

Sremska Mitrovica (Serbia) Flamblocker CF7 report demonstration.

This report provides information and results on the demonstration of the Flamblocker CF7 product at Sremska Mitrovica (Serbia) as performed on July 10th 2025 at the Sremska Mitrovica landfill facility.

Purpose of the demonstration:

The purpose of the demonstration was to prove and show to the public what the capabilities of the Flamblocker CF7 product are. By performing this demonstration, Flamblocker intended to show to the public that the Flamblocker CF7 product indeed performs as promised.

Flamblocker has made the following claims in regards to Flamblocker CF7 and its capabilities:

- Ability to reduce the time needed to resolve a waste fuelled fire,
- Ability to reduce the amount of water needed to resolve a waste driven (fuelled) fire,
- Ability to cool the fire and the burning materials 6x faster compared to regular methods (pure water),
- Cost reduction of landfill fires based on deployment (time) of fire trucks, fire truck staff and usage of water with related cost of previous parties,
- Reduction of emissions caused by landfill fires based on reduction of required time to extinguish the landfill fire using Flamblocker CF7,

Audience of the demonstration:

Flamblocker invited representatives of various governmental entities including;

- Several municipalities that own and/or operate landfill facilities (Municipal representatives)
- Special advisors to the Serbian Ministry of Environmental Protection,
- Commanders of several fire departments from municipalities that own/operate a landfill facility,
- Regional commander of the Sremska Mitrovica region,
- Waste operators that operate landfill facilities in Serbia,
- Representatives for North Macedonia and Montenegro,
- Mr Siniša Mitrović, master environmental analyst, Head of the Center for Circular Economy and senior representative for the Serbian Chamber of Commerce.



Method of demonstration:

The demonstration was intended to show the efficiency of the Flamblocker CF7 product compared to regular deployed methods. Regular methods for fire suppression at a landfill fire is the usage of water and the usage of covering the fires by sand.

To enable a realistic comparison between the usage of only water (regular method) and the usage of Flamblocker CF7 combined with water, 2 identical in size, volume and material waste containers were deployed.

Each waste container was loaded with the same composition of landfill waste, a mixture of unsorted MSW, with the adding of a fixed weight/volume of additional plastics (PET bottles and other plastic materials) to each container.

Each container received a set of car tires, a car battery (discharged) and 20 litres of engine oil in a plastic jerrycan.

The waste was obtained from incoming fresh waste (unsorted MSW) that was collected in a single run within a single area to ensure the mixture of unsorted MSW is comparable between the 2 testing containers.

The preparation of the 2 testing containers was done in the days before the test date.

To avoid moisture due to rain or other influences, the containers were prepared in an enclosed area within the Sremska Mitrovica waste facility and kept indoors until the testing day.

On the testing day, both containers were moved from the indoor area to a secure outdoor area.



Container prepared for Flamblocker CF7



Container prepared for only water





To enable a comparison between the 2 methods (method 1 = only water, method 2 = water + 6% Flamblocker CF7), 2 identical fire trucks were obtained, each having identical fire hoses, identical water pressure and water volume deployment abilities.

The truck deployed for the extinguishing of the fire with Flamblocker CF7 had a straight water nozzle whilst the truck deployed for extinguishing the fire with only water had a spray nozzle. The spray nozzle on the water unit has a better effect and as such, the water unit had an advantage over the Flamblocker CF7 unit.

The fire truck deployed for the Flamblocker CF7 unit was fitted with a mixing connector to enable the adding of 6% Flamblocker CF7 to the deployed water (standard fire truck equipment model).

Both fire trucks deployed the same type and size/length of water hoses for the test.



To start the fires within the testing containers, each container was doused with 20 litres of Euro95 benzine (car fuel) and both containers were set on fire using a burning rag. The starting of the fire on both containers was within 2 minutes of each other.

Both fire trucks/teams were instructed to put the water pressure on the same level to avoid any advantages on either side. This was checked by the fire commander and observed by external witnesses.

To enable a correct and viable comparison, both fire trucks were instructed to use their hoses for a set/fixed time and were instructed to deploy their hoses simultaneously to enable the comparison of both methods, resulting in both testing containers receiving the same amount of water in the same amount of time.

