



# Ballot Vote Sheet

**TO:** The Commission  
 Alberta E. Mills, Secretary

**DATE:** August 16, 2023

**THROUGH:** Austin C. Schlick, General Counsel  
 Jason K. Levine, Executive Director

**FROM:** Daniel R. Vice, Assistant General Counsel, Regulatory Affairs  
 David M. DiMatteo, Attorney, Regulatory Affairs

**SUBJECT:** ASTM's Revised Standard for Pre-filled Containers and Direct Final Rule Under the Portable Fuel Container Safety Act of 2020

**BALLOT VOTE DUE:** Tuesday, August 22, 2023

The Office of the General Counsel is forwarding for the Commission's consideration a staff memorandum and draft direct final rule. Under the Portable Fuel Container Safety Act of 2020 (PFCSA), the Commission must promulgate a rule to require flame mitigation devices in portable fuel containers that impede the propagation of flame into the container, unless the Commission determines that there is a voluntary standard for such flame mitigation devices. 15 U.S.C. § 2056d(b)(3)(A). On January 13, 2023, the Commission published in the *Federal Register* a notice of its determinations under the PFCSA that three such voluntary standards (ASTM F3429/F3429M-20, ASTM F3326-21, and section 18 of UL 30:2022) require flame mitigation devices in portable fuel containers that impede the propagation of flame into the container and are thus considered mandatory consumer product safety rules under the PFCSA. 88 Fed. Reg. 2,206. Since July 12, 2023, ASTM F3429/F3429M-20, ASTM F3326-21, and section 18 of UL 30:2022 have been considered mandatory consumer product safety rules under the PFCSA.

On June 12, 2023, ASTM notified the Commission that it had published revised ASTM F3429/F3429M-23 for pre-filled portable fuel containers. Under the PFCSA, a voluntary standards organization must notify the Commission of a revision to any voluntary standard for portable fuel containers that the Commission has determined meets the requirements to be consumer product safety rules. 15 U.S.C. § 2056d(b)(5). Once a voluntary standards organization notifies the CPSC of a revision, the revision will be incorporated into the relevant consumer product safety rule not later than 180 days after that notification (or on such later date as the Commission determines appropriate), unless within 90 days of the notice the Commission determines that the revisions do not meet the requirements of section 2056d(b)(3)(A) of the PFCSA, and so notifies the voluntary standards organization.

The accompanying staff memorandum evaluates the revised ASTM F3429/F3429M-23 standard against the requirements of the PFCSA and makes a favorable recommendation. The



# Ballot Vote Sheet

accompanying draft direct final rule would: (1) accept the ASTM F3429/F3429M-23 revision; and (2) for the convenience of the public, incorporate by reference in Code of Federal Regulations the three voluntary standards (including the revised ASTM F3429 standard) that are mandatory under the PFCSA.

Staff is sending the briefing package to the Commission at this time to allow the Commission time to vote upon the revision to ASTM F3429/F3429M before the September 10, 2023 statutory deadline for rejection of the revision. For efficiency and convenience, the revision and direct final rule are being combined into a single package for the Commission. If the Commission approves the draft direct final rule, OGC will delay sending that document to the *Federal Register* for publication to avoid potential confusion regarding which version of the ASTM F3429 standard applies at this time. Specifically, if the Commission approves the direct final rule, OGC will send the direct final rule to the *Federal Register* in late October 2023 to allow for publication and the necessary 30-day comment period before the December 9, 2023, effective date of the adoption of the 2023 version of ASTM F3429 as a mandatory standard, in place of the 2020 version that governs until December 9, 2023.

Please indicate your vote on the following options:

- I. Determine that the revision to ASTM F3429/F3429M-23 meets the requirements of section 2056d(b)(3)(A) of the PFCSA and approve publication of the attached direct final rule in the *Federal Register*, **as drafted**.

\_\_\_\_\_  
 (Signature)

\_\_\_\_\_  
 (Date)

- II. Determine that the revision to ASTM F3429/F3429M-23 meets the requirements of section 2056d(b)(3)(A) of the PFCSA and approve publication of the attached direct final rule in the *Federal Register*, **with specified changes**.

\_\_\_\_\_  
 (Signature)

\_\_\_\_\_  
 (Date)



# Ballot Vote Sheet

III. Determine that the proposed revision to ASTM F3429/F3429M-23 does not meet the requirements of section 2056d(b)(3)(A) of the PFCSA and therefore do not approve publication of the attached notice in the *Federal Register*.

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)

IV. Take other action specified below.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)

Attachment: Draft *Federal Register* notice: "Portable Fuel Container Safety Act Regulation"

[Billing Code 6355-01-P]

**CONSUMER PRODUCT SAFETY COMMISSION**

**16 CFR Part 1461**

[Docket No. CPSC-2022-0017]

**Portable Fuel Container Safety Act Regulation**

**AGENCY:** Consumer Product Safety Commission.

**ACTION:** Direct final rule.

**SUMMARY:** The Portable Fuel Container Safety Act of 2020 (PFCSA) provides that the Consumer Product Safety Commission (Commission) must promulgate a rule to require flame mitigation devices in portable fuel containers that impede the propagation of flame into the container, unless the Commission determines that there is a voluntary standard for flame mitigation devices that achieves the same result. In January 2023, the Commission published in the *Federal Register* a notice of its determinations under the PFCSA that three such voluntary standards (ASTM F3429/F3429M-20, ASTM F3326-21, and section 18 of UL 30:2022) collectively apply to all known classes of portable fuel containers. Pursuant to the PFCSA, therefore, the requirements of the three voluntary standards are treated as a consumer product safety rule under the Consumer Product Safety Act (CPSA).

On June 12, 2023, ASTM notified the Commission that ASTM F3429/F3429M-20 has been revised. In August 2023, for the reasons summarized in this direct final rule, the Commission evaluated the revised ASTM F3429/F3429M-23 standard and found that the revisions carry out the purposes of the PFCSA. Accordingly, pursuant to the PFCSA, the revisions to ASTM F3429/F3429M will be incorporated into the mandatory standard for portable fuel containers. This direct final rule creates a new part codifying the incorporation by reference

August 16, 2023

of this revised standard and the other two voluntary standards that are mandatory under the PFCSA.

**DATES:** The rule is effective on [INSERT DATE], unless CPSC receives a significant adverse comment by [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. If CPSC receives such a comment, it will publish in the *Federal Register* a notice withdrawing this direct final rule before its effective date. The incorporation by reference of the publication listed in this rule is approved by the Director of the Federal Register as of [INSERT DATE].

**ADDRESSES:** You can submit comments, identified by Docket No. CPSC-2022-0017, by any of the following methods:

*Electronic Submissions:* Submit electronic comments to the Federal eRulemaking Portal at: [www.regulations.gov](http://www.regulations.gov). Follow the instructions for submitting comments. Do not submit through this website: confidential business information, trade secret information, or other sensitive or protected information that you do not want to be available to the public. CPSC typically does not accept comments submitted by electronic mail (e-mail), except as described below.

