



Flammability Assessment of Generator Tents and Running Covers

2025

07/11/2025

2025 Developments

Addressing the Need for a Generator Tent Flammability Standard



UL 2201A Standard Development

There is a growing need in the United States for a formal safety standard to address the fire hazards associated with generator tents and running covers. These products are intended to enable safe generator operation during wet weather, but many enter the market with no verified flammability performance. The rise in untested products on e-commerce platforms has introduced unnecessary risk to consumers, first responders, and nearby structures.

Currently, no standard exists for how manufacturers should evaluate or certify these products for flammability. This absence of guidance limits oversight and puts pressure on fire officials, safety agencies, and consumers to make decisions without reliable information.

UL Standards & Engagement (ULSE) has now approved the development of a dedicated flammability standard, UL2201A, which will help fill this gap. The standard is actively underway, with participation from safety professionals and industry leaders who are committed to establishing clear, enforceable requirements for this emerging product category. We are in the early stages of canvassing for Technical Committee members with Fire Marshals, CPSC, safety officials, and other stakeholders already engaged in this process.

Rated vs. Unregulated Products

In support of this effort, GenTent Safety Canopies conducted a head-to-head flammability demonstration for UL Solutions. The test was performed on-site using actual portable generators. We compared GenTent's NFPA-rated and tested product against an unverified third-party product currently sold online (IGAN). A propane torch was held directly against the fabric to simulate ignition conditions.

The results were alarming. The GenTent material self-extinguished within two seconds, preserving the generator and surrounding area. In contrast, the IGAN cover burned continuously for nearly an hour, completely destroying the generator and threatening nearby structures. This real-world comparison underscores the urgent need for a flammability testing standard.

See the recent flammability test videos:



GenTent



gentent.com/gententrated/



IGAN



gentent.com/iganunregulated/

Flammability Assessment of Generator Tents and Running Covers

Portable generators play a crucial role in emergency power supply, but their safe operation in wet weather is contingent upon utilizing appropriate running covers. Running covers, or generator tents, must pose no additional hazards to generator operations. One of the key hazards to avoid is flammability. This product research paper presents a comprehensive analysis of flammability tests conducted on various generator tents and running covers, emphasizing the critical importance of using NFPA (National Fire Protection Association) rated generator tents for optimal safety.

This study addresses the necessity of NFPA-rated generator tents to mitigate fire hazards associated with generator use. Through testing and analysis, this paper will compare different products, including the NFPA 701-rated GenTent Safety Canopy, against alternative covers and tents with varying materials and fire-resistant (FR) ratings. The methodology involves stationary tests considering ignition, flame propagation, and after-flame characteristics.

Methodology

Flammability tests were conducted on five different generator running covers, evaluating their performance against defined criteria. The examination involved situating the generator tents and covers onto a portable generator frame and aligning the fabric to hang at an approximate distance of 12 inches below the crossbar of the frames. This positioning emulates the spatial configuration of the GenTent's electrical apron when properly installed on a generator, representing the nadir of the fabric extension.

The GenTent, recognized as the control fabric in this evaluation, was subjected to a controlled flame application procedure. A 2.5-inch propane torch, affixed to a 5-pound propane tank, was employed to initiate the flame. Based on the size of the torch, and the slight variation in flame output from the dial setting, the torch was positioned atop a 1-inch-thick flame brick, with a spatial gap of 2 inches from an adjacent vertical 1-inch flame brick.

Tests were not designed to meet NFPA-701 standards, but rather to simulate conditions in line with running a portable generator. The tests were conducted on two different days, outdoors in Brentwood, New Hampshire. The recorded temperatures varied from 25 to 54 degrees Fahrenheit (-3.8 to 12.2 degrees Celsius), with overcast conditions and periods of light snow on day one, and rain on day two. The adjustment in testing conditions over two days was prompted by the introduction of new products for evaluation after the initial round of testing.

Due to the size and measured temperature of the flame, the flame path is designed to follow the flame brick positions forward and up to the hanging fabric samples. Notably, the lower edge of the suspended fabric was stationed approximately 3 inches above the torch mouth. The highest recorded flame temperature reached 365 degrees Fahrenheit (185 Celsius). The flame was applied for approximately 40 seconds in duration, unless it proved otherwise unsafe due to melted material dropping in line with the torch head.