After the containers were set on fire, they were left to burn for several minutes to enable the fire to grow and obtain strength and heat.

When the fire commander made the observation that the waste is on fire and the fire is complete, both trucks were given the signal to start the fixed and simultaneous extinguishing of the fires, using the same volume of water at the same pressure and for the same amount of time.



The test was set to have 2 runs of dousing the fires, each at a fixed time and a fixed volume of water. The container for the regular method was doused with only water whilst the Flamblocker container was doused with the same volume of water that included the 6% of Flamblocker CF7

After the initial run, a quick observation was performed by the fire commander and already a significant difference in remaining open fire was noted. The water doused container was still actively burning whilst the Flamblocker CF7 container did not show any open fires anymore but was still smoking.

A second round of water was added to both containers to kill the still active fire in the water doused container (original method container). Although the Flamblocker CF7 container showed no signs of open fire anymore, the container was also doused with the second volume of water that included the 6% Flamblocker CF7 to enable a full comparison in results between the 2 methods.





After the second volume of water was deployed on both containers, the fire commander gave the all-clear notification and the fire trucks were ordered to stand down on their work, leaving both containers as they were at that moment in time to enable a full inspection of the results by thermal heat camera.

Results and findings:

Based on the facts that both containers had the same waste volume and waste composition, that the deployed volume of water (with and without Flamblocker CF7) on both containers were the same and both deployed fire trucks were identical in type and model, the following results, observations and findings were concluded by the local and regional fire commander and independent witnesses;

- The container that was doused with only water was still partially burning,
- The container that was doused with water and Flamblocker CF7 was not burning anymore but only smoking,
- Both containers showed significant fire damage to the waste materials inside the containers, proving that the fire was self propellant during the test and that the fire was full and actual and not operating on the starter fluid (car benzine EURO95),
- That the container that was doused with only water still had a temperature that exceeded 152C Celsius,
- That the container doused with water with the added 6% of Flamblocker CF7 had a temperature of only 21C Celsius,
- That the efficiency of the Flamblocker CF7 product was significantly higher compared to the original method of extinguishing, being only water,
- That the time needed to extinguish a fire with Flamblocker CF7 is up to 50% shorter compared to regular methods of extinguishing fires and that, as such, the cost of operations for extinguishing a fire using the Flamblocker CF7 is significantly lower compared to regular methods and that the required volume of water is up to 50% lower compared to regular methods.

Colder than the ambient temperature.

Immediately after the all clear sign was given by the regional and local fire commander, the fire commanders deployed a thermal camera to register the remaining heat in both containers. Upon performing the registration of the remaining heat within the 2 containers, the regional and local fire commanders removed their protective gloves and were able to touch the container that was doused with water and Flamblocker CF7. The commanders were not able to touch the container that was doused with only water.

The container that was doused with only water had a temperature of 152C Celsius whilst the container doused with water and Flamblocker CF7 had a temperature of only 21C Celsius, enabling the commanders to touch that container with their bare hands.

Please note that the ambient temperature (recorded outside temperature) at the Sremska Mitrovica location was 25C Celsius and that the container doused with CF7 had a temperature of 21C Celsius, being lower than the actual ambient temperature, proving that the Flamblocker CF7 has a very strong cooling capability.

<https://www.accuweather.com/sr/rs/sremska-mitrovica/300675/july-weather/300675?year=2025>

(link to validated weather report on Sremska Mitrovica at day of the test)



Temperature container
Only water (original method)



Temperature container.
water + 6% CF7

Both fire brigade commanders have provided an signed witness statement to the above mentioned facts and findings. This statement is part of this report.

Word of gratitude.

Flamblocker wishes to express its gratitude to the commanders and teams of the fire brigade, to the staff and management of the Sremska Mitrovica waste facility, to the mayor of Sremska Mitrovica for allowing the test to proceed and to the relevant ministries for providing the permission to execute the test and to Mr Siniša Mitrović for his support and advise on developing and enabling the test.

Contact.

To learn more about Flamblocker CF7 and its workings or to order Flamblocker, please contact our Serbian country distributor.

Contact information:

To know more about Flamblocker CF7 and other specialist fire fighting products, please contact SophSys via;

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