*Mail/hand delivery/courier/confidential written submissions:* CPSC encourages you to submit electronic comments by using the Federal eRulemaking Portal. You may, however, submit comments by mail, hand delivery, or courier to: Office of the Secretary, Consumer Product Safety Commission, 4330 East West Highway, Bethesda, MD 20814; telephone: (301) 504-7479.

*Instructions:* All submissions must include the agency name and docket number. CPSC may post all comments without change, including any personal identifiers, contact information,

August 16, 2023

or other personal information provided, to: [www.regulations.gov](http://www.regulations.gov). If you wish to submit confidential business information, trade secret information, or other sensitive or protected information that you do not want to be available to the public, you may submit such comments by mail, hand delivery, or courier, or you may e-mail them to: [cpsc-os@cpsc.gov](mailto:cpsc-os@cpsc.gov).

*Docket:* For access to the docket to read background documents or comments received, go to: [www.regulations.gov](http://www.regulations.gov), and insert the docket number, CPSC-2022-0017, into the “Search” box, and follow the prompts.

**FOR FURTHER INFORMATION CONTACT:** Will Cusey, Small Business Ombudsman, U.S. Consumer Product Safety Commission, 4330 East West Highway, Bethesda, MD 20814; telephone (301) 504-7945 or (888) 531-9070; email: [sbo@cpsc.gov](mailto:sbo@cpsc.gov).

**SUPPLEMENTARY INFORMATION:**

**A. Background**

The PFCSA<sup>1</sup> requires the Commission to promulgate, not later than 30 months after December 27, 2020, a final rule to require flame mitigation devices in portable fuel containers that impede the propagation of flame into the container. 15 U.S.C. 2056d(b)(1), (2). However, the Commission is not required to promulgate a final rule for a class of portable fuel containers within the scope of the PFCSA if the Commission determines at any time that:

- there is a voluntary standard for flame mitigation devices for those containers that impedes the propagation of flame into the container;
- the voluntary standard is or will be in effect not later than 18 months after the date of enactment of the PFCSA (*i.e.*, June 27, 2022); and

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<sup>1</sup> Portable Fuel Container Safety Act of 2020, codified at 15 U.S.C. § 2056d, as stated Pub. L. No. 116–260, div. FF, title IX, § 901, available at: [www.govinfo.gov/content/pkg/PLAW-116publ260/pdf/PLAW-116publ260.pdf](http://www.govinfo.gov/content/pkg/PLAW-116publ260/pdf/PLAW-116publ260.pdf).

August 16, 2023

- the voluntary standard is developed by ASTM International or such other standard development organization that the Commission determines to have met the intent of the PFCSA.

15 U.S.C. 2056d(b)(3)(A). Any such Commission determinations regarding applicable voluntary standards must be published in the *Federal Register*. 15 U.S.C. 2056d(b)(3)(B).

On January 13, 2023, the Commission published favorable determinations under section 2056d(b)(3)(A) of the PFCSA regarding three voluntary standards for portable fuel containers: ASTM F3429/F3429M-20, ASTM F3326-21, and section 18 of ANSI/CAN/UL/ULC 30:2022 (UL 30:2022). 88 FR 2206. Therefore, by operation of the PFCSA, portable fuel containers manufactured after July 12, 2023, must comply with the requirements of either ASTM F3429/F3429M-20, ASTM F3326-21, or section 18 of UL 30:2022, as applicable. In particular, portable fuel containers sold empty (that are not safety cans<sup>2</sup>) are required to comply with the requirements of ASTM F3326-21. Safety cans are required to meet the requirements of either ASTM F3326-21 or section 18 of UL 30:2022. Portable fuel containers sold pre-filled are required to comply with the requirements of ASTM F3429/F3429M-20. However, in a May 19, 2023, letter, the CPSC Office of Compliance and Field Operations exercised enforcement discretion regarding pre-filled portable fuel containers subject to ASTM F3429/F3429M-20 to prevent a shortage of critical fuels, including fuels used for emergencies.<sup>3</sup>

Under section 2056d(b)(5) of the PFCSA, a voluntary standards organization must notify the Commission of any revision to the requirements for flame mitigation devices for the

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<sup>2</sup> Safety cans are portable fuel containers sold empty that the U.S. Occupational Safety and Health Administration (OSHA) generally regulates for use in the workplace but are also available for purchase by consumers at many physical and online retailers.

<sup>3</sup> The letter is available here: <https://www.cpsc.gov/s3fs-public/Enforcement-Discretion-Related-to-Portable-Fuel-Containers.pdf?VersionId=7ZC5ry.So7vVIpsL2J7329Pfhshyh49a>.

August 16, 2023

Commission-approved voluntary standards for portable fuel containers. Once a voluntary standards organization notifies the CPSC, the revisions will be incorporated into the consumer product safety rule not later than 180 days after notification (or such later date as the Commission determines appropriate), unless within 90 days of such notice, the Commission determines that the revisions do not meet the requirements of section 2056d(b)(3) of the PFCSA, and so notifies the voluntary standards organization. 15 U.S.C. 2056d(b)(5)(B).

On June 12, 2023, ASTM notified CPSC that it has revised ASTM F3429/F3429M-20 with the publication of ASTM F3429/F3429M-23. On June 23, 2023, the Commission published a notice of availability and request for comment regarding revised ASTM F3429/F3429M-23. Two comments were submitted in support of a favorable Commission determination on the revisions to ASTM F3429/F3429M. 88 FR 41046. On [INSERT DATE OF COMMISSION VOTE], as set forth in section B of this preamble, the Commission determined that the revisions meet the requirements of section 2056d(b)(3)(A) of the PFCSA.<sup>4</sup> Accordingly, ASTM F3429/F3429M-23 shall be treated as a consumer product safety rule promulgated under section 9 of the CPSA effective December 9, 2023 (which is 180 days after ASTM's notification). This direct final rule creates a new 16 CFR part 1461 for portable fuel containers to incorporate by reference the revised ASTM F3429/F3429M-23, as well as ASTM F3326-21 and section 18 of UL 30:2022.<sup>5</sup> This direct final rule is codifying the three voluntary standards for portable fuel containers that are mandatory under the PFCSA for the convenience of stakeholders and the public and to provide clarity regarding which versions of the voluntary standards are mandatory for portable fuel containers under the PFCSA.

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<sup>4</sup> See Record of Commission Action here: [INSERT RCA HYPERLINK](#).

<sup>5</sup> The Commission voted ~~X-X~~ to approve publication of this notice as drafted.



**B. Revisions to ASTM F3429/F3429M**

On January 13, 2023, the Commission published a *Federal Register* notice in accordance with the PFCSA, determining that pre-filled portable fuel containers must comply with ASTM F3429/F3429M-20 as a consumer product safety rule. 88 FR 2206. On June 12, 2023, ASTM notified the Commission that a revision of that standard, ASTM F3429/F3429M-23, was published in May 2023. ASTM F3429/F3429M-23 includes substantive revisions affecting the flame mitigation performance tests (the endurance test and the flashback test) and non-substantive revisions concerning its scope, a referenced document, a section title, and the appendix of the standard. The substantive revisions affecting the performance test requirements relate to testing containers with large volumes, testing containers with wide mouths, modifying the allowable downward angle of the container during testing, and eliminating redundant testing when the same flame mitigation device is used on differently sized containers.

