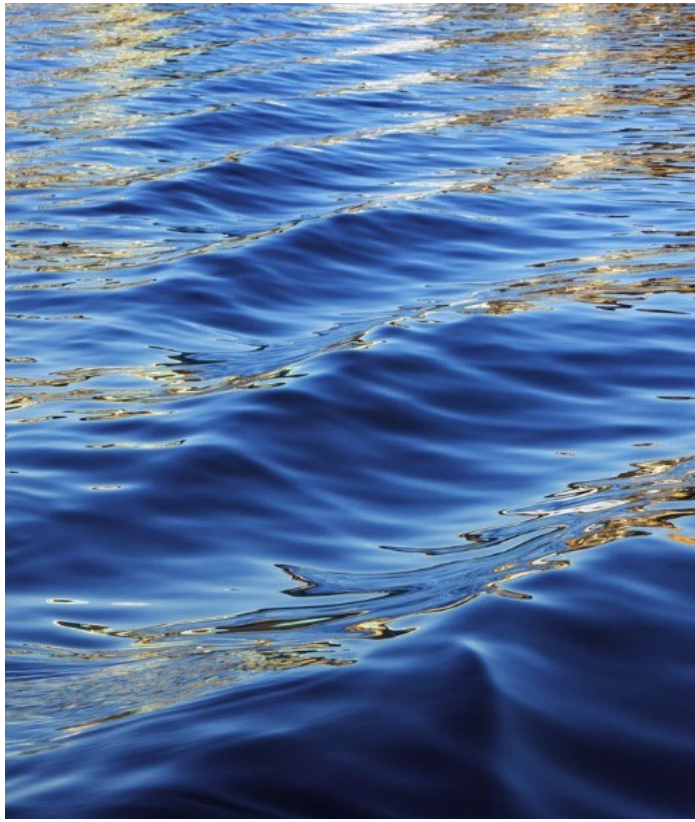
TURI Services

Reporting Workshops - 2025



Toxics Use Reduction Institute (TURI)

- Education and Training for TUR Planners
- Science and Policy
  - Science Advisory Board
  - Policy analysis, data analysis
- Research, development and assessment of safer alternatives
  - University research grants, collaborative business-researcher grants
  - Laboratory services for industrial and janitorial cleaning
  - Alternatives assessment
- Technical and financial support to businesses and communities
  - Grants and information resources
  - Business supply chain workgroups and research

Education and Training

- March 2025 International ChemCon Conference in Boston
  - Coordinated with ChemCon to offer this opportunity to TUR planners
- Alternative Planning – RC and EMS
  - Hybrid TURA Environmental Management System course (March 2025), with in-person segment at MA company Gem Gravure
  - Energy Conservation Webinar (May 2025) with OTA

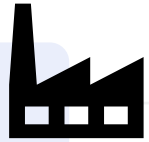
- TUR Planner certification course (Aug – Oct 2025)
  - New improvements, more user-friendly interface
  - Begin remote modules in Mid-August 2025
  - In person sessions October 2025
- Beyond the Safety Data Sheet (available free online anytime)
  - In-house training at Flexcon (April 2025)
- Track upcoming events from TURI's home page and calendar
  - Contact training@turi.org for more info

TURI Training Program – Upcoming Webinars

- Environmental Justice Webinar on June 4 at 1:30 pm
- Math Skills for TUR Reporting and Planning Webinar (3 CEUs) on June 17 from 1:00 pm – 2:30 pm
- Additional webinars on policy, technology, science and TUR planning skills will be held monthly for TUR planners
- Toxics Use Reduction (TUR) Planner Course (Fall 2025)
- Resource Conservation Planning Course (Early 2026)

TURA Grants Update

Business Grants



- New Method Plating - Eliminate TCE use and set up demonstration site to spread adoption of TUR innovations
- Conklin Office Furniture– Alternatives to toxic solvents for furniture recycling

