



Certified PFAS-free &
Environmentally Preferred Products
in Firefighting Foam, Food Service
Ware, & Furniture Fabrics

Mark S. Rossi, PhD



Solutions for a safe & healthier tomorrow



BIZNGO FOR
SAFER CHEMICALS &
SUSTAINABLE MATERIALS



INVESTOR
ENVIRONMENTAL
HEALTH NETWORK



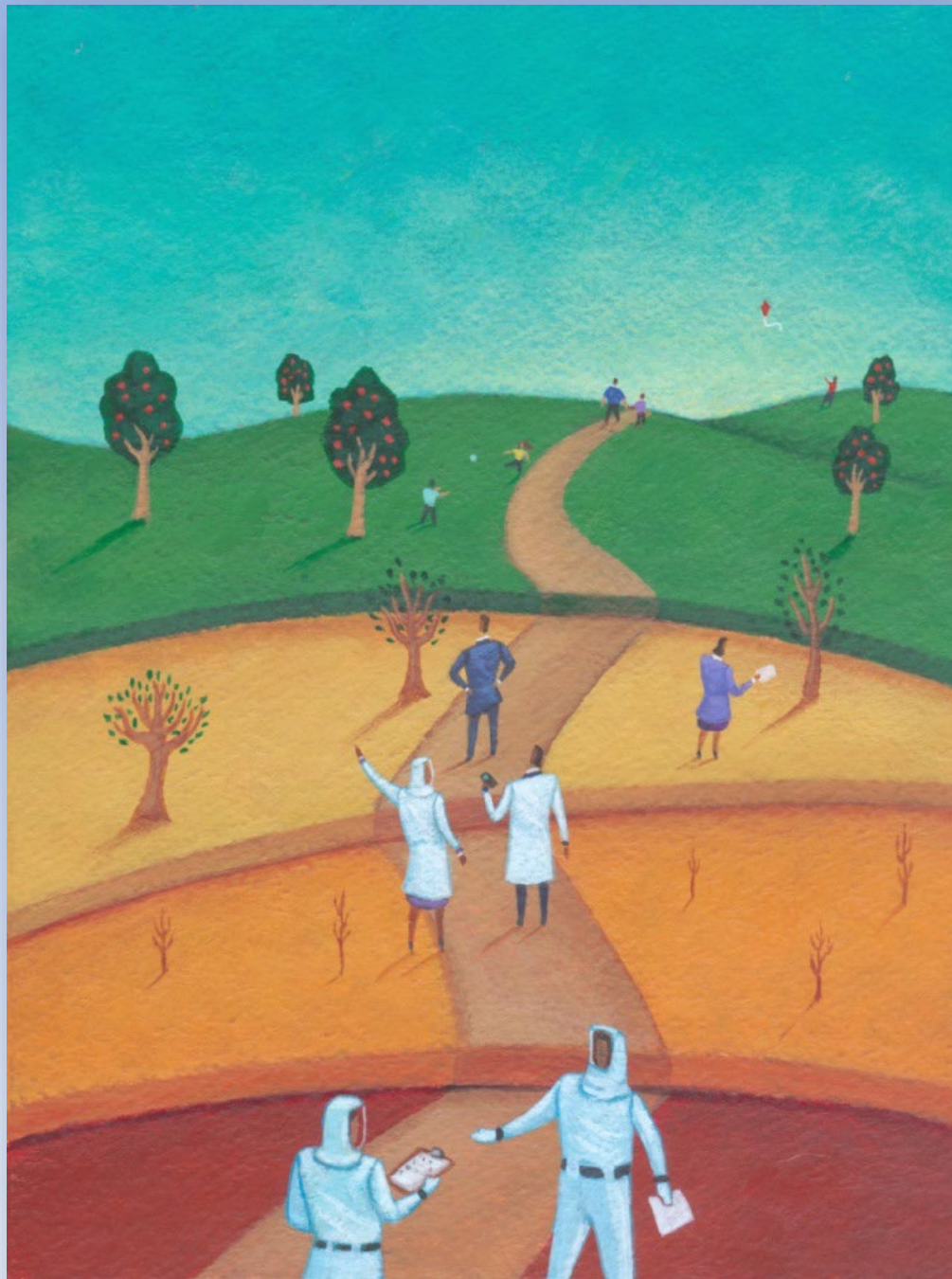
GREENSCREEN
FOR SAFER
CHEMICALS



CHEMICAL
FOOTPRINT
PROJECT

We want PFAS-free products

But, how do we know an alternative products is ...