As discussed below, the Commission concluded that the changes in ASTM F3429/F3429M-23 do not affect the effectiveness of the flame mitigation device in impeding the propagation of a flame or other ignition source into the container. The changes to the standard will improve the safety of testing flame mitigation devices on larger volume containers and facilitate compliance testing of these containers.

Many of the revisions to ASTM F3429/F3429M-20 were requested by laboratories conducting the testing for compliance, to improve safety for test personnel and facilities. Without these changes to the test methods, manufacturers may not be able to find a certification testing laboratory to demonstrate compliance for some of their products, which could limit consumer access to these products. If consumers are unable to buy pre-filled portable fuel

containers that are compliant with ASTM F3429/F3429M, they may use hazardous substitute containers.

As explained below, the Commission concluded that the revisions in ASTM F3429/F3429M-23 meet the requirements of section 2056d(b)(3)(A) of the PFCSA is allowing ASTM F3429/F3429M-23 to become the mandatory consumer product safety rule for pre-filled portable fuel containers pursuant to section 2056d(b)(5) of the PFCSA. The background and revisions to ASTM F3429/F3429M are described in more detail in the CPSC staff's briefing memorandum.<sup>6</sup>

1. Substantive Revisions to ASTM F3429/F3429M

*a. Larger volume containers*

The first substantive revision in ASTM F3429/F3429M-23 allows the container volume to be reduced for testing purposes if the reduced volume does not impact, change, hinder, or deform the flame mitigation device or how the flame mitigation device is mounted on the container. Laboratories that tested containers with larger volumes to ASTM F3429/F3429M-20 found that a failed test produced a large explosion that presented a risk to test personnel and equipment. Testing laboratories determined that they could not safely mitigate the risks when testing larger volumes without a revision to ASTM F3429/F3429M-20. We note a flame mitigation device impedes the propagation of the flame into the container by quenching an external flame at the mouth of the container before it can ignite the vapors within the container. The shape and size of the container does not impact determination of the flame mitigation device's effectiveness because an effective device stops the flame before it enters the container. The changes proposed affect only the consequences of a failure, not whether the flame mitigation

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<sup>6</sup> Staff Memorandum available at: [\[INSERT LINK\]](#).

device fails. The Commission therefore concludes that this revision facilitates compliance testing but does not affect the voluntary standard's satisfaction of the requirements of section 2056d(b)(3)(A) of the PFCSA.

*b. Containers with wider mouths*

The second substantive revision to ASTM F3429/F3429M-23 limits the maximum flow rate of gaseous fuel and air used to fill the container before the tests. This change only alters the rate of filling the container to prepare it to be tested. Laboratories that tested containers with wider mouths to ASTM F3429/F3429M-20 found that the flow of gaseous fuel and air created a large cloud of explosive gas outside the container. Open flames near the cloud of explosive gas presented an explosion risk. Testing laboratories determined that they could not safely mitigate the risks to test personnel when testing containers with wider mouths without modifying ASTM F3429/F3429M-20.

Under the revision, gaseous fuel and air at the appropriate ratio fill the container before the trials, but the flow is stopped before the external flames are introduced. Because the gaseous fuel and air flow is stopped before the external ignition source is introduced, slowing the fill rate does not affect the performance of the flame mitigation device. The Commission concludes that this revision facilitates compliance testing but does not affect the voluntary standard's satisfying the requirements of section 2056d(b)(3)(A) of the PFCSA because the performance of the flame mitigation device when exposed to external ignition sources is evaluated the same as with a faster fill rate.

*c. Downward angle when testing container*

The third substantive revision to ASTM F3429/F3429M-23 allows the container to be mounted at a downward angle between 45 and 60 degrees when tested, rather than at 45 +/- 2

degrees as under the 2020 version of the standard. Testing laboratories proposed this change to allow greater flexibility to position the flame directly onto the mouth of the container as required in the test. Testing laboratories had found it difficult to properly position the flame as required in the performance test without being able to adjust the position of the container significantly. Because an effective flame mitigation device impedes the flame before it reaches inside the container, and an ineffective device allow the ignition of the gaseous fuel and air in the container regardless of the angle, the precise downward angle of the container is not critical to the effectiveness of the flame mitigation device.

*d. Accepting flame mitigation devices on other containers*

The fourth substantive revision to ASTM F3429/F3429M-23 allows a container that uses a flame mitigation device that has met the requirements of the standard when attached in the same manner to a similar container model, to be considered compliant with this standard, without needing to be re-tested. Because a compliant flame mitigation device prevents flame from reaching vapors in the container, changing the shape and size of the container does not affect the effectiveness of the flame mitigation device.

2. Non-Substantive Revisions to ASTM F3429/F3429M

There are three non-substantive revisions in ASTM F3429/F3429M-23. First, ASTM changed the order of the scope subclauses to match the standard structure of other ASTM specifications. The text of the scope was not otherwise changed. Second, ASTM F3326 was removed from the listed reference documents as it was not used elsewhere in ASTM F3429/F3429M-23. A reserved section was renamed from a “permanency” test to a “retention” test. Currently, this is a placeholder for a potential future requirement. Finally, some explanatory information in the non-mandatory appendix for the “retention” test was removed,

but no mandatory requirements were added or changed. The Commission concludes these non-substantive changes do not implicate the standard's satisfying the requirements of section 2056d(b)(3)(A) of the PFCSA.

**C. Description of the Rule**

This direct final rule creates a new part 1461, "Portable Fuel Container Safety Act Regulation." Part 1461 incorporates by reference the three voluntary standards the Commission has determined under the PFCSA to be mandatory: ASTM F3429/F3429M-23 (updated from the 2020 version of the standard), ASTM F3326-21, and section 18 of UL 30:2022. The provisions of the direct final rule are described below.

*A. Section 1461.1 – Scope and application*

Section 1461.1 of the rule provides, in accordance with the PFCSA, that portable fuel containers must comply with the requirements specified in § 1461.3, which are considered to be consumer product safety rules.

*B. Section 1461.2 – Definition*

Section 1461.2 of the rule provides the statutory definition of "portable fuel container" found in the PFCSA. Although this definition is provided in the PFCSA, this section restates the definition for the convenience of the regulated community and the public.

*C. Section 1461.3 – Requirements for flame mitigation devices on portable fuel containers*

Section 1461.3 provides that each portable fuel container manufactured for sale in the United States shall conform to the applicable requirements of this section depending on whether the portable fuel container is sold pre-filled or empty.

August 16, 2023

Section 1461.3(a)(1) of the rule requires that portable fuel containers sold to consumers pre-filled must comply with the requirements of ASTM F3429/F3429M-23, *Standard Specification for Performance of Flame Mitigation Devices Installed in Disposable and Pre-Filled Flammable Liquid Containers*. ASTM F3429/F3429M is listed by ASTM as a dual standard in inch-pound (F3429 designation) and metric (F3429M designation) units. Both designations of the standard are substantively identical except for the inch-pound versus metric units used in the standard. The standard requires two performance tests of the container's flame mitigation device. The first is an endurance test, in which the container is subjected to an external and stationary 2.5-inch flame at the mouth of the container for 30 seconds. The second test is a flashback test, in which the container is subjected to an external flash fire near the container mouth. The container passes each test if the contents of the container do not catch fire or otherwise ignite in each of five consecutive trials. The two tests are used to demonstrate that the flame mitigation device impedes the propagation of two different types of ignition sources, a stationary flame and a moving flame.

