

## Technical Data Sheet

## LENIUM<sup>®</sup> ES

### Product Description

**LENIUM ES Vapor Degreasing Solvent** is binary azeotrope of n-propyl bromide (*n*PB), isopropyl alcohol (IPA) and stabilizers designed for use in open-top and vacuum vapor degreasers. It is effective in electronics defluxing applications, removing solder flux residues and ionic contamination from circuit assemblies. LENIUM ES also removes adhesives, buffing compounds, drawing oils, greases, hydraulic oils, lapping compounds, resins, inks, silicone oils and waxes. It is a drop-in replacement for trichloroethylene (TCE), HCFC-141b, HCFC-225, perchloroethylene (PCE) and methylene chloride (MeCl).

### Features and Benefits

- Electronics Cleaner
- Replaces TCE, PCE, etc.
- Removes Ionics
- Removes Flux Residues
- Low Surface Residues

### Properties

|                            |                       |
|----------------------------|-----------------------|
| Specific Gravity (25 °C)   | 1.25                  |
| Flash Point                | None                  |
| Boiling Point              | 148-151 °F (64-66 °C) |
| Viscosity (20 °C)          | 0.49 cps              |
| Vapor Pressure (20 °C)     | 110.9 mm Hg           |
| Evaporation Rate (TCA = 1) | 0.96                  |
| Specific Heat (25 °C)      | 0.27                  |
| Heat of Vaporization       | 58.8 cal/g            |
| Kauri-Butanol (KB) Value   | 125                   |

### Soils Removed

- Flux Residues
- Hydraulic Oils
- Buffing Compounds
- Drawing Oils
- Lapping Compounds
- Silicone Oils
- Greases
- Waxes

### Equipment

Suitable for use in a variety of commercially available cleaning equipment including open-top and vacuum vapor degreasers.

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### Process

Add LENIUM ES at full concentration to the tank reservoir(s). See vapor degreasing operating manual for more information.

#### Controller Settings

|  |                   |
|--|-------------------|
| Liquid Temperature Controller/Sensor (LTC) | 164 °F (73 °C)    |
| High Temperature Controller (HTC)          | 169 °F (76 °C)    |
| Safety Vapor Controller (SVC)              | 144 °F (62 °C)    |
| Vapor Up Temperature (VU)                  | 144 °F (62 °C)    |
| Primary Refrigeration Temperature          | 35-40 °F (2-5 °C) |

### Environmental/Regulatory

|  |               |
|--|---------------|
| Ozone Depletion Potential (ODP)                                    | 0.013-0.018   |
| Global Warming Potential (GWP)                                     | Low           |
| Volatile Organic Compound (VOC)                                    | 1250 g/L      |
| National Emission Standards for Hazardous Air Pollutants (NESHAPs) | Not regulated |
| Superfund Amendments and Reauthorization Act (SARA)                | Not regulated |
| Resource Conservation and Recovery Act (RCRA)                      | Not regulated |
| Permissible Exposure Limit (PEL, ACGIH)                            | 0.1 ppm       |

### Disposal/Safety

#### Disposal

Vantage recommends contacting your current or local environmental service company for proper disposal.

#### Safety

Please see Safety Data Sheet for further information.

### Approvals

**Goodrich** Landing LGPS 1400 Solvent Cleaning/Degreasing

**Lockheed Martin** EMAP G41.149

**Safran** In-1500 Products Used For Degreasing-Organic Solvents (n-Propyl Bromide)

### Packaging

Available in 50 lb (23 kg) pails and 550 lb (249 kg) drums.

### Shelf Life

36 months when stored in original, sealed container above 50 °F (10 °C).

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