



Overview on Regulatory Status of Halogenated Solvent Cleaners

Several solvents used in parts-cleaning operations — such as methylene chloride (MEC), perchloroethylene (perc), and trichloroethylene (TCE), and n-propyl bromide (nPB) — are all filed under “Risk Evaluation” by the U.S. EPA under the Toxic Substances Control Act (TSCA).

While some manufacturing facilities continue using nPB for vapor degreasing in parts cleaning operations, time may be running out for the use of those solvents as regulators at the federal and state levels are beginning to look at banning or severely limiting those solvents' uses. The EPA announced in 2016 that 10 chemicals — including methylene chloride, perc, TCE, and nPB — would undergo “Risk Evaluations,” the second step in the EPA's existing chemical process under TSCA.

- Vacuum degreasers allow for the use of several different chemicals, including halogenated solvents, combustible modified alcohols, and azeotropic mixtures.

Part 3: Considerations When Deciding Chemical Management Actions

Before deciding whether to change your parts-cleaning chemistry or equipment to comply with possible nPB regulatory changes, there are several considerations. A facility should examine these pertinent considerations before deciding on what action plan to undertake when it comes to chemical management:

- **Company Policies:** first among the list of considerations is checking whether your organization has policies and procedures that cover using “Chemicals of Concern” as specified by the Toxic Substances Control Act (TSCA). Some companies have adopted “Chemical Prioritization Protocols” to systematically evaluate and potentially eliminate chemicals of concern, so reviewing your organization’s policies will help you know where to start.
- **Futureproofing:** as new regulations for nPB continue to emerge, a “wait and see” approach may not be an option. For instance, if your site invests in new equipment, it may be a good time to find equipment solutions that move away from nPB. Consider the right decision for your company to ensure nPB compliance for years to come.
- **Threshold Limit Value (TLV) vs. Process Needs:** When TLVs are eventually set on nPB and other cleaning chemistries, will you be able to sufficiently clean parts to meet your needs and your customers’ quality expectations?
- **True Costs:** Chemicals are just a small part of the overall cost of sustainable cleaning. Consider the direct and indirect costs of converting chemicals, equipment, and waste treatment and how those will affect overall budgets and quality standards.
- **Global Manufacturing:** Another important consideration is ensuring that your operations can perform the same consistent and high-quality part-cleaning operations throughout an organization’s global operations based on regional regulatory restrictions. For instance, companies that operate in a country where nPB is banned may choose to eliminate it at sites worldwide.
- **Equipment:** Ensure that the equipment you choose, whether an open- or closed-loop system, will be able to meet and exceed requirements in future parts-cleaning operations.
- **Scalability:** is your organization poised to grow? While you can operate within compliance limits now, will that still hold if the production scale meets future growth objectives?
- **Stabilization:** your system may need to utilize stabilizers to reliably prevent problems with organic acids or sulfur compounds from happening in your system.

Regarding stabilization, since vapor degreasing is a closed system where solvents are heated and then condensed to clean parts, contaminants such as oil, grease, and emulsions are removed from the parts, which may have a negative