Successful passage of the outlined flammability test is contingent upon the material meeting one or more of the following criteria, indicating at least some level of flame resistance or flame retardancy:

Did the material exposed to the flame path ignite?

- Passing response: NO
- Failing response: YES

Did the material not exposed to the flame path ignite?

- Passing response: NO
- Failing response: YES

Did the material sustain an after-flame duration exceeding 1 minute following exposure to the flame path?

- Passing response: NO
- Failing response: YES

Results and Analysis

GenTent Safety Canopy Model: GTOFUAETN

Material: Marine grade vinyl coated polyester

FR Rated: NFPA-701-Rated

Pass Stationary Test: YES

- Criteria:
 1. Did material exposed to the flame path ignite? YES
 2. Did material not exposed to flame path ignite? NO
 3. Did the material maintain after flame more than 1 minute? NO



(day one)



See the flammability test video:



gentent.com/gententfiretest/

GUYISS Model: CFX2201

Material: 600D+210D waterproof oxford fabric

FR Rated: Unknown

Pass Stationary Test: NO

- Criteria:
 1. Did material exposed to the flame path ignite? YES
 2. Did material not exposed to flame path ignite? YES
 3. Did the material maintain after flame more than 1 minute? YES



(day one)



See the flammability test video:



gentent.com/guyiss/

GEHENG Model: GH-405

Material: Material: 600D Waterproof Polyester Tarp

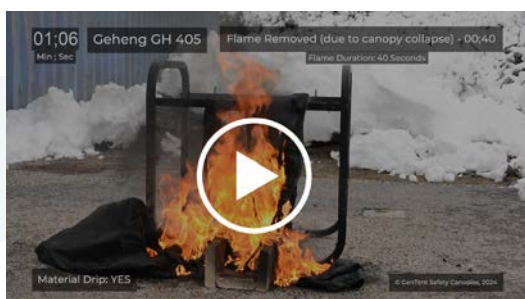
FR Rated: Unknown

Pass Stationary Test: NO

- Criteria:
 1. Did material exposed to the flame path ignite? YES
 2. Did material not exposed to flame path ignite? YES
 3. Did the material maintain after flame more than 1 minute? YES



(day one)



See the flammability test video:



gentent.com/geheng/

JIAHOO

Model: JH-SGC-01

Material: 600D waterproof Oxford cloth+200D inner lining

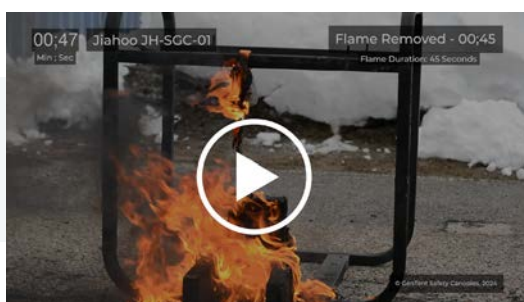
FR Rated: Unknown

Pass Stationary Test: NO

- Criteria:
 1. Did material exposed to the flame path ignite? YES
 2. Did material not exposed to flame path ignite? YES
 3. Did the material maintain after flame more than 1 minute? YES



(day one)



See the flammability test video:



gentent.com/jiahoo/

IGAN

Model: Generator Running Cover

Material: Material: Ultra heavy-duty: 100% waterproof tarp

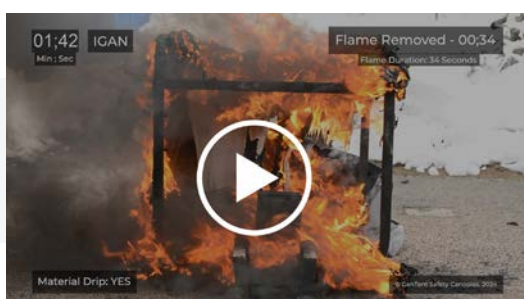
FR Rated: NO

Pass Stationary Test: NO

- Criteria:
 1. Did material exposed to the flame path ignite? YES
 2. Did material not exposed to flame path ignite? YES
 3. Did the material maintain after flame more than 1 minute? YES



(day one)



See the flammability test video:



gentent.com/igan/

GENSHED Model: GCE

Material: Unknown

FR Rated: NO

Pass Stationary Test: NO

- Criteria:
 1. Did material exposed to the flame path ignite? YES
 2. Did material not exposed to flame path ignite? YES
 3. Did the material maintain after flame more than 1 minute? YES