Section 1461.3(a)(2) of the rule requires portable fuel containers sold empty to the consumer to comply with ASTM F3326-21, *Standard Specification for Flame Mitigation Devices on Portable Fuel Containers*. ASTM F3326 requires a performance test of the container's flame mitigation devices after the container is exposed to several use-and-abuse tests. Use-and-abuse tests are designed to ensure a flame mitigation device still functions after simulating normal use and reasonably foreseeable abuse of the container over time. The flame mitigation device performance test demonstrates that the container prevents a flame traveling at five meters per second from igniting the contents of the container in each of five consecutive

trials. The test also demonstrates that the flame mitigation device impedes the propagation of a rapidly travelling flame front into the container.

Portable fuel containers sold empty to the consumer that are classified as safety cans that meet the requirements of section 18 of UL 30:2022, *Standard for Safety Metallic and Nonmetallic Safety Cans for Flammable and Combustible Liquids*, are not required to comply with ASTM F3326-21. UL 30:2022 is a voluntary standard that covers various requirements for safety cans, including requirements for flame mitigation devices. Section 18 of UL 30 has two performance test options. The first option is to subject the safety can mouth to an external and stationary 2.5-inch flame for 30 seconds. The safety can passes the test if the interior contents of the safety can do not catch fire or otherwise ignite in each of five consecutive trials. The second performance test option is used for safety cans that have a flame arrestor. In this performance test, a 7.5-inch flame is balanced on one side of the flame arrestor as a fuel-air mixture passes through. The flame arrestor fails if the flame crosses the flame arrestor and ignites the fuel-air mixture.

Section 1461.4 of the rule incorporates by reference the three voluntary standards that are mandatory under the rule.

#### **D. Direct Final Rule Process**

The Commission is issuing this rule as a direct final rule. Although the Administrative Procedure Act (APA; 5 U.S.C. 551-559) generally requires agencies to provide notice of a rule and an opportunity for interested parties to comment on it, section 553 of the APA provides an

exception when the agency “for good cause finds” that notice and comment are “impracticable, unnecessary, or contrary to the public interest.” *Id.* 553(b)(B).

The purpose of this direct final rule is to codify in the CFR three voluntary standards (ASTM F3429/F3429M-23, ASTM F3326-21, and section 18 of UL 30:2022) that are mandatory consumer product safety rules by operation of law under the PFCSA. Public comments would not alter whether the three voluntary standards are considered mandatory consumer product safety rules under the PFCSA. The Commission concludes that when it merely codifies voluntary standards that are already mandatory consumer product safety rules by statute under the PFCSA, notice and comment are unnecessary.

In its Recommendation 95-4, the Administrative Conference of the United States (ACUS) endorses direct final rulemaking as an appropriate procedure to expedite rules that are noncontroversial and not expected to generate significant adverse comments. *See* 60 FR 43108 (Aug. 18, 1995). ACUS recommends that agencies use the direct final rule process when they act under the “unnecessary” prong of the good cause exemption in 5 U.S.C. 553(b)(B). Consistent with the ACUS recommendation, the Commission is publishing this rule as a direct final rule, because CPSC does not expect any significant adverse comments.

Unless CPSC receives a significant adverse comment by [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER], this rule will become effective on December 9, 2023—the end of the 180-day period specified in the PFCSA. In accordance with ACUS’s recommendation, the Commission considers a significant adverse comment to be “one where the commenter explains why the rule would be inappropriate,” including an assertion challenging “the rule’s underlying premise or approach,” or a claim that the rule “would be ineffective or unacceptable without a change.” 60 FR 43108, 43111 (Aug.



18, 1995). As noted, this rule merely codifies in the CFR the three voluntary standards that are mandatory consumer product safety rules under the PFCSA and restates the statutory definition of “portable fuel container”; thus public comments would not change such statutory requirements or definitions.

If the Commission does receive a significant adverse comment, the Commission will withdraw this direct final rule. Depending on the comment and other circumstances, the Commission may then incorporate the adverse comment into a subsequent direct final rule or publish a notice of proposed rulemaking, providing an opportunity for public comment.

#### **E. Incorporation by Reference**

Section 1460.3 of the direct final rule incorporates by reference ASTM F3429/F3429M-23, ASTM F3326-21, and section 18 of ANSI/CAN/UL/ULC 30:2022. The Office of the Federal Register (OFR) has regulations regarding incorporation by reference. 1 CFR part 51. Under these regulations, agencies must discuss, in the preamble to a final rule, ways in which the material the agency incorporates by reference is reasonably available to interested parties, and how interested parties can obtain the material. In addition, the preamble to the final rule must summarize the material. 1 CFR 51.5(b).

In accordance with the OFR regulations, section C of this preamble summarizes the major provisions of ASTM F3429/F3429M-23, ASTM F3326-21, and section 18 of UL 30:2022 that the Commission incorporates by reference into 16 CFR part 1461. The standards are reasonably available to interested parties. Until the direct final rule takes effect, read-only copies of ASTM F3429/F3429M-23 and ASTM F3326-21 are available for viewing, at no cost, on ASTM’s website at: [www.astm.org/CPSC.htm](http://www.astm.org/CPSC.htm). Once the rule takes effect, a read-only copy of those two ASTM standards will be available for viewing, at no cost, on the ASTM website at:

**OS 18**

August 16, 2023

[www.astm.org/READINGLIBRARY/](http://www.astm.org/READINGLIBRARY/). Interested parties can purchase copies of ASTM F3429/F3429M-23 and ASTM F3326-21 from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959 USA; telephone: (610) 832-9585; [www.astm.org](http://www.astm.org).

A read-only copy of UL 30:2022 is available for viewing, free-of-charge at UL's Standards Sale Site at: [shopulstandards.com](http://shopulstandards.com). Click "Browse and Buy Standards," and search for UL 30 and then click "Digital View," and sign in, or create a user account. The read-only copy of UL 30:2022 will remain available for viewing, free-of-charge after the direct final rule goes into effect. Interested parties can purchase a copy of UL 30:2022 from UL Standards and Engagement, 151 Eastern Avenue Bensenville, IL 60106 USA; telephone: (888) 853-3503; [shopulstandards.com](http://shopulstandards.com).

Interested parties can also schedule an appointment to inspect copies of ASTM F3429/F3429M-23, ASTM F3326-21, and UL 30:2022 at CPSC's Office of the Secretary, U.S. Consumer Product Safety Commission, Room 820, 4330 East West Highway, Bethesda, MD 20814, telephone: (301) 504-7479; e-mail: [cpsc-os@cpsc.gov](mailto:cpsc-os@cpsc.gov).

