SoyFoam™ TF 1122 *Meeting the Mission with* PFAS-Free *Innovation!*

A HISTORY OF SOY IN FIREFIGHTING

1930s

Dr. Percy Lavon Julian, a pioneering chemist, develops soy protein–based foam used to smother oil and gasoline fires during World War II. (Science History Institute).

1940s

The U.S. Navy adopted the invention, nicknaming it "bean soup," utilizing it during WWII. This marked the first major use of soy in firefighting applications and set the foundation for sustainable foam technology. (U.S. Patent and Trademark Office)

1970s

The United States Department of War began using AFFF to fight fuel fires. The release of these chemicals into the environment during training and emergency responses is a major source of PFAS contamination of ground water on military bases. (U.S. Department of Veteran Affairs)

2020s

In response to firefighter health concerns about PFAS, the United Soybean Board begins a research partnership with Cross Plains Solutions to develop a high-performing firefighting foam made with U.S. Soy.

2024

Cross Plains Solutions introduces SoyFoam TF 1122, a U.S.-made, soy-based fluorine-free foam for Class A and B fires. Made with soy-derived surfactants, SoyFoam offers rapid knockdown, high burnback resistance, and environmental safety, meeting key military and municipal performance standards.

2025

SoyFoam becomes a leading example of how soybeans can power sustainable innovation in critical safety applications. SoyFoam wins the ACS Green Chemistry Challenge Award, highlighting its role in replacing PFAS foams with a renewable, biodegradable solution.

GREENSCREEN CERTIFIED™ GOLD

FIREFIGHTING FOAM

20241003 CERTIFICATE NUMBER

2.2(1e) VERSION

cpa Clean Production Action

GreenScreen Certified® is a registered trademark of Clean Production Action.

THE FIRST AND ONLY FIREFIGHTING FOAM GREENSCREEN CERTIFIED® AT THE GOLD LEVEL.

- **Contains NO Fluorine Components**
- **100% PFAS Free**

SoyFoam™ TF 1122 is ready to serve as a DoD training foam. Its breakthrough chemistry is the foundational solution for MIL-SPEC and more.

SoyFoam™ TF 1122 has passed all 9 of the required burns on Jet A and gasoline in accordance to MIL-PRF 32725 with extinguishment times comparable to AFFF PFAS.

SoyFoam™ R&D underway for MIL-SPEC, UL 162, U.S. Forest Service and more.

SoyFoam™ TF 1122 is certified ready biodegradable by the Organization of Economic Cooperation and Development and is certified as 84% biobased through the U.S. Department of Agriculture BioPreferred® program.

Active Project with the United States Department of War

- **Project: ESTCP WP24-EO-9610**
  Name: SoyFoam™ F3 Mil-Spec Firefighting Foam
  Environmental Security Technology Certification Program

  Objective: Traditional firefighting foams are directly linked to Veterans Affairs (VA) disability calculations and claims, affecting over 1 million veterans and counting. Cross Plains Solutions structured this project in line with Performance Specification for Fire Extinguishing Agent, Fluorine-Free Foam (F3) Liquid Concentrate, for Land-Based, Fresh Water Application per MIL-PRF 32725.

U.S. firefighters are currently protecting their health and environment with SoyFoam™ TF 1122

"We've used it on structure and vehicle fires with outstanding results."

Jeff King
Assistant Chief
Corydon, Kentucky Fire Department

"I don't want to fill up someone's house with something that's going to give them cancer later."

John Hejl
Fire Chief
Casselton North Dakota

"After learning about the harmful effects that PFAS pose, we were determined to do what was necessary to protect our firefighters. The decision to cease using a product found to have harmful effects was an easy one but this left our department with fewer options to fight difficult, ignitable liquid fires. We were delighted to hear about a product that allows us to do our job effectively and safely. We think that TF 1122 offers a solution that is a safe means to protect our community and the firefighters that serve this community."

Daniel Hord
Deputy Chief of Resource Management,
Columbus Georgia Fire and Emergency Medical Services

USDA CERTIFIED BIOBASED PRODUCT PRODUCT 84%

U.S. SOY

U.S. soybean farmers supported the testing and development of this product through their soy checkoff and the United Soybean Board.

Cross Plains SOLUTIONS