

Risks and Limitations of Metalworking Fluid Product Cross-Referencing

Subject: Why Metalworking Fluid Product Cross-Referencing is Not Recommended

Background: Frequently, our Technical Service and Customer Care Departments receive inquiries for a “Product Cross” from an alternate metalworking fluid manufacturer.

While this may seem like a straightforward way to find alternatives, it poses significant risks and limitations. This bulletin highlights the critical concerns associated with MWF cross-referencing and why caution is necessary.

Key Risks and Limitations:

- **Chemical Composition Differences:** Metalworking fluids have complex formulations that vary significantly between manufacturers. Substituting one fluid for another without thorough evaluation can lead to performance issues, productivity decrease, damaged or destroyed parts, machinery and most importantly, unhappy customers.
- **Machine and Material Compatibility:** Not all MWFs are suitable for every machining process or material. Differences in lubrication properties, cooling efficiency, and corrosion protection can impact machining quality, tool life and post machining metal protection.
- **Health, Safety, and Environmental Concerns:** Some MWFs contain additives and/or biocides regulated under specific health and environmental standards. Using an unverified alternative may introduce safety hazards or regulatory non-compliance.
- **Regulatory Compliance Issues:** Different manufacturers may adhere to varying industry and environmental regulations. Using an unapproved substitute could violate compliance requirements, leading to operational or legal consequences.

- **Conduct Comprehensive Testing:** If substitution is necessary, perform lab and field testing to ensure compatibility and performance.
- **Review Safety Data Sheets (SDS):** Compare SDS details to confirm chemical composition, health hazards, and regulatory compliance.
- **Consider Long-Term Effects:** Assess the impact of the alternative on tool wear, machine maintenance, and overall process efficiency.

Conclusion: Metalworking fluid cross-referencing is not a simple one-to-one replacement process. Variations in chemistry, regulatory standards, and performance characteristics can lead to serious operational, safety, and compliance issues. It is crucial to engage with technical experts and conduct thorough evaluations before making any changes.

For further information or support, please contact our technical team or a [Master Fluid Solutions District Salesperson](#).

Recommended Best Practices:

- **Gather all the Information:** Collect as much information as possible about the application. Utilize Master Fluid Solutions [MOTWOF](#) as a guide to collect the details. This form is located on [CoolTools Toolbox](#) and will guide the user for collecting the relevant information.