**F. Effective Date**

Section 2056d(b)(5)(B) of the PFCSA provides that not later than 180 days after the Commission is notified of a revised voluntary standard (or such later date as the Commission determines appropriate), such revised voluntary standard shall become enforceable as a consumer product safety rule promulgated under 16 U.S.C. 2058, in place of the prior version, unless within 90 days after receiving the notice the Commission determines that the revised voluntary standard does not meet the requirements in section 2056d(b)(3)(A) of the PFCSA. Unless the Commission receives a significant adverse comment by [INSERT DATE 30

DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER], the rule therefore will become effective on December 9, 2023. Based on the Commission's January 2023 published determinations under the PFCSA, portable fuel containers that are sold empty to the consumer manufactured after July 12, 2023, must comply with the requirements of either ASTM F3326-21, or section 18 of UL 30:2022, as applicable. This direct final rule's effective date of December 9, 2023, which is the effective date of the ASTM F3429/F3429M-23 revision as a mandatory safety standard, does not alter the previously established effective date of July 12, 2023, for ASTM F3326-21 and section 18 of UL 30:2022 under the PFCSA. Products subject to the requirements of those standards are already required to meet those standards.

Further, portable fuel containers sold pre-filled are also required under the PFCSA to comply with the requirements of ASTM F3429/F3429M-20 after July 12, 2023. However, the Office of Compliance and Field Operations issued a letter exercising enforcement discretion regarding pre-filled portable fuel containers subject to ASTM F3429/F3429M-20 to prevent a shortage of critical fuels used for emergencies.<sup>7</sup>

### **G. Regulatory Flexibility Act**

The Regulatory Flexibility Act (RFA; 5 U.S.C. 601-612) generally requires agencies to review proposed and final rules for their potential economic impact on small entities, including small businesses, and prepare regulatory flexibility analyses. 5 U.S.C. 603, 604. The RFA applies to any rule that is subject to notice and comment procedures under section 553 of the APA. *Id.* As discussed in section D of this preamble, the Commission has determined that notice and the opportunity to comment are unnecessary for this rule. Therefore, the RFA does

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<sup>7</sup> The letter is available here: <https://www.cpsc.gov/s3fs-public/Enforcement-Discretion-Related-to-Portable-Fuel-Containers.pdf?VersionId=7ZC5ry.So7vVlpsL2J7329Pfhshyh49a>.

not apply. CPSC also notes the limited nature of this document, which merely creates a new part in the Code of Federal Regulations codifying the incorporations by reference to reflect the voluntary standards that are mandatory under the PFCSA and the statutory definition of portable fuel containers.

#### **H. Environmental Considerations**

The Commission's regulations provide a categorical exclusion for the Commission's rules from any requirement to prepare an environmental assessment or an environmental impact statement where they "have little or no potential for affecting the human environment." 16 CFR 1021.5(c)(2). This rule falls within the categorical exclusion, so no environmental assessment or environmental impact statement is required.

#### **I. Preemption**

Section 26(a) of the CPSA provides that where a consumer product safety standard is in effect and applies to a product, no state or political subdivision of a state may either establish or continue in effect a requirement dealing with the same risk of injury unless the state requirement is identical to the federal standard. 15 U.S.C. 2075(a). Section 26(c) of the CPSA also provides that states or political subdivisions of states may apply to CPSC for an exemption from this preemption under certain circumstances. The PFCSA deems rules issued under that statute to be a "consumer product safety rule." Therefore, once a rule issued under the PFCSA takes effect, it will preempt in accordance with section 26(a) of the CPSA.

#### **J. Congressional Review Act**

The Congressional Review Act (CRA; 5 U.S.C. 801-808) states that before a rule can take effect, the agency issuing the rule must submit the rule, and certain related information, to each House of Congress and the Comptroller General. 5 U.S.C. 801(a)(1). The CRA submission

must indicate whether the rule is a “major rule.” The CRA states that the Office of Information and Regulatory Affairs determines whether a rule qualifies as a “major rule.”

Pursuant to the CRA, OIRA has determined that the rule does not qualify as a “major rule,” as defined in 5 U.S.C. 804(2). To comply with the CRA, CPSC will submit the required information to each House of Congress and the Comptroller General.

**List of Subjects**

**16 CFR Part 1461**

Consumer protection, Portable Fuel Containers, Incorporation by reference, Safety.  
For the reasons discussed in the preamble, the Commission amends Title 16 of the Code of Federal Regulations by adding a new part to read as follows:

**PART 1461 – PORTABLE FUEL CONTAINER SAFETY ACT REGULATION**

Sec.

1461.1 Scope and application.

1461.2 Definition.

1461.3 Requirements for flame mitigation devices on portable fuel containers.

1461.4 Incorporation by reference.

**Authority:** 15 U.S.C. 2056d

**§ 1461.1 Scope and application.**

In accordance with the Portable Fuel Container Safety Act of 2020 (PFCSA), portable fuel containers must comply with the requirements specified in § 1461.3, which are considered to be consumer product safety rules.

**§ 1461.2 Definition.**

The definition of portable fuel container in the PFCSA (5 U.S.C. 2056d(b)(8)) applies to this part. Specifically, a portable fuel container is defined in the PFCSA as any container or vessel (including any spout, cap, and other closure mechanism or component of such container or vessel or any retrofit or aftermarket spout or component intended or reasonably anticipated to be for use with such container)—

(a) (1) intended for flammable liquid fuels with a flash point less than 140 degrees Fahrenheit, including gasoline, kerosene, diesel, ethanol, methanol, denatured alcohol, or biofuels;

(2) that is a consumer product with a capacity of 5 gallons or less; and

(b) that the manufacturer knows or reasonably should know is used by consumers for transporting, storing, and dispensing flammable liquid fuels.

**§ 1461.3 Requirements for flame mitigation devices on portable fuel containers.**

Each portable fuel container manufactured for sale in the United States shall conform to one of the following applicable requirements.

(a) *Containers sold pre-filled.* Portable fuel containers sold pre-filled with a flammable liquid to the consumer must comply with the requirements of ASTM F3429/F3429M-23 (incorporated by reference, see §1461.4).

(b) *Containers sold empty.* Portable fuel containers sold empty to the consumer must meet the requirements of ASTM F3326-21 (incorporated by reference, see §1461.4). Portable fuel containers sold empty to the consumer that are classified as safety cans that meet the requirements of section 18 of ANSI/CAN/UL/ULC 30:2022 (incorporated by reference, see §1461.4) are not required to comply with ASTM F3326-21.

**§ 1461.4 Incorporation by reference.**

Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. All approved incorporation by reference material is available for inspection at the Consumer Product Safety Commission and at the National Archives and Records Administration (NARA). Contact the U.S. Consumer Product Safety Commission at: Office of the Secretary, U.S. Consumer Product Safety Commission, 4330 East West Highway, Bethesda, MD 20814; telephone (301) 504-7479, e-mail [cpsc-os@cpsc.gov](mailto:cpsc-os@cpsc.gov). For information on the availability of this material at NARA, visit [www.archives.gov/federal-register/CFR/IBR-locations.html](http://www.archives.gov/federal-register/CFR/IBR-locations.html) or email [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov). The material may be obtained from the following sources:

(a) ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959; telephone: (610) 832-9585; [www.astm.org](http://www.astm.org).

