TECHNICAL DATA SHEET

Cleanaseal® 110 HV Lite

High-Voltage Hydrophobic Dielectric Cleaner & Conditioning Fluid
Revision: A02
Technology Origin: Belgium
Date: 21 May 2023

1. Product Description

Cleanaseal® 110 HV Lite is a non-chlorinated, medium-flash dielectric cleaning and conditioning fluid designed for both energized and de-energized high-voltage equipment. It removes surface contamination and leaves a **thin, uniform hydrophobic film** that enhances insulation performance, reduces corona discharge, minimizes tracking, and improves long-term reliability of outdoor and indoor electrical systems.

The product is optimized for rapid controlled evaporation while maintaining a stable, non-tacky residual conditioning layer.

2. Typical Physical & Electrical Properties

Property	Typical Value	Test Method
Appearance	Clear, pale liquid	Visual
Odor	Mild, low-odor	Organoleptic
Flash Point (Closed Cup)	**≈ 55°C**	ASTM D93
Evaporation Time (25°C thin film)	3–6 minutes	Internal
Dielectric Strength	**≥ 40–45 kV**	ASTM D877
Electrical Conductivity	$< 1 \times 10^{-11}$ S/m	ASTM D1125
Specific Gravity (20°C)	0.82–0.86	ASTM D1298
Viscosity @ 25°C	2.0–3.5 cSt	ASTM D445
Water Content	≤ 50 ppm	Karl Fischer
Non-Volatile Residue (Hydrophobic Film)	2–3%	ASTM D2369
Solubility in Water	Insoluble	—
Thermal Stability	Stable up to 90°C	ASTM D6186
Plastic Compatibility	Suitable for epoxies, FR-4, ceramics; evaluate on PC/ABS	ASTM D543

3. Key Features & Benefits

Medium-flash, low-odor, non-chlorinated formulation
High dielectric strength for HV maintenance
Ultra-low electrical conductivity
Leaves a **thin hydrophobic conditioning layer**
Reduces surface leakage current and corona discharge
Enhances outdoor contamination resistance
Rapid controlled evaporation
Suitable for high-voltage spray guns and mist applicators
Stable antioxidant system for long shelf life
Compatible with most insulating materials

4. Recommended Applications

Designed for energized and de-energized cleaning of:

- High-voltage insulators (porcelain, glass, composite)
- Bushings, connectors, busbars, switchgear
- Outdoor transmission equipment in polluted or coastal environments
- Control panels and enclosures
- Motors, alternators, generators (when de-energized)
- Surfaces requiring a light hydrophobic conditioning film

5. Application Guidelines

Energized Cleaning

(Must comply with NFPA 70E, OSHA 1910, IEC 61482, IEEE 1584, and facility arc-flash procedures)

- Maintain required approach distances and PPE
- Spray from top to bottom to flush contaminants downward
- Allow 3–6 minutes for initial solvent evaporation
- Hydrophobic film reaches functional stability after drying

De-Energized Cleaning

- Apply by spray or lint-free wipe
- Ideal for removing dust, oils, moisture, salt, and environmental debris
- Air movement accelerates drying

6. PPE Requirements

Industrial users should follow:

- Chemical-resistant gloves (Nitrile or Neoprene)
- Safety goggles or a face shield
- Long-sleeve protective clothing
- Respiratory protection when ventilation is insufficient
  (e.g., N95 or organic vapor cartridge, depending on exposure)

7. Spill Response & Cleanup

In case of accidental spills:

- Use **oil-absorbent materials:** vermiculite, clay absorbents, or oil pads
- Collect into approved flammable-liquid waste containers
- Do **not** wash into drains or dilute with water
- Dispose of according to local regulations

8. Storage & Shelf Life

Store in original sealed containers
Keep away from heat sources and direct sunlight
Ideal storage temperature: **10–35°C**

Compatible with HDPE and steel packaging
Shelf life: **24 months** under recommended conditions

9. Packaging Options

500 mL
1 L
4 L
10 L / 20 L HDPE containers

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10. Manufacturer Information

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