Safer & environmentally preferable

Not a regrettable substitute

“PFAS-free”

Simplifying complexity & communicating preferred alternatives





Trusted 3rd Party



LEVI STRAUSS & CO.





GreenScreen Certified™ - enhancing
the health of people and the planet
by providing PFAS-free and
preferred products

Firefighting Foam
Food Service Ware
Furniture & Fabrics
Textile Chemicals
Cleaners & Degreasers



PFAS-free & Preferred Products

- **Firefighting Foam** – 15 products from 5 manufacturers
- **Food Service Ware** – 48 products from 2 manufacturers
- **Furniture & Fabrics** – 4 products from 2 manufacturers
- **Cleaners & Degreasers in Manufacturing** – 8 products from 3 manufacturers
- **Textile Chemicals** – 142 products from 7 manufacturers

217 products from 19 manufacturers

Manufacturers reformulating to meet GreenScreen Certified requirements

<https://www.greenscreenchemicals.org/certified>



What does “PFAS-free” mean?

- Intentionally added PFAS: not allowed in any certification*
- Impurities:
 - Thresholds set for all standards
 - Testing requirements set for
 - Firefighting Foam
 - Food Service Ware
 - Furniture & Fabrics (fabrics)



* One exception in furniture & fabric: PTFE allowed in powder coatings for bronze level

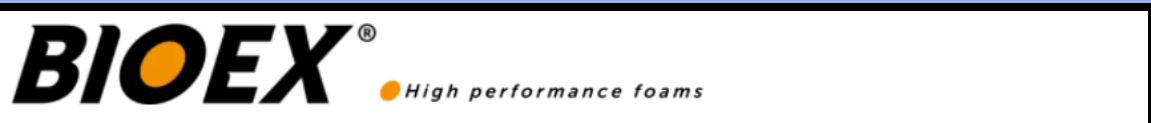
GREENSCREEN CERTIFIED PFAS TESTING REQUIREMENTS FOR IMPURITIES/RESIDUALS/NON-FUNCTIONAL CONSTITUENTS


PFAS Testing	Firefighting Foam v2.1	Furniture & Fabric v1.1	Food Service Ware v1.0
Measurement method	Total organic fluorine (TOF)	Total fluorine	Total fluorine
Threshold to pass	< 1 ppm	< 100 ppm	< 100 ppm
Analytical technique	Combustion Ion Chromatography (CIC)	CIC or Ion selective electrode (ISE)	CIC or ISE
Minimum Detection Limit (MDL)	1 ppm TOF	50 ppm or lower	50 ppm or lower
Analytical laboratories	ALS	Any with MDL < 50 ppm; labs include Galbraith (ISE), SGS, and Eurofins	Galbraith

GreenScreen Certified™ Products > Firefighting Foam

Company ▼	Product Type ▲	Product ▼	Level ▼	Version & Certificate# ▼	Exp	
National Foam, Inc.	Firefighting Foam Class A & B fires	MuniF3 Green 3% Synthetic Fluorine Free Foam	Silver	v2.1 #20211138	2026	
Angus Fire Ltd	Firefighting Foam Class A & B fires	Frontier 3%	Silver	v2.1 #20211160	2026-07-31	
Verde Environmental, Inc	Firefighting Foam Class A & B Wetting Agent	Micro-Blaze Out	Silver	v2.1 #20211147	2026-07-28	Patented microbial technology; UL Listed; NFPA 18
BIOEX	Firefighting Foam Class A & B Wetting Agent	ECOPOL F	Silver	v2.1 #20211016	2026-03-30	
National Foam, Inc.	Firefighting Foam Class B	UniversalF3 Green 3x3	Silver	v2.1 #20211135	2026-04-21	UL; ULC, LASTFIRE; EN1568 Parts 3 and 4; NFPA 11; NFPA 16

Class A Foam Concentrates
Class B Foam Concentrates
Class A Wetting Agents
Class A&B Wetting Agents





EnviroMail™ 137 - Are your firefighting foams fluorine free?

GreenScreen, a non-government organisation based in the US, offers certification of Class A & B foam concentrates and wetting agents as fluorine free. Under the certification, PFAS-free is defined as PFAS contamination below 0.0001% by weight of the product (1 part per million) measured as total organic fluorine by combustion ion chromatography. This reflects an extremely conservative limit given the level of PFAS intentionally added to achieve foaming/filming properties is in the region of 0.1% by mass.

GreenScreen utilises ALS Australia to perform TOF analysis for its certification of fluorine free firefighting foam products.