(1) ASTM F3429/F3429M-23, *Standard Specification for Performance of Flame Mitigation Devices Installed in Disposable and Pre-Filled Flammable Liquid Containers*, approved on May 1, 2023.

(2) ASTM F3326-21, *Standard Specification for Flame Mitigation Devices on Portable Fuel Containers*, approved on May 15, 2019.

(b) UL Standards and Engagement, International, 151 Eastern Avenue, Bensenville, IL 60106; telephone: 1-888-853-3503; [www.shopulstandards.com](http://www.shopulstandards.com).

(1) ANSI/CAN/UL/ULC 30:2022, Safety Standard: *Metallic and Nonmetallic Safety Cans for Flammable and Combustible Liquids*, Tenth Edition, dated April 29, 2022.

(2) [Reserved]

**OS 24**  
August 16, 2023

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Alberta E. Mills, Secretary  
Consumer Product Safety Commission





# Memorandum

**TO:** The Commission  
Alberta E. Mills, Secretary

**THROUGH:** Austin C. Schlick, General Counsel  
Jason K. Levine, Executive Director  
DeWane Ray, Deputy Executive Director for Safety Operations

**FROM:** Duane E. Boniface, Assistant Executive Director  
Office of Hazard Identification and Reduction

Scott Ayers, Fire Program Area Manager  
Directorate for Engineering Sciences

**SUBJECT:** Staff Recommendation to the Commission on Revisions to ASTM F3429/F3429M, Standard Specification for Performance of Flame Mitigation Devices Installed in Disposable and Pre-Filled Flammable Liquid Containers

**DATE:** August 16, 2023

## I. Introduction

On January 13, 2023, the Commission published in the *Federal Register*<sup>1</sup> its determinations under section (b)(3)(A) of the Portable Fuel Container Safety Act of 2020 (the Act)<sup>2</sup> that the following classes of portable fuel container are required to meet the requirements of the respective voluntary standards by July 12, 2023:

- Containers sold empty – ASTM F3326-21 Standard Specification for Flame Mitigation Devices on Portable Fuel Containers (ASTM F3326-21)
- Containers sold empty that meet the OSHA requirements for safety cans – ANSI/CAN/UL/ULC 30:2022 Standard for Safety Metallic and Nonmetallic Safety Cans for Flammable and Combustible Liquids (UL 30:2022)
- Containers sold pre-filled – ASTM F3429/F3429M-20 Standard Specification for Flame Mitigation Devices Installed in Disposable and Pre-Filled Flammable Liquid Containers (ASTM F3429/F3429M-20)

Section (b)(5)(A) of the Act, states, “[i]f the requirements of a voluntary standard...are subsequently revised, the organization that revised the standard shall notify the Commission after the final approval of the revision.” Such “revised voluntary standard shall become enforceable as a consumer product safety rule promulgated under section 9 of the Consumer

<sup>1</sup> 88 Fed. Reg. 2,206.

<sup>2</sup> 15 U.S.C. § 2056d.

Product Safety Act (15 U.S.C. 2058), in place of the prior version, unless within 90 days after receiving the notice the Commission determines that the revised voluntary standard does not meet the requirements described in paragraph (3).” Under section (b)(5)(B) of the Act, revisions to the voluntary standard are effective 180 days after the Commission is notified (or such later date as the Commission determines appropriate). Section (b)(3)(A)<sup>3</sup> of the Act requires that:

- i. There is a voluntary standard for flame mitigation devices for those containers that impedes the propagation of flame into the container;
- ii. The voluntary standard described in clause (i) is or will be in effect no later than 18 months after the date December 27, 2020 [June 27, 2022]; and
- iii. The voluntary standard described in clause (i) is developed by ASTM International or such other standard development organization that the Commission determines to have met the intent of this section.

As noted, by statute revisions must meet these three requirements. Satisfying requirement (ii) (being in place no later than June 2022) is now an impossibility for new revisions, however; staff understands item (ii) as requiring that the underlying voluntary standard, rather than the proposed revision to it, was in place by the June 2022 deadline. Most important, a revision to one of the voluntary standards must meet subsection (i): after revision, the voluntary standard would still need to require the flame mitigation device to impede the propagation of a flame into a container.

ASTM published a revised version of ASTM F3429/F3429M-20 in May 2023, as ASTM F3429/F3429M-23. On June 12, 2023, ASTM notified the Commission of the ASTM F3429/F3429M-23 revision.<sup>4,5</sup> On June 23, 2023, the Commission published a notice of availability of the revision and sought comments on whether the changes meet the requirements of the Act [88 FR 41046]. Under the update provision in the Act, ASTM F3429/F3429M-23 will become the consumer product safety rule for pre-filled containers law not later than December 9, 2023 (or such later date as the Commission determines appropriate), unless by September 10, 2023, the Commission determines that ASTM F3429/F3429M-23 does not meet the requirements described above.

This memorandum summarizes the changes in ASTM F3429/F3429M-23, the public comments received, and provides staff’s assessment of those changes with respect to the requirements of section (b)(3)(A)(i) of the Act.

### **General Description of ASTM F3429/F3429M-20**

In January 2023, the Commission determined that pre-filled portable fuel containers must comply with ASTM F3429/F3429M-20 in accordance with the Act. The ASTM F15.72 subcommittee for Pre-Filled Containers of Flammable and Combustible Liquids developed this

<sup>3</sup> Section (b)(3)(B) also requires that the Commission’s determinations be published in the *Federal Register*.

<sup>4</sup> ASTM F3429/F3429M-23 was approved on May 1, 2023.

<sup>5</sup> For free-of-charge, read-only online access to ASTM F3429/F3429M-23, access ASTM’s CPSC reading room at <http://www.astm.org/cpsc.htm> and search for ASTM F3429.

standard, which was initially published in and in effect since September 2020. CPSC staff chaired the task group that developed the standard.

ASTM F3429/F3429M-20 requires two performance tests be conducted on a pre-filled portable fuel container's flame mitigation device. The first test is an endurance test in which the open container is filled with a gaseous fuel and air mixture and subjected to an external stationary 2.5-inch flame at the mouth of the container for 30 seconds while the container is positioned in a downward angle. The second test is a flashback test in which the open container, again filled with a gaseous fuel and air mixture, is subjected to an external flash fire near the container mouth while in a downward angle. The container passes each test if the contents of the container do not ignite or explode in each of five consecutive trials, demonstrating that the flame mitigation device successfully impedes the propagation of two different types of ignition sources, a stationary flame and a moving flame front.

### **Flame Jetting Hazard and Flame Mitigation Devices**

The principal hazards that flame mitigation devices protect against are flame jetting and container rupturing. "Flame jetting," as defined in ASTM F3429/F3429M-20, is a "phenomenon where an external ignition source causes a sudden ignition within a liquid container that directionally propels burning vapor and liquid from the mouth of the container." Container rupturing is similar to flame jetting, except the burning vapor and liquid exit through a rupture in the container. The injury potential associated with each hazard is the same, severe burns and possible death. Flame jetting typically injures people other than the person holding the container, while container rupturing typically injures the person holding the container. Burning liquid from flame jetting generally travels further from the container than when the container ruptures. For this memorandum, references to flame jetting also include container rupturing.