(day one)



See the flammability test video:



gentent.com/genshed/

Cover Geny Model: Grey

Material: 600D Waterproof Fabric

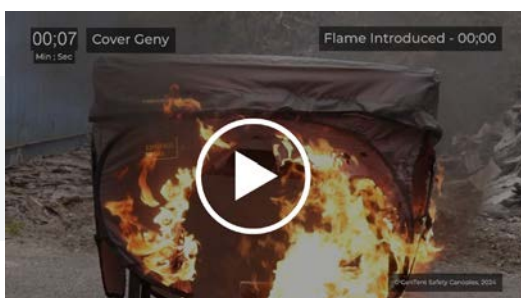
FR Rated: Unknown

Pass Stationary Test: NO

- Criteria:
 1. Did material exposed to the flame path ignite? YES
 2. Did material not exposed to flame path ignite? YES
 3. Did the material maintain after flame more than 1 minute? YES



(day two)



See the flammability test video:



gentent.com/covergeny/

NGB (NineGodBird)

Model: Black-A

Material: 600D+210D waterproof oxford fabric

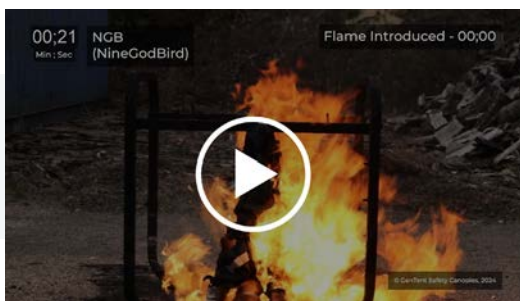
FR Rated: Unknown

Pass Stationary Test: NO

- Criteria:
 1. Did material exposed to the flame path ignite? YES
 2. Did material not exposed to flame path ignite? YES
 3. Did the material maintain after flame more than 1 minute? YES



(day two)



See the flammability test video:



gentent.com/ngb/

Jorohiker

Model: JHR-YXZFDJZ-BK-322424

Material: 600D polyester tarpaulin with PU coating

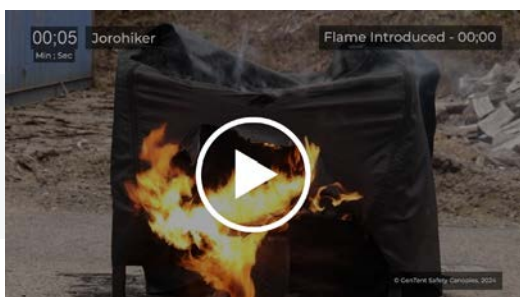
FR Rated: Unknown

Pass Stationary Test: NO

- Criteria:
 1. Did material exposed to the flame path ignite? YES
 2. Did material not exposed to flame path ignite? YES
 3. Did the material maintain after flame more than 1 minute? YES



(day two)



See the flammability test video:



gentent.com/jorohiker/

BENVOL

Model: BV-FJD-01

Material: 420D waterproof oxford cloth

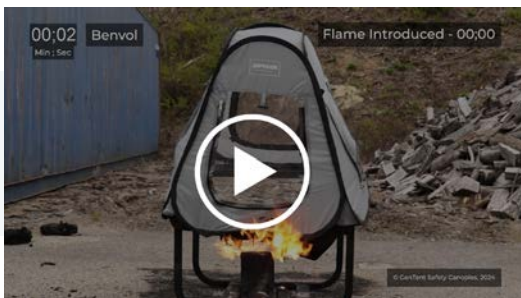
FR Rated: Unknown

Pass Stationary Test: NO

- Criteria:
 1. Did material exposed to the flame path ignite? YES
 2. Did material not exposed to flame path ignite? YES
 3. Did the material maintain after flame more than 1 minute? YES



(day two)



See the flammability test video:



gentent.com/benvol/

HSDAGU

Model: BHZ2301

Material: 600D+210D waterproof oxford fabric

FR Rated: Unknown

Pass Stationary Test: NO

- Criteria:
 1. Did material exposed to the flame path ignite? YES
 2. Did material not exposed to flame path ignite? YES
 3. Did the material maintain after flame more than 1 minute? YES



