

SAFERA[®]
SAFETY WITH STYLE

THE UPCOMING STANDARD FOR STOVE GUARDS

EN 50615

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COOKING FIRES

The most common cause for residential fires

- The number of domestic fires in Finland in 2012 was 3300.
- Electrical fires contributed to 75% (2590) of domestic fires.
- Cooking fires contributed to 41% of electrical fires.
- Source: Finnish Safety and Chemicals Agency TUKES

The logo for TUKES, the Finnish Safety and Chemicals Agency, featuring the word "tukes" in a lowercase, rounded, teal-colored font.

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Tests on devices for fire prevention and suppression for hobs (cooktops)

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The standardization process

Preparation of the standard:

CEN - European Committee for
Standardization

CENELEC - European Committee for
Electrotechnical Standardization

CLC/TC 61 Safety of household and
similar electrical appliances

CLC/TC 61 WG4
(working group 4)

The working group consists of officials and
manufacturers from European countries

The standard hierarchy:

Low voltage directive
LVD 2006/95/EC

Home appliance standard
EN 60335-1:2012

Stove guard standard
EN 50615

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The stove guards are divided to three categories based on their properties.

Category A:

Extinguishing & simultaneous power cut-off

Category B:

Preventive power cut-off

Category AB:

Preventive power cut off followed by extinguishing, if flame occurs

Note: Preventive power cut-off is not the same as simultaneous power cut-off. The separating matter is the logic behind it. Extinguishing has a simultaneous power cut-off, since it's not logical to extinguish without power cut off.

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Tests for category A devices: Effectiveness of the extinguishing

- The effectiveness against grease fire is tested with a few tests:
 - The extinguishing must triggered within 45 seconds of the ignition
 - Extinguishing must not cause splashes
 - Must not re-ignite within 10 minutes
- Additional test:
 - Ability the extinguish a kitchen roll paper
 - "A false alarm" -test, when device must not extinguish
 - Tests are performed with the hardest setup for the stove guard, which is defined in the first test.
 - Tests are done with sun flower oil with auto-ignition temperature of 350-370°C
 - The amount of oil depend of the size of the pan (specified in standard 60335-2-6)

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Tests for category B devices: The ability to prevent a fire.

- A pot with oil is placed on a hob on full power. Each plate is tested in turns.
 - The device must cut power before oil reaches 330°C
 - The oil temperature must not rise over 350°C within 10 minutes of the power cut-off
- Large pots are used to create shadows on other plates.
- "A false alarm" -test, when device must not cut power.

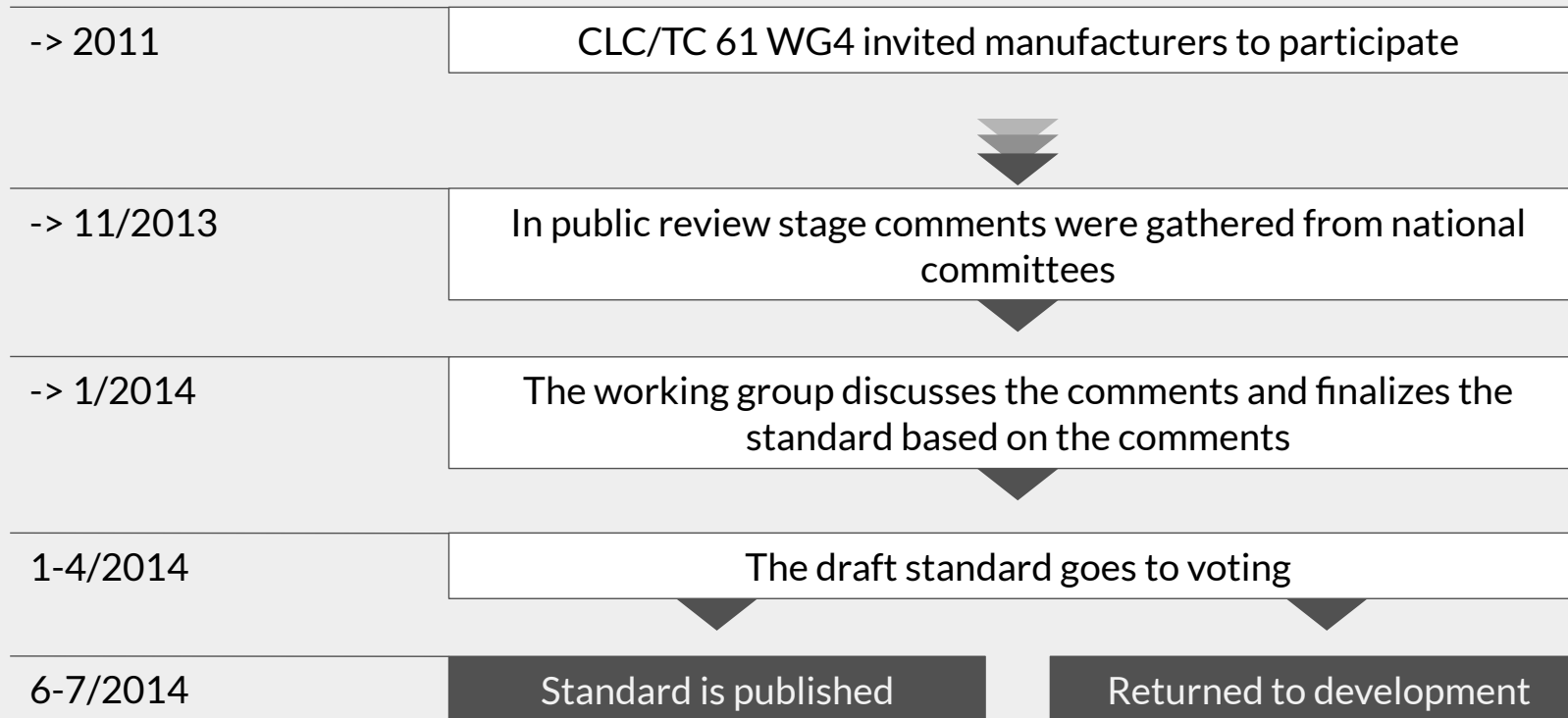
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The standard sets common criteria for performance, but doesn't cover all possible situations.

- The tests focus on creating a common criteria for measuring the stove guards' ability to prevent and extinguish grease fires.
- The test do not cover situations where only smoke is produced. Manufacturers can of course bring such devices to the market, as long as standard criteria are also fulfilled.
- The standard doesn't recognize special user groups. It's also left for the manufacturers to device if they want to make products for different user groups.

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The time schedule and the process



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Possible effects of the standard

- In future that stove guards must fulfill the standard requirements:
 - Manufacturers declare with CE-marking the their products comply with the standard
- Specifying a stove guard gets a lot easier:
 - "... EN 50615 category B stove guard..."
- In Norway stove guards are practically regulatory in all new houses:
 - A standard is really needed there as the quality and properties of the stove guards on the market vary significantly at the moment.
- The standard has gathered a lot of attention also in other Nordic countries and in Britain.

THANK YOU!

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