



Date: September 5, 2025

Subject: Elevated Ambient Temperature Exposure and Fire Extinguisher Compliance

Fire extinguishers are tested to address the upper and lower operating temperature limits identified on their nameplates, as required by code. This bulletin explains how the RELY FX™ dry chemical extinguisher models were designed to handle elevated temperature exposures and address compliance concerns.

Elevated Temperature Applications

Within many transport and industrial settings, fire extinguishers are sometimes installed into areas where ambient temperatures regularly exceed 120°F (49°C). Enclosed spaces like vehicle cabs or enclosed outdoor compartments exposed to direct sunlight can sometimes reach and record elevated temperatures up to 155°F (68°C). Other applications such as indoor industrial manufacturing operations, engine rooms and special hazards often also regularly experience periodic temperature exposure spikes above the designated maximum 120°F (49°C) temperature limit currently specified within the existing UL testing standards for fire extinguishers.

Fire Extinguisher Inspection and Maintenance Requirements

Field fire extinguisher maintenance requirements dictate corrective action whenever fire extinguishers have been exposed to elevated temperatures exceeding 120°F (49°C). This can necessitate removal and recharge of a subject fire extinguisher as frequently as annually. (2022 NFPA-10 § 7.3.2.4) Visual fire extinguisher inspections in elevated temperature settings with observed pressure gauge needle readings outside their designated operating ranges, also dictate immediate corrective action be taken. (2022 NFPA-10 § 7.2.2 (4), 7.2.2.3 (4) & 7.2.3)

Beyond generating or observing any potential operational performance related issues associated with extinguishers exposed to elevated ambient temperatures, this can represent and raise various code compliance related issues.

NFPA-10 Extinguisher Standard and Manufacturer Product Testing

The NFPA-10 standard acknowledges that whenever potentially elevated temperature exposure conditions exist, it recommends selecting extinguisher models suitable for such environments, based on the fire extinguisher manufacturer's recommendations. (2022 NFPA-10 § A.6.1.3.12 (3))

To further verify the enhanced performance of RELY FX™ extinguishers under elevated temperature conditions, all of the applicable +120°F (49°C) equipment hardware and performance temperature related tests within the UL-299 and ULC-S508 standards were successfully witnessed by UL at an elevated 160°F (71°C) temperature.

Because UL and ULC extinguisher standards do not permit changes to the maximum temperature limit reflected on nameplates above 120°F, the RELY FX™ dry chemical products passing this elevated temperature exposure testing have nameplates containing an additional statement reflecting the +160°F (71°C) temperature limitation along with a white mark on the pressure gauge faces to indicate that elevated temperature pressure range.

Should you have any questions or need additional information, contact NFE customer service at 1-800-267-8508.