(day two)



See the flammability test video:



gentent.com/hsdagu/

Rosefray

Model: 25*24*21in Gray

Material: 600D waterproof oxford fabric

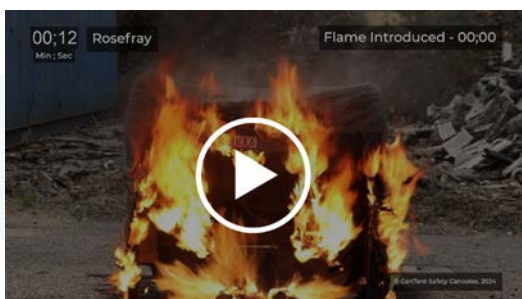
FR Rated: Unknown

Pass Stationary Test: NO

- Criteria:
 1. Did material exposed to the flame path ignite? YES
 2. Did material not exposed to flame path ignite? YES
 3. Did the material maintain after flame more than 1 minute? YES



(day two)



See the flammability test video:



gentent.com/rosefray/

Neverland

Model: 32 X 24 X 24 Inch

Material: 600D waterproof oxford fabric

FR Rated: Unknown

Pass Stationary Test: NO

- Criteria:
 1. Did material exposed to the flame path ignite? YES
 2. Did material not exposed to flame path ignite? YES
 3. Did the material maintain after flame more than 1 minute? YES



(day two)



See the flammability test video:



gentent.com/neverland/

POUNAZE / KARIER

Model: GCS-2401

Material: 600D+210D waterproof oxford fabric

FR Rated: Unknown

Pass Stationary Test: NO

- Criteria:
 1. Did material exposed to the flame path ignite? YES
 2. Did material not exposed to flame path ignite? YES
 3. Did the material maintain after flame more than 1 minute? YES



(day two)



See the flammability test video:



gentent.com/pounaze_kariier/

WOGUINC

Model: WOGUI-1.0

Material: 600D+210D waterproof oxford fabric

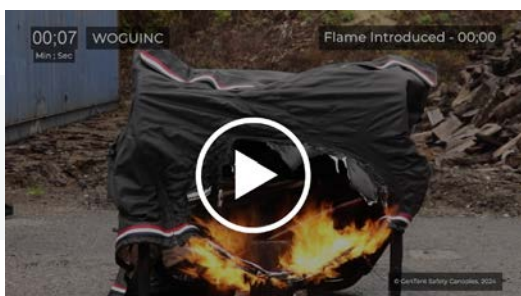
FR Rated: Unknown

Pass Stationary Test: NO

- Criteria:
 1. Did material exposed to the flame path ignite? YES
 2. Did material not exposed to flame path ignite? YES
 3. Did the material maintain after flame more than 1 minute? YES



(day two)



See the flammability test video:



gentent.com/woguinc/

BALAPET

Model: standard

Material: Waterproof oxford fabric

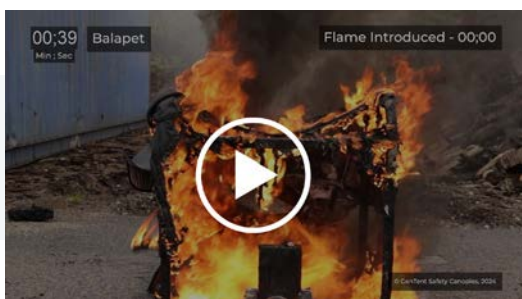
FR Rated: Unknown

Pass Stationary Test: NO

- Criteria:
 1. Did material exposed to the flame path ignite? YES
 2. Did material not exposed to flame path ignite? YES
 3. Did the material maintain after flame more than 1 minute? YES



(day two)



See the flammability test video:



gentent.com/balapet/

AKEfit

Model: JX008-6

Material: 500D waterproof oxford fabric

FR Rated: Unknown

Pass Stationary Test: NO

- Criteria:
 1. Did material exposed to the flame path ignite? YES
 2. Did material not exposed to flame path ignite? YES
 3. Did the material maintain after flame more than 1 minute? YES



(day two)



