



Standard Terminology for Metalworking Fluids and Operations¹

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1. Scope

1.1 This terminology standard provides a compilation of ASTM and non-ASTM consensus definitions of terms used in the metalworking industry.

1.2 This terminology standard does not purport to be an exhaustive lexicon. Rather it defines terms relevant to metalworking fluid management and metalworking fluid health and safety.

1.3 This terminology standard defines primary metalworking operations, fluid types and other terms germane to the practice of metalworking fluid management.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:²

- D1356 Terminology Relating to Sampling and Analysis of Atmospheres
- D2881 Classification for Metalworking Fluids and Related Materials
- D6161 Terminology Used for Microfiltration, Ultrafiltration, Nanofiltration and Reverse Osmosis Membrane Processes
- D7049 Test Method for Metal Removal Fluid Aerosol in Workplace Atmospheres
- E1302 Guide for Acute Animal Toxicity Testing of Water-Miscible Metalworking Fluids
- E1497 Practice for Selection and Safe Use of Water-Miscible and Straight Oil Metal Removal Fluids
- E1687 Test Method for Determining Carcinogenic Potential of Virgin Base Oils in Metalworking Fluids

E1972 Practice for Minimizing Effects of Aerosols in the Wet Metal Removal Environment

E2144 Practice for Personal Sampling and Analysis of Endotoxin in Metalworking Fluid Aerosols in Workplace Atmospheres

E2148 Guide for Using Documents Related to Metalworking or Metal Removal Fluid Health and Safety

E2169 Practice for Selecting Antimicrobial Pesticides for Use in Water-Miscible Metalworking Fluids

E2275 Practice for Evaluating Water-Miscible Metalworking Fluid Bioresistance and Antimicrobial Pesticide Performance

E2563 Test Method for Enumeration of Non-Tuberculosis *Mycobacteria* in Aqueous Metalworking Fluids by Plate Count Method

E2564 Test Method for Enumeration of *Mycobacteria* in Metalworking Fluids by Direct Microscopic Counting (DMC) Method

E2657 Test Method for Determination of Endotoxin Concentrations in Water-Miscible Metalworking Fluids

E2693 Practice for Prevention of Dermatitis in the Wet Metal Removal Fluid Environment

E2694 Test Method for Measurement of Adenosine Triphosphate in Water-Miscible Metalworking Fluids

2.2 Government Standards:³

- 29 CFR 1910.1200 Occupational Safety and Health Standards, Hazard Communication
- 40 CFR 156 Labeling Requirements for Pesticides and Devices

3. Significance and Use

3.1 Personnel from a wide range of disciplines contribute to metalworking fluid management and plant environment health and safety management. Consequently, terms familiar to some stakeholders will be unfamiliar to others.

3.2 This terminology standard provides, in a single document, a compilation of definitions used by personnel involved with both metalworking environment health and safety and fluid management.

¹ This terminology is under the jurisdiction of ASTM Committee E34 on Occupational Health and Safety and is the direct responsibility of Subcommittee E34.50 on Health and Safety Standards for Metal Working Fluids.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from U.S. Government Printing Office Superintendent of Documents, 732 N. Capitol St., NW, Mail Stop: SDE, Washington, DC 20401, <http://www.access.gpo.gov>.