

VaporBrom™ A

**brominated vapor degreasing solvent for
Electronics and Precision Cleaning**



Banner Chemicals Group UK
Flying the flag of excellence for over 150 years



GENERAL DESCRIPTION

VaporBrom™ brominated vapor degreasing solvent is the strongest and lowest cost drop-in alternative to TCE (trichloroethylene). This product which is an azeotrope of alcohol and normal Propyl Bromide was formulated for cleaning flux residues from printed circuit assemblies.

However, VaporBrom A is also suitable for removing contaminants such as oils, greases, adhesives and resins from surfaces such as metal and glass.

VaporBrom A solvent boils at relatively high temperatures making it the ideal choice for hard-to-remove contamination such as waxes and buffing compounds.

PROCESS DESCRIPTION

VaporBrom A is intended for use in in open-top and vacuum vapor degreasers.

Vapor degreaser operation is simple. The parts are lowered into the degreaser until immersed into a sump of boiling solvent. The parts then move into a rinse sump that may contain ultrasonics. After the immersion rinse cycle is complete, the parts are raised into a solvent vapor for a final vapor rinse. Finally the parts flash dry when pulled past chilled coils. Typical cleaning times are 15 minutes or less.

VaporBrom A can be used in existing vapor degreasing equipment but as with any vapor degreasing chemistry, emission control retrofits are recommended to reduce vapor losses and minimize worker exposure.

The following settings are recommended:

VaporBrom A Controller Settings

- Liquid Temperature Controller/Sensor (LTC) 73°C
- High Temperature Controller (HTC) 75°C
- Safety Vapor Controller (SVC) 62°C
- Vapor Up Temperature (VU) (62°C)
- Primary Refrigeration Temperature 2-5°C

Banner Chemicals has been selling vapor degreasing solvents for decades and we are experts in precision cleaning. We fully support the VaporBrom product line with vapor degreasing process and equipment evaluation to ensure that customers obtain optimal cleaning results while reducing running costs and maintaining the highest possible environmental and safety standards.

FEATURES & BENEFITS

VaporBrom brominated vapor degreasing solvents

- High boiling point. Provides increased solvency due to a larger ΔT in relation to ambient conditions.
- Azeotropic blend. Produces extremely low post-cleaning ionic levels.
- High flux load capacity. Providing longer bath life.
- Strong solvency results in short cycle times, which increases productivity
- Excellent cleaning performance, even on complex geometries and tight clearances which is nearly impossible with aqueous cleaners.
- Parts exit the machine cool, dry, and spot-free which improves productivity and reduces cost.
- Short cycle times which increases productivity
- Easy maintenance. Minimal acid acceptance testing required to ensure bath integrity.
- Manufactured in Europe with the highest quality raw materials featuring extremely iPB levels.
- Easy process monitoring with minimal effort



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MAINTAINING HEALTH & SAFETY

VaporBrom™ brominated vapor degreasing solvent contains normal Propyl Bromide, a solvent which has been used for industrial vapor degreasing for over 20 years. Over time government regulations regarding the solvent have evolved and now regulations vary from country to country. Banner recommends that local government regulations be examined and followed when using Banner VaporBrom products.

Banner Chemicals follows a strict Product Stewardship Program for its VaporBrom brand product. This program includes product training, emission reduction training, and vapor monitoring.

Based on the product stewardship program, Banner Chemicals sells its VaporBrom nPB-based products only into engineered vapor degreasing systems where solvent emissions are minimized to near zero levels.

In addition, Banner Chemicals does not support nPB used for manual cleaning, in aerosols or as a component in adhesives or other high emissive applications.

Reading and understanding the VaporBrom Safety Data Sheet is strongly recommended before handling. Banner Chemicals takes its responsibility for product stewardship very seriously. If you need help understanding information on our material safety data sheets or products labels, or have any concerns about handling our products, simply contact Banner Chemicals and we will be glad to assist you.

If normal Propyl Bromine is not a good fit for your work environment, try Banner Chemicals SOLVEX HD fluorinated vapor degreasing solvent. Although it costs slightly more than VaporBrom, SOLVEX HD cleans well and it is much easier to handle.

PROPERTIES

VaporBrom A brominated vapor degreasing solvent

- High boiling point. Provides increased solvency due to a larger ΔT in relation to ambient conditions.
- Appearance Clear liquid
- Boiling Point 66°C
- Evaporation Rate (TCA = 1) 0.96
- Flammability Limits (vol %) 4-7.8
- Flash Point None
- Heat of Vaporization 58.8 cal/g
- Kauri-Butanol (KB) Value 125
- Specific Gravity (25°C) 1.25
- Specific Heat (25°C) 0.27
- Solubility in Water <100 ppm
- Solubility of Water 2,500 ppm
- Vapor Pressure (20°C) 110.8 mm Hg
- Viscosity (25°C) 0.49 cps

HANDLING & STORAGE

VaporBrom A brominated vapor degreasing solvent

If handling VaporBrom n-propyl bromide vapor degreasing solvents provide and use safety equipment including the following:

- Viton, PVA, nitrile, neoprene or butyl gloves can be used for short-term (30 minutes or less) protection against splashing. For heavy or prolonged skin contact silver shield gloves should be worn.
- Silver shield aprons should be worn for splash protection.
- Chemical goggles should be worn for eye protection.
- In areas with inadequate ventilation, wear a full-face piece organic vapor respirator.

VaporBrom brand products should be stored in the original container, preferably above 10°C, in a ventilated, fire-resistant building.

The shelf life of VaporBrom brand products is thirty-six (36) months when it is stored in its original, sealed container

ENVIRONMENTAL / REGULATORY

VaporBrom A brominated vapor degreasing solvent

- Ozone Depletion Potential (ODP) 0.013-0.018
- Global Warming Potential (GWP) Low
- Banner Chemicals is certified



- VaporBrom A complies with

