U.S. Department
of Transportation
**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

October 13, 2026

Madi Hall
Weld Engineer
Fike Corporation
704 SW 10th St. PO Box 610
Blue Springs, MO 64015

Reference No. 25-0128

Dear Ms. Hall:

This letter is in response to your September 30, 2025 email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to Department of Transportation (DOT) 4BW welded steel cylinders with electric-arc welded seams. You ask about a potential conflict between the material specifications provided in Appendix A of Part 178 (as referenced in § 178.61(b)(1)), the weld procedures outlined in paragraph § 178.61(d)(4), and the requirements specified in the Compressed Gas Association's (CGA) Standard C-3 (CGA C-3), *Standards for Welding on Thin-Walled Steel Cylinders* (2019). Specifically, you ask, regarding the manufacture of DOT 4BW cylinders, whether you should defer to the phosphorous allowance in CGA C-3 or the allowance specified in Appendix A of Part 178.

For the manufacture of a DOT 4BW cylinder, you must adhere to the material content (in your case, phosphorous) provided in Appendix A to Part 178, as referenced in § 178.61(b)(1). Welding procedure and operator qualification must be in accordance with CGA C-3, as referenced in § 178.61(d)(4). In CGA C-3 Sections 3.4 and 4.3, the base material of the qualification test specimens may differ in analysis as long as they are in the same material group used in the manufacture of these cylinders.

I hope this information is helpful. Please contact us if we can be of further assistance.

Sincerely,

Dirk Der Kinderen
Chief, Standards Development Branch
Standards and Rulemaking Division

Fike
BECAUSE SO MUCH IS AT STAKE™

Casey, C.
25-0128

Mr. Shane Kelley
Director, Standards and Rulemaking Division
U.S. DOT/PHMSA (PHH-10)
1200 New Jersey Avenue, SE East Building, 2nd Floor
Washington, DC 20590

Mr. Kelley,

Fike Corporation would like to request a letter of formal interpretation for 49 CFR 178.61. There seems to be a contradiction in material specifications between this section of DOT code and CGA C-3. Section d(4) calls out that all weld procedures must be compliant with CGA C-3. Section b(1) states that all material shall be compliant with table 1 in Appendix A. Grade 3 material in Appendix A Table 1 does not fit into any one material grouping in CGA C-3 Table 1 and the phosphorus allowance is actually higher than that allowed for any group number in CGA C-3. If grade 3 material is chosen for manufacturing 4BW welded cylinders, as 49 CFR 178.61 would allow, then it is possible that the material would not be compliant with CGA C-3. How should one reconcile the differences in material specifications between DOT regulations and CGA C-3 such that the manufactured cylinders will be fully code compliant?

Thank you,
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