A flame mitigation device impedes the propagation of the flame into the container by preventing an external flame from igniting the vapors within the container. Flame arrestors are the most popular type of flame mitigation device; a flame arrestor quenches and cools the flame at the mouth of the container thereby impeding the propagation of the flame into the container. Other examples of flame mitigation devices (though not currently used in any known pre-filled portable fuel container) include, but are not limited to, expanded metal mesh, screens, bladders, pinhole restrictors, and pumps.

## **II. Summary of Changes in ASTM F3429/F3429M-23**

ASTM published a revision of ASTM F3429/F3429M-20 that includes four substantive revisions affecting the flame mitigation performance tests (the endurance test and the flashback test) and non-substantive revisions concerning the scope, a referenced document, a section title, and appendix of the standard. The four substantive revisions affecting the performance test requirements relate to testing containers with larger volumes, testing containers with wider mouths, modifying the allowable downward angle of the container during testing, and eliminating redundant testing when the same flame mitigation device is used on different size containers. As explained below, staff supports the revisions to the voluntary standard and determined the revisions do not affect the performance of the flame mitigation device. Therefore, staff

concludes that the revisions in ASTM F3429/F3429M-23 are safety-neutral in regard to a flame mitigation device's ability to prevent an external ignition source from igniting vapors in the fuel container as required by section 2(b)(3) of the Act. Staff does believe the changes to the standard will improve the safety of testing flame mitigation devices on larger volume containers and result in the ability to test for compliant devices for these containers. Thus, staff does not recommend that the Commission find that "the revised voluntary standard does not meet the requirements" of section (b)(3)(A); staff instead recommends the Commission allow the revision to become CPSC's new mandatory standard.

### Larger Volume Containers

The first substantive revision in ASTM F3429/F3429M-20 allows the container volume to be reduced for testing purposes if the reduced volume does not impact, change, hinder, or deform the flame mitigation device or how the flame mitigation device is mounted on the container. This change was proposed by testing laboratories to improve the safety of test personnel while conducting the test. Laboratories that tested containers with larger volumes to ASTM F3429/F3429M-20 found that a failed test produced a large explosion that presented a risk to test personnel and equipment. Testing laboratories determined that they could not safely mitigate the risks when testing larger volumes without modifying ASTM F3429/F3429M-20. Staff notes a flame mitigation device impedes the propagation of the flame into the container by quenching an external flame at the mouth of the container before it can ignite the vapors within the container. The shape and size of the container does not impact the flame mitigation device effectiveness because the flame is stopped before entering the container. Therefore, staff concludes that this revision does not affect meeting the conditions of section (b)(3)(A) of the Act, because the performance of the flame mitigation device when exposed to external ignition sources is independent of the container volume.

The specific substantive revisions to section 6.1.1.5 ASTM F3429/F3429M-20 are reflected in ASTM F3429/F3429M-23 as depicted below (with crossed-out text meaning text was removed and underlined text meaning text was added):

6.1.1.5 ~~If the container geometry presents difficulty for instrumentation, it is acceptable to remove a bottom portion of the container, leaving the FMD and shoulder of the container intact. Mount the container to a rigid metal or plastic base, creating a test container. Do not reduce the test container volume or width. It is acceptable to increase the test container volume and width above the original container volume or width. Seal all penetrations and joints with an appropriate adhesive.~~ It is acceptable to remove a bottom portion of the container, leaving the FMD and shoulder of the container intact. Mount the container to a rigid metal or plastic base, creating a test container. It is acceptable to increase the test container volume and width above the original container volume or width. Seal all penetrations and joints with an appropriate adhesive.

### Containers with Wider Mouths

The second substantive revision to ASTM F3429/F3429M-20 limits the maximum flow rate of gaseous fuel and air used to fill the container before the tests. This change does not affect the container. It only changes the rate of filling the container to prepare it to be tested. This change applies to both performance tests in the standard. This change was proposed by testing laboratories to improve the safety of test personnel while conducting the test. Laboratories that tested containers with wider mouths to ASTM F3429/F3429M-20 found that the flow of gaseous

fuel and air created a large cloud of explosive gas outside the container. Open flames near the cloud of explosive gas presented an explosion risk. Testing laboratories determined that they could not safely mitigate the risks to test personnel when testing containers with wider mouths without modifying ASTM F3429/F3429M-20.

Under the revision, gaseous fuel and air at the appropriate ratio fills the container before the trials but is then stopped before the external flames are introduced. Limiting the maximum gaseous fuel and air flow rate only affects the set-up time needed for the tests and not the procedure for conducting the test itself. The gaseous fuel and air flow is stopped before the external ignition source is introduced, so this revision does not affect the performance of the flame mitigation device. Therefore, staff concludes that this revision does not affect meeting the conditions of section (b)(3)(A) of the Act because the performance of the flame mitigation device when exposed to external ignition sources is evaluated the same as it would be with a faster fill rate.

The specific substantive revisions to ASTM F3429/F3429M-20 are reflected in ASTM F3429/F3429M-23 as depicted below (with crossed-out text meaning text was removed and underlined text meaning text was added):

7.4 Calculate the combined flow rate of air and fuel,  $V_T$ , by using:

$$V_T = 1.125(A_0)(V_1)$$

7.4.1 Do not exceed a combined flow rate,  $V_T$ , of 815 SCCM.

8.4.5 Develop and maintain a steady flow of pre-mixed air and gas, at the appropriate air/gas ratio (in accordance with Section 7), through the container for a minimum of four test container volume air changes. To ensure adequate mixing, do not exceed one (1) container volume change per minute. Reduce the combined flow rate as needed while maintaining the fuel to air ratio.

9.4.5.1 It is acceptable to increase the flow rate of the pre-mixed air and gas, at the appropriate air/gas ratio, to reduce the time required to achieve the required four air changes. However the flow rate may not exceed one (1) container volume change per minute.

### **Downward Angle When Testing the Container**

This third substantive revision to ASTM F3429/F3429M-20 allows the container when tested to be mounted at a downward angle between 45 and 60 degrees, rather than at 45 +/- 2 degrees. This change was proposed by testing laboratories to allow greater flexibility to position the flame directly onto the mouth as required in the test while still representing the worst-case condition. Testing laboratories had found it difficult to properly position the flame as required in the performance test without being able to adjust the position of the container. Because the flame mitigation device impedes the flame before it reaches the container, the angle of the container is not critical to the effectiveness of the flame mitigation device as long as the container remains at a downward angle. Therefore, staff concludes that this revision does not affect meeting the

conditions of section (b)(3)(A) of the Act because it still requires the container to be tested in a downward orientation.

The specific substantive revisions to ASTM F3429/F3429M-20 are reflected in ASTM F3429/F3429M-23 as depicted below (with crossed-out text meaning text was removed and underlined text meaning text was added):

6.2.1 Mount the container securely such that the center of the opening is projected at an angle of  $45^{\circ} \pm 2^{\circ}$  ~~below the horizontal.~~ to  $60^{\circ}$  below the horizontal, as required to orient the impinging flame directly on the FMD.