Research Grants

- Haartz - PFAS free fabrics for automobiles
- Safer alternatives to PFAS in food packaging
- PIGE identification of PFAS in consumer products for vulnerable groups (with Clean Water Fund and Silent Spring Institute)

Community Grants

- Berkshire Regional Planning Commission – Plastics and Microplastics Reduction
- Brazilian Women's Group - Transitioning to Safer Cleaning Products

Connect with us!

www.turi.org

newsletter – monthly updates and timely information

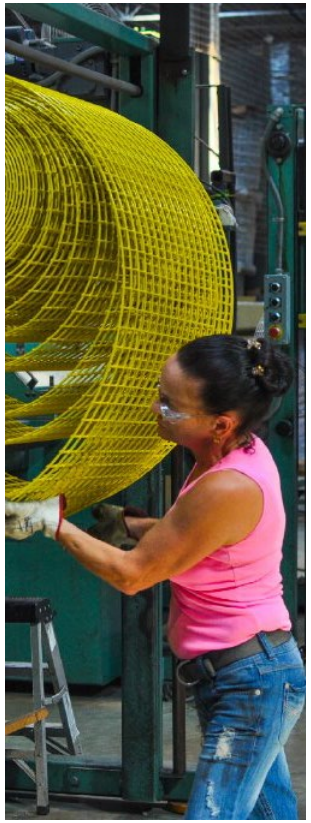
Linkedin – connect for latest news!

facebook

Instagram – for latest short videos

Connect with our staff!

Don't know who to ask? 978-934-3275 or info@turi.org



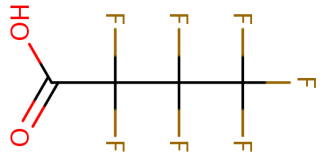
PFAS update

Reporting Workshops - 2025

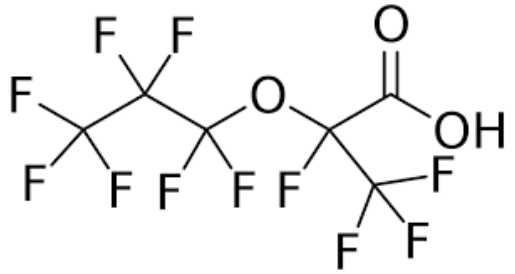
TURA Certain PFAS NOL Category

For the 2022 Reporting Year, the Certain PFAS NOL category was added under TURA. The Certain PFAS NOL category is defined as those PFAS that contain:

- a perfluoroalkyl moiety with three or more carbons
  (e.g., $–C_nF_{2n}–$, $n \geq 3$; or $CF_3–C_nF_{2n}–$, $n \geq 2$)



- a perfluoroalkylether moiety with two or more carbons
  (e.g., $–C_nF_{2n}OC_mF_{2m}–$ or $–C_nF_{2n}OC_mF_m–$, n and m ≥ 1)



wherein for the example structures shown, the dash (–) is not a bond to a hydrogen and may represent a straight or branched structure, and that are not otherwise listed.

PFAS Tracking and Reporting: TRI and TURA

	Report to TRI	TURA tracking starting	Report to DEP	How Reportable	Threshold
TURA Certain PFAS NOL	---------	January 1, 2022	July 1, 2023	As a category	25,000 lbs. mfg/ proc 10,000 lbs. otherwise used
172 TRI/TURA PFAS – 2020	July 1, 2021	January 1, 2021	July 1, 2022	Individually	100 lbs. (de minimis exemption no longer applies)
Four TRI PFAS – 2021	July 1, 2022	January 1, 2023	July 1, 2024		
Four TRI PFAS – 2022	July 1, 2023				
Nine TRI PFAS – 2023	July 1, 2024	January 1, 2024	July 1, 2025		
Seven TRI PFAS - 2024	July 1, 2025	January 1, 2025	July 1, 2026		
Nine TRI PFAS – 2025	July 1, 2026	*Anticipated Jan 1, 2025*	*Anticipated July 1, 2026*		