[GreenScreen Certified™](#) | [GreenScreen® For Safer Chemicals \(greenscreenchemicals.org\)](#)

Michigan.gov

Department of Environment, Great Lakes, and Energy

Michigan PFAS Action Response Team

HEALTH | DRINKING WATER | INVESTIGATIONS | TESTING | FISH & WILDLIFE

PFAS RESPONSE / PFAS FOAM

Firefighting Foam and PFAS


FLOURINE-FREE AFFF

Now that we know what to look for, you can learn more information on PFAS-free material from the [Known PFAS-free Foam](#). (this list is accurate as of April 2019). You may also consult the GreenScreen [GreenScreen® For Safer Chemicals \(greenscreenchemicals.org\)](#). Please note, the State of Michigan does not have a PFAS product.

Until today no chemicals used

Dr. Mark S. Ros:

Look for the GreenScreen Certified logo on foam concentrates. Each ingredient is independently assessed against various human health and environmental concerns regarding GreenScreen Certified products. www.greenscreenchemicals.org





WISCONSIN
DEPARTMENT OF
NATURAL RESOURCES

HUNTING FISHING

FLUORINE-FREE FIREFIGHTING FOAMS

A few organizations offer lists of what are believed to be fluorine-free firefighting foams, including:

- [Interstate Chemicals Clearinghouse \(IC2\)](#) [\[exit DNR\]](#)
- [Wisconsin State Fire Chiefs Association](#) [\[exit DNR\]](#)
- [GreenScreen™ Certified Products](#) [\[exit DNR\]](#)



Standard Elements

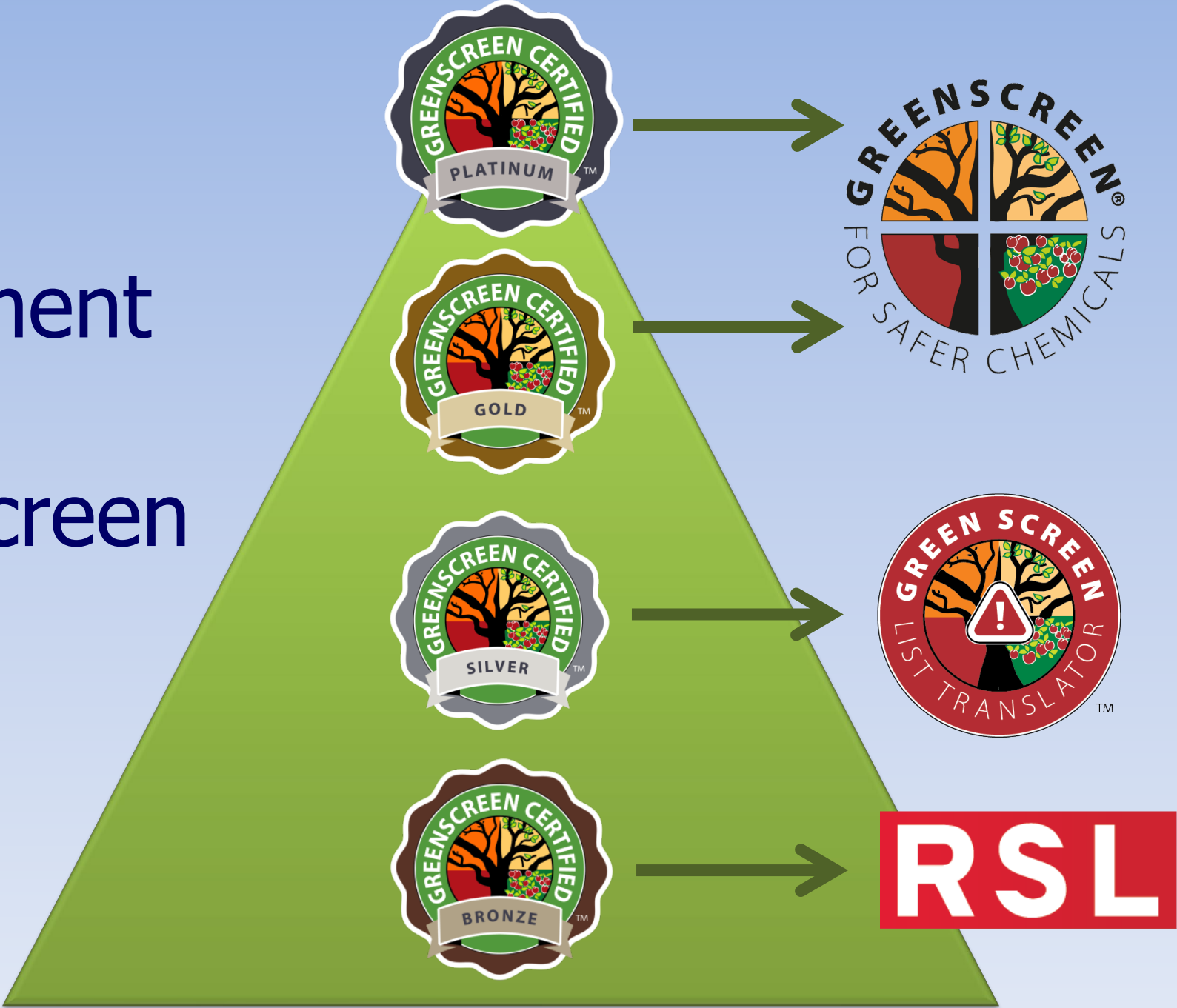
1. Chemical inventory disclosed under confidentiality
2. Product meets all Restricted Substances List (RSL) requirements
3. All chemicals assessed for hazard using GreenScreen tools
4. Product meets all Analytical Testing Requirements



