 180 V/mil	ASTM D149
Comparative Tracking Index (CTI)	600 V	ASTM D3638
Service Temperature Range	-30–180 ˚C	—

Application Instructions

Read the product SDS before using this product (downloadable at www.mgchemicals.com).

Recommended Preparation

Clean the substrate with MG #824 99.9% Isopropyl Alcohol, so the surface is free of oils, dust, and other residues.

Recommended Thinner

When thinning is required, use MG #4352 Thinner 2.

Brush

This product can be applied by brush for rework or touch-ups. Thinning is not required for most brush applications. Desired coating thickness can be achieved in a single application. Applied coating can be cured immediately.

Manual Spray Guns

Use a standard fluid nozzle gun with a minimum tip diameter of 0.8–1.0 mm. The settings listed below are recommendations; however, performance will vary with different brands:

Inlet	Air Flow	Air Cap
20–40 psi	10–15 SCFM	8–10 psi

1. Dilute 1-part coating to 1-part thinner (MG #4352 Thinner 2). Adjust ratio if required.
2. Stir the coating gently, but thoroughly.
3. Spray a test pattern to ensure good flow quality.
4. Tilt the board at 45° and spray a thin even coat from a distance of 20–25 cm (8–10 in). Use spray-and-release strokes with an even motion to avoid paint buildup in one spot. Start and end each stroke off the surface.
5. Wait 15 min between coats to avoid trapping solvent.
6. Rotate the board 90° and spray again to ensure good coverage.
7. Apply additional coats until desired thickness is achieved (go to step 3).
8. Let dry for 30 min at room temperature before applying heat cure.

Dip Coat

Use a Ford or Zahn cup to monitor the viscosity of the coating, as the solvent will evaporate over time.

1. Hang the PCB on a dipping arm.
2. Slowly lower the PCB into a tank and leave immersed in the coating for 2 min to allow penetration.
3. Slowly withdraw the PCB from the tank at a rate of approximately 6" per minute.
4. Let dry for 15 min before applying additional coats or heat cure.

Clean-up

Clean spray system and equipment with acetone, MG #434.

Disclaimer: This information is believed to be accurate. It is intended for professional end-users who have the skills required to evaluate and use the data properly. M.G. Chemicals Ltd. does not guarantee the accuracy of the data and assumes no liability in connection with damages incurred while using it.