9.4.6 Confirm that the tube is inflated by verifying that its weight is supported by its internal pressure and that the tube does not sag below the  $45^{\circ}$  downward angle of the container.

[Both figures 1 and 2 were modified to show the downward angle of  $45^{\circ}$  to  $60^{\circ}$  for the container mounting]

### Accepting Flame Mitigation Devices on Other Containers

The fourth substantive revision to ASTM F3429/F3429M-20 allows a container that uses the same flame mitigation device, attached in the same manner as used on another similar container model which has met the requirements of the standard, to be considered compliant with this standard, without needing to be re-tested on alternate containers. This change was proposed by testing laboratories and manufacturers to remove the need for redundant testing of flame mitigation devices that have been previously tested and demonstrated compliant with the voluntary standard. Therefore, staff concludes that this revision does not affect meeting the conditions of section (b)(3)(A) of the Act, because as described regarding the revision for larger volume containers, the flame mitigation device quenches the external flame at the mouth of the container. The shape and size of the container does not affect its effectiveness as the flame was impeded from reaching the vapors within the container.

The specific substantive revisions to ASTM F3429/F3429M-20 are reflected in ASTM F3429/F3429M-23 as depicted below (with crossed-out text meaning text was removed and underlined text meaning text was added):

5.8 A container with the same FMD, and its attachment to the container opening, as a container which has met the requirements of this specification shall be considered as compliant with this specification.

### Non-Substantive Revisions

There were three non-substantive revisions to ASTM F3429/F3429M-20. First, ASTM staff recommended that the order of the scope subclauses be changed to match the standard structure of other ASTM specifications. The text of the scope was not otherwise changed. Second, ASTM F3326 was removed from the listed reference documents as it was not used elsewhere in ASTM F3429/F3429M-23. A reserved section was renamed from a “permanency”

test to a “retention” test. Currently, this is placeholder for a future requirement that the subcommittee is working on for a potential future revision. Finally, some explanatory information in the non-mandatory appendix for the “retention” test was removed, but no mandatory requirements were added or changed. Therefore, staff concludes these revisions are non-substantive and do not affect the performance of the flame mitigation devices.

The specific non-substantive revisions to ASTM F3429/F3429M-20 are reflected in ASTM F3429/F3429M-23 as depicted below (with crossed-out text meaning text was removed and underlined text meaning text was added):

~~4.3~~ 1.5 This specification does not address hazards caused by fire and explosion nor hazards from vapors external to the container when the fuel in the container does not ignite. Further, this specification does not consider scenarios where confinement, obstructions, or preheating cause flame acceleration prior to the flame front reaching the interior of the container.

4.4 1.3 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system are not necessarily exact equivalents; therefore, to ensure conformance with the standard, each system shall be used independently of the other, and values from the two systems shall not be combined.

~~4.5~~ 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, health, and environmental practices and determine the applicability of regulatory limitations prior to use. Information on specific hazards associated with the test methods in this specification is shown in Section 4.4.

#### 2.1 ASTM Standards:

D3828 Test Methods for Flash Point by Small Scale Closed Cup Tester

D4359 Test Method for Determining Whether a Material Is a Liquid or a Solid

F852/F852M Specification for Portable Gasoline, Kerosene, and Diesel Containers for Consumer Use

F2874 Specification for One Time Use Portable Emergency Fuel Containers (PEFC) for Use by Consumers

~~F3326 Specification for Flame Mitigation Devices on Portable Fuel Containers~~

5.6 ~~Permanency~~ Retention test of the FMD on the container (Reserved, see Appendix X3.)

#### X3. ~~PERMANENCY~~ RETENTION TEST

X3.1 The intent of the ~~permanency-retention~~ retention test is to ensure that the FMD cannot be easily removed without the use of tools. Frequently, the FMD is a flame arrestor at the mouth of the container. Consumers may not be familiar with flame arrestors and may not know if the flame arrestor is intended to be removed. ~~The manufacturer should ensure that a FMD is installed in such a manner that a consumer cannot easily remove the FMD~~

~~without the use of tools. Specification F3326 requires that the FMD in a portable fuel container resist a push and pull force of 67 N [15 lb.]. (See reserved 5.6.)~~

### III. Summary of Public Comments

The Commission requested public comments on the effect the revision to ASTM F3429/F3429M will have on the safety of pre-filled portable fuel containers. CPSC received two comments. The comments, from the Prefilled Fuel Container Industries Association (PFCIA), which consists of 18 members from key enterprises in the industry, and the Household & Commercial Products Association (HCPA), which represents member companies that are subject to the Act, both supported the revision. The PFCIA and HCPA each asserted that containers up to 5 gallons in capacity and containers with larger openings cannot be tested safely to the current ASTM F3429/F3429M-20 and that the revision is urgently needed. The PFCIA and HCPA both also encouraged the Commission to adopt the new revision “as soon as possible.”

### IV. Conclusion

After reviewing the changes in ASTM F3429/F3429-23, as discussed above, staff concludes that the changes to the voluntary standard are safety-neutral to the product, and do not affect the performance of the flame mitigation device from impeding the propagation of a flame or other ignition source into the container. Staff does believe the changes to the standard will improve the safety of testing flame mitigation devices on larger volume containers and result in the ability to test for compliant devices for these containers. Staff recommends that the Commission allow ASTM F3429/F3429M-23 to become the mandatory consumer product safety rule for pre-filled portable fuel containers pursuant to section (b)(5) of the Act. Many of the revisions to ASTM F3429/F3429M-20 were requested by testing laboratories conducting the testing for compliance to improve the safety to test personnel and facilities without reducing FMD performance. Without these changes, manufacturers may not be able to find a certification testing laboratory for some of their products, limiting consumer access to these products.

Staff finds that the revisions in ASTM F3429/F3429-23 meets the conditions of section (b)(3)(A) as required by section section (b)(5) of the Act and recommends the Commission approve the revisions to the standard to become the mandatory standard for pre-filled portable fuel containers.

Staff also recommends that the Commission publish a direct final rule (DFR) to incorporate by reference the two mandatory standards, ASTM F3326-21 and UL 30:2022, the Commission previously determined to be mandatory standards under the Act, and the newly revised ASTM F3429/F3429M-23 which is the successor to ASTM F3429/F3429-20, that the Commission previously determined to be mandatory standards into the Code of Federal Regulations (C.F.R.). Incorporating the three voluntary standards into the C.F.R. would reduce regulatory confusion by providing the public notice of the current voluntary standards for portable fuel containers that are mandatory standards in the C.F.R. OGC is providing a draft DFR for the Commission’s consideration for this purpose.



**V. Public Access to ASTM F3429/F3429M-23**

ASTM F3429/F3429M-20 is available to the public for review, free of charge, by accessing ASTM's CPSC reading room at:

<http://www.astm.org/cpsc.htm>.

- Search for ASTM F3429.

Note:

In the future, read-only access to the standard may move to ASTM's Reading Room at:

<https://www.astm.org/products-services/reading-room.html>.