See the flammability test video:



gentent.com/akefit/

Softclub Model: black

Material: 600D waterproof oxford fabric

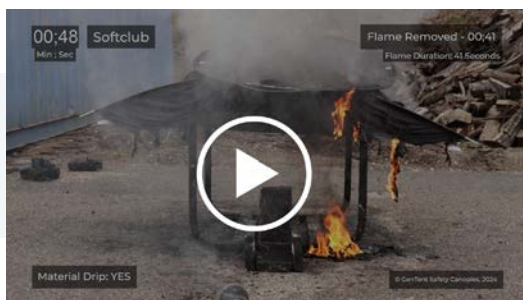
FR Rated: Unknown

Pass Stationary Test: NO

- Criteria:
 1. Did material exposed to the flame path ignite? YES
 2. Did material not exposed to flame path ignite? YES
 3. Did the material maintain after flame more than 1 minute? YES



(day two)



See the flammability test video:



gentent.com/softclub/

Akkkan Model: AKKKAN-FDJ-1

Material: Polyester hydrophobic fabric

FR Rated: Unknown

Pass Stationary Test: NO

- Criteria:
 1. Did material exposed to the flame path ignite? YES
 2. Did material not exposed to flame path ignite? YES
 3. Did the material maintain after flame more than 1 minute? YES



(day two)



See the flammability test video:



gentent.com/akkkan/

ZZTXL

Model: standard-Grey

Material: 100% waterproof tarp fabric

FR Rated: Unknown

Pass Stationary Test: NO

- Criteria:
 1. Did material exposed to the flame path ignite? YES
 2. Did material not exposed to flame path ignite? YES
 3. Did the material maintain after flame more than 1 minute? YES



(day two)



See the flammability test video:



gentent.com/zztxl/

PARTS WORLD USA

Model: Tan-Beige

Material: 1100D waterproof oxford fabric

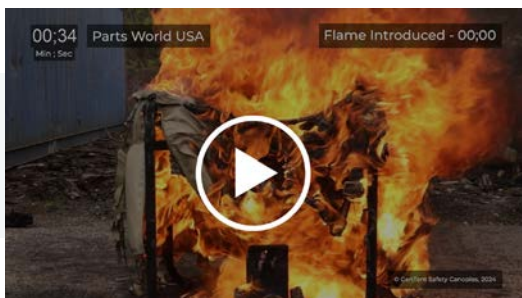
FR Rated: Unknown

Pass Stationary Test: NO

- Criteria:
 1. Did material exposed to the flame path ignite? YES
 2. Did material not exposed to flame path ignite? YES
 3. Did the material maintain after flame more than 1 minute? YES



(day two)



See the flammability test video:



gentent.com/partsworldusa/

Conclusion: The results underscore the superior fire-resistant attributes of the NFPA-rated GenTent Safety Canopy when compared to other tested covers. These findings emphasize the imperative for products attached to portable generators to comply with established flame retardancy standards. It's noteworthy that the exhaust temperature of portable generators varies depending on the make and model, with typical temperatures reaching up to 650 degrees Fahrenheit (343.3 Celsius).

While there is no specific standard for generator tents or running covers for portable generators, NFPA-701 serves as the accepted standard for flammability testing of textiles and films. Given that many of these tents and canopies include injection-molded plastic components, evaluating appropriate flame retardancy standards for those intended for use with portable generators is advisable. A key reference in generator safety is the ANSI/PGMA G300-2023 standard, which explicitly addresses flammability standards for generator "enclosures" and mandates UL-94 flammability standards for plastic components.

Generator tents and running covers lacking flame-resistant (FR) ratings pose significant safety risks. Improving generator safety necessitates recognizing the distinctions in NFPA-rated generator tents, ensuring resistance to ignition, minimal flame propagation, and swift flame extinguishment.

Recommendations:

- Encourage consumers to prioritize NFPA-rated generator tents for enhanced safety.
- Advocate for standardized FR ratings for generator running covers.
- Urge manufacturers to disclose FR ratings for transparency and consumer awareness.

This research underscores the importance of informed decision-making in selecting generator running covers, aligning with NFPA standards for heightened safety during generator operation.



Authored by GenTent Safety Canopies Staff:
Mark Carpenter, Brian Thomas, Justin Manteuffel

FOR FURTHER INFORMATION, CONTACT:

Brian Thomas, Director of Sales & Marketing
99 Pine Road
Brentwood, NH 03833

[\(781\) 334-8368 x1001](tel:7813348368)
brian.thomas@gentent.com