

## **Continued Use of Trichloroethylene (Trike) – Aerospace applications –**

This paper is written to help resolve any confusion around the continued use of Trike in metal cleaning. Whereas Trike is widely recognized within the industry as one of the most efficient solvents with unique properties for high precision surface cleaning and degreasing, a complex regulatory situation as well as the promotion of alternatives can cast doubts on the future of Trike in metal cleaning.

Its distinct efficiency in comparison to alternative processes along with its wide range of approvals within the aerospace industry, still makes Trike the solvent of choice from a manufacturing viewpoint. Yet, in 2002 Trike was reclassified Carcinogen Cat. 2 with label R45, and strict control measures need to be in place to protect workers and the environment. A number of European regulations affect the use of Trike in metal cleaning applications. The question one needs to answer, therefore, centres around when and under which conditions Trike can continue to be used, today and in the future, in order to comply with the applicable regulations and the best environment, health and safety practices.

**In applications where Trike is essential to meet quality and safety standards, Trike can continue to be used provided strict control measures are in place that guarantee compliance with the applicable regulations. It is strongly recommended that Trike is used in hermetically sealed equipment and a closed-loop safety system for handling the solvent, including delivery, transfer and take-back. It is recognized that consultancy from solvent experts, continuous solvent monitoring and stabilization extend the life time of the solvent and contribute to the proper risk management of Trike.**

This conclusion is grounded in the following facts and arguments:

1. The product-specific risks of Trike are well known and can be adequately and sufficiently managed by applying proper risk management. This has been recognized by the Regulators and is reflected in the prevailing regulations.

2. Under the EU Solvent Emission Directive, Trike can continue to be used in surface cleaning under certain conditions:
  - It has been demonstrated that Trike is technically the best solution compared to other products for a specific application or that switching to an alternative is not economically viable (Art.7);
  - TRI is used as part of a registered and authorized cleaning process that meets the Emission Limit Values set by the SED.
3. Users consuming less than 1 metric tonne of Trike per year fall outside the SED legislation. In order to assure a proper risk management for these users, the European producers of Trike, via the European Chlorinated Solvent Association ECSA, have developed a Voluntary Industry Commitment that has the support of the European Commission and the European Member States. Under the Commitment, Trike will only be supplied for metal cleaning or degreasing after 2010 if the user has an enclosed system and has confirmed that Trike will *only and exclusively* be used in such enclosed cleaning equipment.
4. The EU Scientific Committee for Occupational Exposure Limits (SCOEL) proposed recently a new Occupational Exposure Limit (OEL) (8-hour TWA) for Trike of 10 ppm with a Short-Term Exposure Limit (15 min) of 30 ppm. This helps to demonstrate that the regulators believe Trike can be continuously used if strict control measures are in place guaranteeing compliance with the OEL.
5. European producers will register Trike under REACH. The Voluntary Industry Commitment and the SCOEL proposal are expected to help Trike producers prepare for REACH implementation and should favourably position industry to obtain authorisation for the continued future use of Trike in enclosed cleaning equipment.
6. Trike demand is growing worldwide. Producers are confident, therefore, that the product will remain long-term available.
7. Users are shifting back to Trike for high-precision cleaning, after having had unsatisfactory cleaning results with alternative solvents or methods.

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