TURI
TOXICS USE REDUCTION INSTITUTE

PFAS Guidance

Lists provided as guidance for reporting

TURA Certain PFAS NOL lists: generated from PFAS that are known to be in commerce, primarily from EPA TSCA reporting

PFAS in TURA TRI list: reportable individually at 100 lb threshold with no de minimis exemption

Some PFAS are also C1-C4 Halogenated Compounds

These lists are **NOT** exhaustive

PFAS Guidance Table 1

Table 1 TURA/TRI PFAS Substances to Continue Reporting Individually, if more than 100 lbs/year used	
307-35-7	Perfluorooctylsulfonyl fluoride
307-55-1	Perfluorododecanoic acid
335-66-0	Octanoyl fluoride, pentadecafluoro-
335-67-1	Perfluorooctanoic acid
335-71-7	1-Heptanesulfonyl fluoride, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-
335-76-2	Perfluorodecanoic acid
335-93-3	Silver(I) perfluorooctanoate (reportable under TRI as of 1/1/21)
335-95-5	Sodium perfluorooctanoate
355-46-4	Perfluorohexanesulfonic acid
375-22-4	PFBA (reportable under TRI as of 1/1/23)
375-73-5	Perfluorobutane sulfonic acid (PFBS) (reportable under TRI as of 1/1/22)
375-95-1	Perfluorononanoic acid
376-06-7	Perfluorotetradecanoic acid
376-14-7	2-[Ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl methacrylate
376-27-2	Methyl perfluorooctanoate
383-07-3	2-[Butyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl acrylate
423-82-5	2-[Ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl acrylate
507-63-1	Perfluorooctyl iodide (reportable under TRI as of 1/1/21)
678-39-7	1-Decanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-
865-86-1	1-Dodecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluoro-
1652-63-7	3-[[(Heptadecafluorooctyl)sulfonyl]amino]-N,N,N-trimethyl-1-propanaminium iodide
1691-99-2	N-Ethyl-N-(2-hydroxyethyl)perfluorooctanesulfonamide
1763-23-1	Perfluorooctane sulfonic acid

PFAS Guidance Table 4

Table 4 PFAS Substances Known to be in Commerce that are Reported as part of the Certain PFAS NOL Category	
306-91-2	*Phenanthrene, 1,1,2,2,3,3,4,4,4a,4b,5,5,6,6,7,7,8,8,8a,9,9,10,10,10a-tetracosafluorotetradecahydro-*
306-94-5	Naphthalene, 1,1,2,2,3,3,4,4,4a,5,5,6,6,7,7,8,8,8a-octadecafluorodecahydro-
307-24-4	Hexanoic acid, 2,2,3,3,4,4,5,5,6,6,6-undecafluoro-
307-30-2	1-Octanol, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-
307-34-6	Octane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-octadecafluoro-
307-60-8	Dodecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12-pentacosafluoro-12-iodo-
307-63-1	Tetradecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14-nonacosafluoro-14-iodo-
307-70-0	1-Undecanol, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-eicosafluoro-
307-98-2	2-Propenoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctyl ester
311-89-7	1-Butanamine, 1,1,2,2,3,3,4,4,4-nonafluoro-N,N-bis(1,1,2,2,3,3,4,4,4-nonafluorobutyl)-
335-27-3	Cyclohexane, 1,1,2,2,3,3,4,5,5,6-decafluoro-4,6-bis(trifluoromethyl)-
335-36-4	Cyclohexane, 1,1,2,2,3,3,4,5,5,6-decafluoro-4,6-bis(trifluoromethyl)-
335-42-2	Furan, 2,2,3,3,4,4,5-heptafluorotetrahydro-5-(1,1,2,2,3,3,4,4,4-nonafluorobutyl)-
335-57-9	Butanoyl fluoride, 2,2,3,3,4,4,4-heptafluoro-
336-08-3	Heptane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-hexadecafluoro-
336-59-4	Hexanedioic acid, 2,2,3,3,4,4,5,5-octafluoro-
338-83-0	Butanoic acid, 2,2,3,3,4,4,4-heptafluoro-, 1,1'-anhydrid
338-84-1	1-Propanamine, 1,1,2,2,3,3,3-heptafluoro-N,N-bis(1,1,
355-02-2	Cyclohexane, 1,1,2,2,3,3,4,4,5,5,6-undecafluoro-6-(trifl
355-38-4	Hexanoyl fluoride, 2,2,3,3,4,4,5,5,6,6,6-undecafluoro-
355-42-0	Hexane, 1,1,1,2,2,3,3,4,4,5,5,6,6,6-tetradecafluoro-
355-43-1	Hexane, 1,1,1,2,2,3,3,4,4,5,5,6,6-tridecafluoro-6-iodo-
1807944-82-6	1-Octanesulfonic acid, 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluoro-, barium salt (2:1)
3030471-22-5	Acetic acid, [(γ-ω-perfluoro-C8-10-alkyl)thio] derivs., Bu esters
NA	EFEP ethylene-tetrafluoroethylene-hexafluoropropylene terpolymer
307-24-4	Perfluorohexanoic acid (PFHxA) (reportable under TRI as of 1/1/24)
2923-26-4	Sodium perfluorohexanoate (reportable under TRI as of 1/1/24)
21615-47-4	Ammonium perfluorohexanoate (reportable under TRI as of 1/1/24)
2816091-53-7	Betaines, dimethyl(.gamma.-.omega.-perfluoro-.gamma.-hydro-C8-18-alkyl) (reportable under TRI as of 1/1/24)

