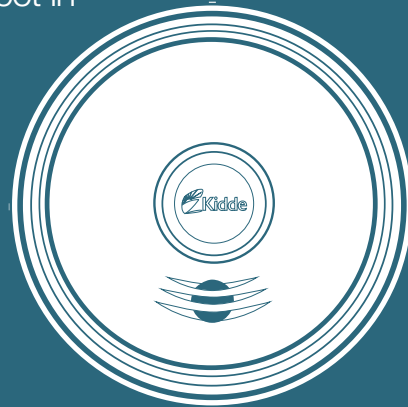# 2020 UL 217 TEST REQUIREMENTS FOR SMOKE ALARMS

The Standard for Single and Multiple Station Smoke Alarms, UL 217, currently utilizes three types of fire tests that manufacturers must meet in order to be compliant.

Wood & Paper Test

Smoke Levels from Flaming or Smoldering Wood & Paper.

Current ionization and photoelectric type smoke sensors **will not pass** the new UL fire tests. The National Institute of Standards and Technology (NIST) tested **45** smoke alarm models from **7** different manufacturers, and concluded "Analysis of the results show that no current smoke alarm model would meet performance level required in ANSI/UL 217".

Synthetic Materials Test

As materials in home furnishings have transitioned to use of synthetic materials that may react differently in a home fire, UL has responded with implementation of two new fire tests which include both flaming and smoldering polyurethane.

Cooking Nuisance Test

UL will be requiring smoke alarms pass a "nuisance test" whereby devices must not alarm when subjected to certain levels of smoke from burned hamburger. The purpose of this test is to help prevent consumers from disabling or removing alarms from service due to cooking related nuisance alarms.

Successful passing of new fire tests will be required to continue manufacturing smoke alarms after June 2020.

Benefits of UL 217 Certified Smoke Alarms

- Meets new UL fire test requirements for flaming and smoldering polyurethane
- Meets new UL fire test requirements for prevention of cooking nuisance alarms
- Single combination smoke and carbon monoxide alarm provides less maintenance than two alarms

PARTICLE SIZE

STEAM

SMOKE

Kidde's solution to meeting the new fire tests is to utilize technology that can differentiate between particle sizes. The size of smoke particles typically associated with nuisance cooking are very small, while other nuisance sources such as steam have particle sizes that are relatively large.

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