RSL Example (beyond PFAS): Food Service Ware

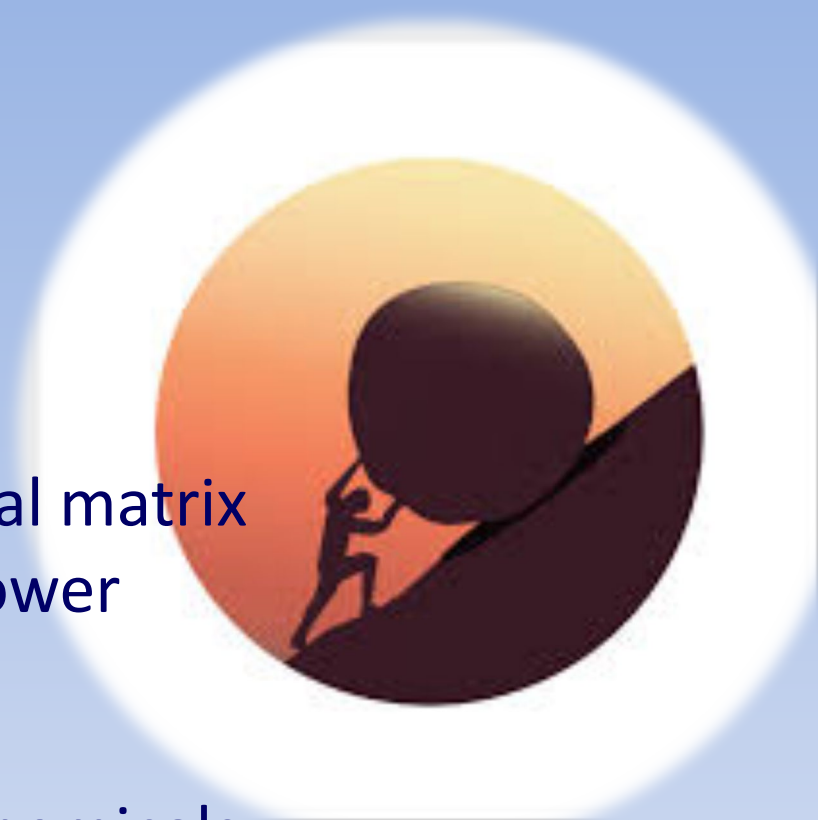
1. Food Packaging Forum Priority Substances List
2. Alkylphenols and alkylphenol ethoxylates
3. Bisphenols
4. Organohalogens (including chlorinated plastic)
5. Ortho-phthalates
6. Siloxanes: Cyclic volatile methyl siloxanes
7. Parabens
8. Benzophenones
9. Organotin Compounds
10. Compounds of Cadmium, Chromium VI, Lead, and Mercury
11. Antimony-based catalyst in PET
12. Antimicrobials
13. Nanomaterials
14. Diglycidyl ethers of bisphenols
15. MOSH and MOAH
16. Polycyclic Aromatic Amines
17. Other Chemicals of Concern

Hazard Assessment with GreenScreen Tools



Challenges

- PFAS Testing
 - Lack of standardized test methods
 - Relevant test methods vary depending on material matrix
 - Test methods evolving with greater accuracy at lower detection levels
- Alternatives
 - Manufacturers may not know, beyond the SDS, chemicals used in alternative formulations to PFAS
 - Suppliers often will not disclose, even to third parties
- Demand
 - Manufacturers need clear, consistent, and loud messaging from purchasers that they want certified products



Thank you! Questions?

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