Prevention

Evaluate use and function. Is it necessary?

Identify process improvement opportunities

Evaluate safer alternatives

Focus program resources: technical assistance, grants, research, information

Right-to-Know reporting on use and byproduct

Safer Alternatives

https://www.youtube.com/watch?v=EOAa1YwAiy4

Transene Company Eliminates its Use of PFAS and Saves Money

TRANSENE COMPANY, INC.

SUMMARY

Transene worked with the Toxics Use Reduction Institute (TURI), the Massachusetts Office of Technical Assistance (OTA), and the University of Massachusetts Lowell (UMass Lowell) to find safer alternatives

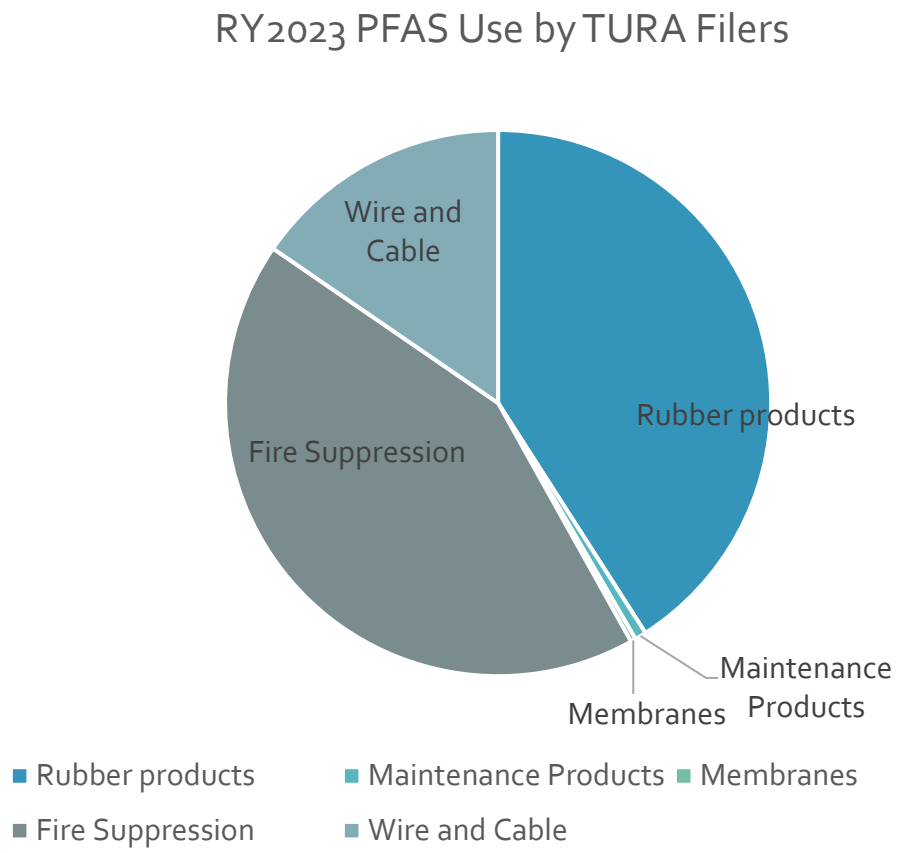
Transene Company, a manufacturer of advanced materials for the electronics industry, wanted to find viable alternatives to perfluoroalkyl substances (PFAS) use in semiconductor manufacturing in response to customer demands for PFAS-free products. Because PFAS have unique properties that can be difficult to replace, Transene's president, Christopher Christuk, turned to TURI and the University of Massachusetts (UMass) Lowell for help.

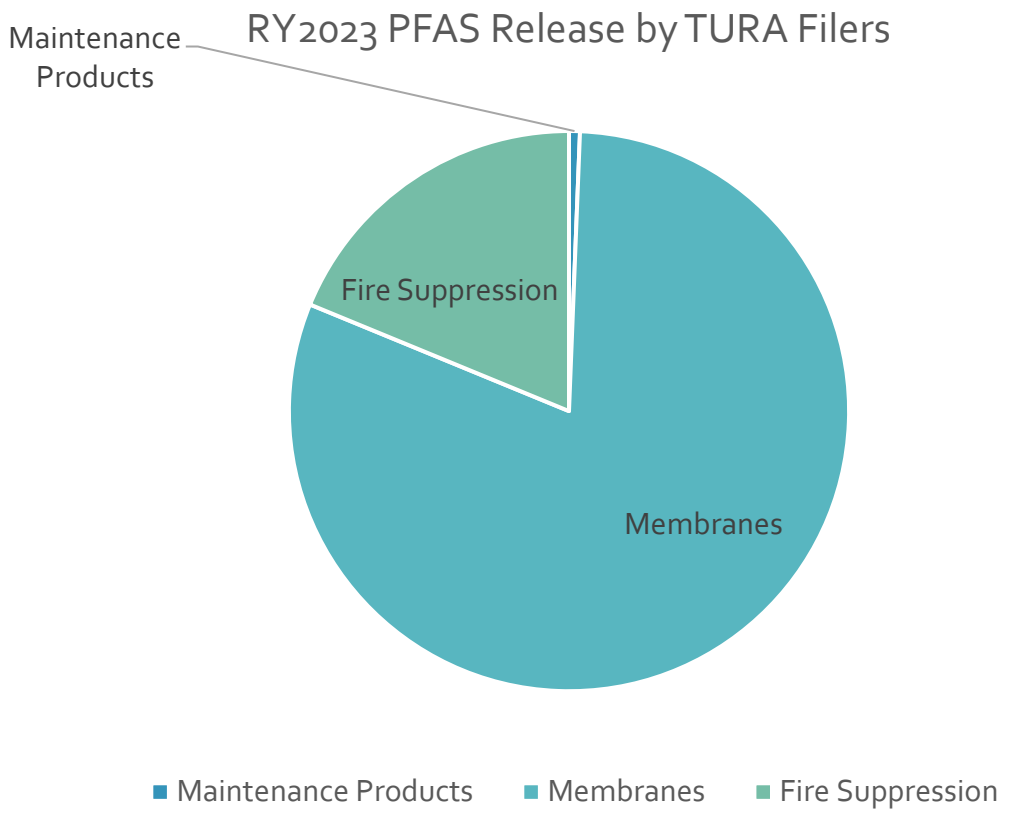
PFAS, a class of thousands of chemicals, are often dubbed "forever chemicals" because they never fully break down in the environment. Found in a wide array of consumer and industrial products such as waterproof fabrics, food packaging, dental floss and nonstick cookware, PFAS are associated with numerous health risks, including cancer, liver damage, decreased fertility and increased risk of asthma and thyroid disease.

Surfactants based on PFAS are widely used for etching in the semiconductor industry because they are extremely stable even under strongly acidic and alkaline conditions. Although effective, the toxicity and high persistence of PFAS necessitate

TURI
TOXICS USE REDUCTION INSTITUTE
UMASS LOWELL

Use and Release of PFAS by TURA Filers

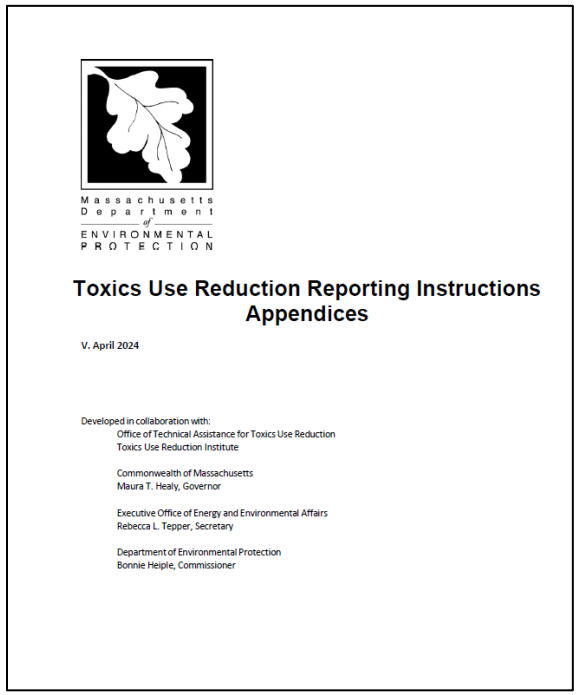




TURI
TOXICS USE REDUCTION INSTITUTE
UMASS LOWELL

PFAS Reporting Resources

- TURA Reporting Instructions
  - Appendices have PFAS reporting guidance
- TURA Chemical list
  - PFAS Excel sheet



Massachusetts Department of ENVIRONMENTAL PROTECTION

Toxics Use Reduction Reporting Instructions Appendices

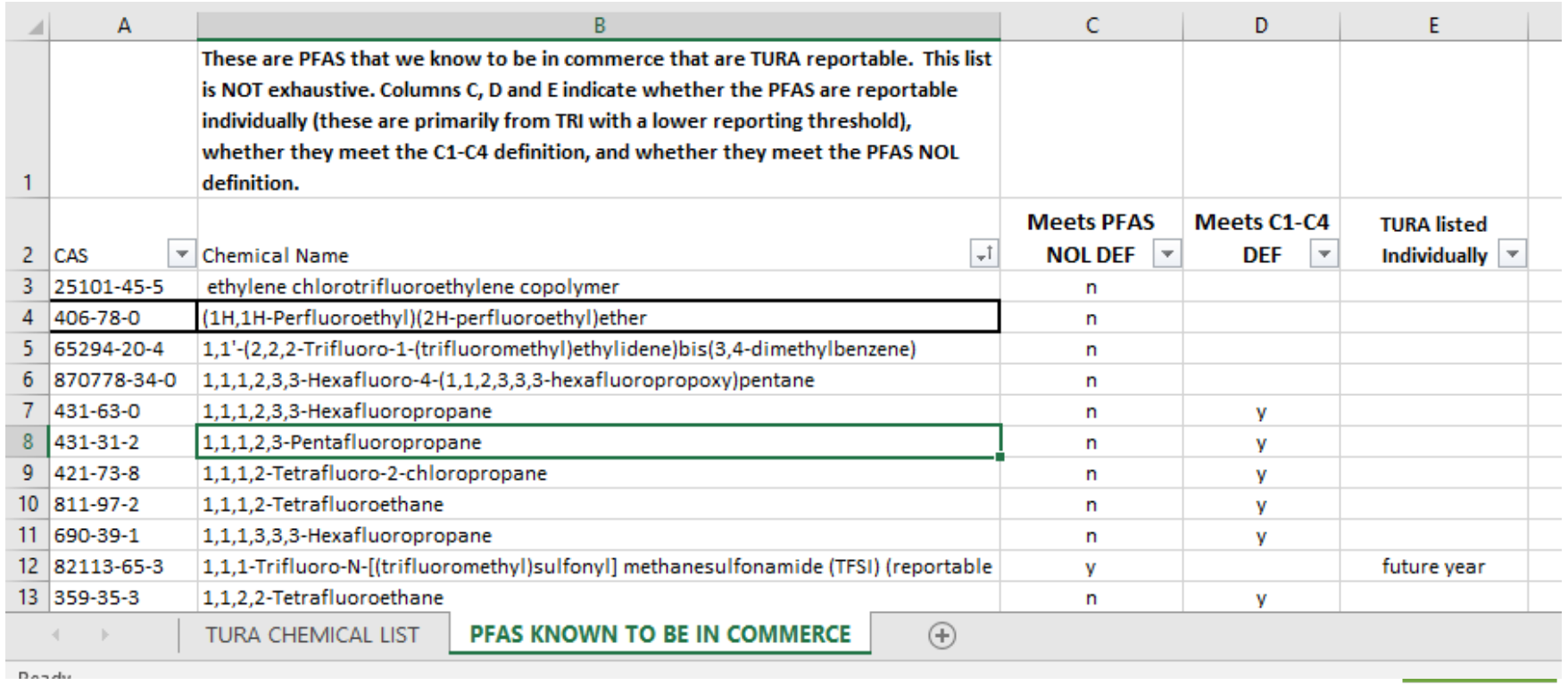
V. April 2024

Developed in collaboration with:
Office of Technical Assistance for Toxics Use Reduction
Toxics Use Reduction Institute

Commonwealth of Massachusetts
Maura T. Healy, Governor

Executive Office of Energy and Environmental Affairs
Rebecca L. Tepper, Secretary

Department of Environmental Protection
Bonnie Heiple, Commissioner



	A	B	C	D	E
1		**These are PFAS that we know to be in commerce that are TURA reportable. This list is NOT exhaustive. Columns C, D and E indicate whether the PFAS are reportable individually (these are primarily from TRI with a lower reporting threshold), whether they meet the C1-C4 definition, and whether they meet the PFAS NOL definition.**			
2	CAS	Chemical Name	Meets PFAS NOL DEF	Meets C1-C4 DEF	TURA listed Individually
3	25101-45-5	ethylene chlorotrifluoroethylene copolymer	n		
4	406-78-0	(1H,1H-Perfluoroethyl)(2H-perfluoroethyl)ether	n		
5	65294-20-4	1,1'-(2,2,2-Trifluoro-1-(trifluoromethyl)ethylidene)bis(3,4-dimethylbenzene)	n		
6	870778-34-0	1,1,1,2,3,3-Hexafluoro-4-(1,1,2,3,3,3-hexafluoropropoxy)pentane	n		
7	431-63-0	1,1,1,2,3,3-Hexafluoropropane	n	y	
8	431-31-2	1,1,1,2,3-Pentafluoropropane	n	y	
9	421-73-8	1,1,1,2-Tetrafluoro-2-chloropropane	n	y	
10	811-97-2	1,1,1,2-Tetrafluoroethane	n	y	
11	690-39-1	1,1,1,3,3,3-Hexafluoropropane	n	y	
12	82113-65-3	1,1,1-Trifluoro-N-[(trifluoromethyl)sulfonyl] methanesulfonamide (TFSI) (reportable	y		future year
13	359-35-3	1,1,2,2-Tetrafluoroethane	n	y	

TURA CHEMICAL LIST | PFAS KNOWN TO BE IN COMMERCE

Identifying PFAS Use in Facilities

Common uses of PFAS in metal finishing processes*

- Cr plating, anodizing, plastic etching – wetting agents, fume/mist suppressants
- Non-Cr metal plating - products that regulate foam, improve bath stability, aid in metal deposition, and improve the quality of the final plate
- Chromate conversion coating - wetting agents, fume suppressants
- Various powder coatings
- Degreasing - HFE solvents

Review and Interpret SDSs

- Companies can check SDSs for products likely to contain PFAS
- Confidential Business Information (CBI) – contact supplier or OTA for help
- If no CAS numbers are available for fluorinated compounds, contact supplier or OTA for help.

Send a notification letter to your chemical or product supplier

- Companies can use OTA's template to notify supplier
- Can involve purchasing department in this effort
- Keep records to demonstrate good faith effort

Contribute to developing product list

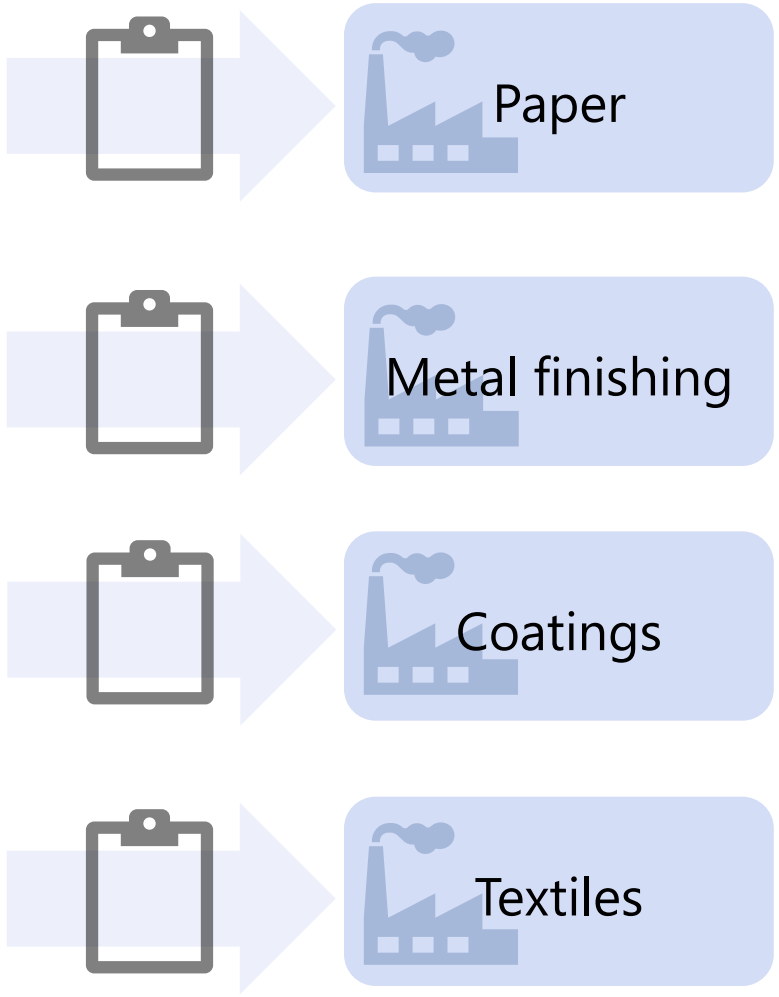
- The TURA program is developing a list of products confirmed to contain PFAS
- If a supplier notifies you of products containing PFAS, please share this information with OTA/TURI

*PFAS in the metal plating and finishing industry (gp3-05), MN Pollution Control Agency, 12/22

Resources for Companies: PFAS Identification

Assessments to identify PFAS sources

(in development)



- OTA technical staff flag likely sources of PFAS
  - Companies may share list of CAS numbers with OTA
- OTA and TURI pursue research on products of concern
- Companies may opt to share product information with OTA to populate a list of PFAS-containing products

TURI
TOXICS USE REDUCTION INSTITUTE