



Testimony: HB 386: Pesticides – PFAS Chemicals – Prohibition

Submitted to: The House Committee on Health & Government Operations
Submitted by: Bonnie Raindrop, Program Director, Smart on Pesticides Coalition and Ruth Berlin, Executive Director, Maryland Pesticide Education Network
Position: In Support

February 12, 2025

Dear Chair Pena-Melnyk, Vice Chair Cullison and Members of the Committee,

The Smart on Pesticides Coalition (SOPC) comprised [of 114 organizations and businesses](#), and facilitated by the Maryland Pesticide Education Network, whose mission is to protect all life from toxic pesticides and promote healthy alternatives, both support passage of HB386 phasing out PFAS-pesticides used in Maryland

- HB 386 provides a critical action to reduce PFAS pollution from pesticides in Maryland (Md). No need to test any of these pesticides – their actual active ingredient is a PFAS, as identified by National Institutes of Health PubChem and EPA, [see attached chart](#). These currently 66 PFAS pesticide active ingredients contained in approximately 1,000 Maryland-registered pesticides are confirmed to be PFAS by EPA’s CompTox Chemical Dashboard, [see screenshots](#), a database that is part of EPA’s PFAS Analytic Tools.
- Of the 14,000 Md registered pesticides – less than 8% are currently known to us to be PFAS. There are many Md registered alternatives, sometimes hundreds, for the products that have a PFAS as an active ingredient. These known PFAS pesticides can be swapped out for another product that is not a known “forever chemical” that targets the same pests.
- The George Walter Taylor Act Action Plan, released by Maryland Dept. of the Environment (MDE) in December 2023 clearly states that **“MDA will consider a pesticide product adulterated if PFAS is found in the formulation itself.” This provides the directive for pesticides with a PFAS active ingredient to have their registrations revoked.**
- HB386, similar to The George Walter Taylor Act law, defines PFAS in alignment with EPA’s definition identifying over 14,000 PFAS chemicals, in its CompTox Chemicals Dashboard, and used by 22 states, Congress, and the U.S. Military. States that use the same definition as Maryland’s of “one fully fluorinated carbon atom” are: Arkansas, Arizona, California, Colorado, Connecticut, Georgia, Kentucky, Hawaii, Illinois, Indiana, Louisiana, Maryland, Maine, Minnesota, New Hampshire, Nevada, New York, Ohio, Oregon, Rhode Island, Vermont, and Washington. HB386 PFAS definition is also similar to the definition created by a group of international scientists that included U.S. EPA via the Organization for Economic Cooperation & Development (OECD), comprised of 37 member nations including the United States, and adopted by the European Union in their pending regulation of PFAS

Consider this:

“If the intent was to spread PFAS contamination across the globe there would be few more effective methods than lacing pesticides with PFAS,” [PEER Science Policy Director Kyla Bennett](#), and former EPA attorney

- **A recent first in the state PFAS in human blood study conducted by the Johns Hopkins School of Public Health and the Maryland Pesticide Education Network** and conducted with the world-renowned Eurofins Laboratory found concerning levels of PFAS in all participants from around the state.
- Both authors of this testimony were also tested by the Eurofins lab, independently of the study and the results for both of us were in the “concerning range” that the National Academy of Sciences Engineering & Medicine considers the range for “potential adverse effects- especially for sensitive populations”. One of us is in ongoing treatment for ovarian cancer, thyroid disease and we both have high cholesterol—all linked to PFAS exposure—and both have multiple health issues that put us in the “sensitive populations” category.
- **At a recent 2025 HGO briefing on PFAS MDA and MDH shared several conclusions from their 2023 study group established by law in 2022 which need to be updated and/or clarified:**
 - **MDA statement: “MDA test over 700 pesticides for PFAS and found no PFAS.”** These testing results are not relevant to HB386 and the PFAS pesticides it phases out because these 66 cannot be detected this way.
 - ❖ **There are no current testing methods for these PFAS-pesticides where the active ingredient is a PFAS. MDA could only test for a very limited number of PFAS from container contamination and possibly PFAS inert ingredients added to the product.**
 - ❖ Current PFAS testing methods only test for 25-70 PFAS compounds of the nearly 15,000 PFAS compounds.
 - ❖ **A strength of HB 386 is that no testing is needed.** These 66 pesticide active ingredients are known PFAS listed on product labels – this fact is not in dispute. As per bullet 1, [see attached chart](#) and [see screenshots](#).
 - **MDH told the study group they couldn't find any studies showing adverse health impacts from PFAS-pesticides.**
 - ❖ Dr. Ichniowski's 2025 written bill testimony, on behalf of American Academy of Pediatrics–MD Chapter, **cites numerous** animal studies and *in vitro* human cell **studies that have identified adverse health effects from PFAS pesticides currently approved for use in Maryland. Please see his testimony for a partial list that includes long term health impacts of PFAS-pesticides, including two significantly used in Maryland – Bifenthrin and Fipronil.** Both are heavily marketed to healthcare for indoor/outdoor use and Bifenthrin is also used for mosquito control. They are *linked to* teratogenicity (harm to fetal growth, anatomy, and development), immunotoxicity, endocrine disruption, carcinogenicity, neurotoxicity, and thyroid toxicity.

Dr. Ichniowski's citations include:

 - [PFAS Pesticides: A Growing Source of PFAS Contamination in the Environment](#) (Environmental Health Perspectives)
 - [Revisiting pesticide pollution: The case of fluorinated pesticides](#)
 - Bifenthrin (a PFAS pesticide, the active ingredient on the label is a PFAS) [PubChem Hazardous Substance Data Bank \(HSDB\) - Bifenthrin](#)
 - Fipronil (A PHAS pesticide, active ingredient listed on label) [PubChem Hazardous Substance Data Bank \(HSDB\) Fipronil](#)
- Prior to the current federal administration, **EPA’s lifetime safe level for the most notorious PFAS, PFOS, in drinking water was 4 parts per trillion (ppt)** and federal government regulators were close to establishing a discharge limit for PFAS manufacturers. In January 2025, President Trump issued a sweeping executive order withdrawing these proposed regulations. (<https://www.cbsnews.com/newyork/news/trump-drinking-water-regulations-forever-chemicals-pfas/>).
- **Given the current Trump administration intensions to weaken and limit the work of the US EPA, it behooves states, including Maryland, to address critical environmental health issues including PFAS-pesticides.** We cannot rely on EPA to continue doing its job for the foreseeable future. PFAS pesticides are absorbed and run off from lawns, crops, and farmland where they are applied, contaminating the soil, streams, rivers, wells, and the Bay. Millions of Marylanders’ drinking water comes from surface **waters and wells that are consequently PFAS contaminated.**
- **Maryland’s \$600 million dollar seafood industry is also at risk from PFAS** – MDE has issued fish consumption warnings for 15 fish species in the Bay watershed. Eating just one Maryland rockfish could be equivalent to drinking PFAS-tainted water for a month. Keep in mind, these numbers are for a single exposure; we may be eating tainted food every day and it accumulates in our bodies.

- Skin exposure for short chain PFAS pesticides makes them more dangerous for farmers, farm workers and those handling sprayed produce. A [recent study](#) found short chain PFAS more readily absorbed through skin than longer chain PFAS, with higher absorption percentages into the bloodstream than longer chained compounds.
- **PFAS are considered “forever chemicals” because they remain in our bodies for years and decades.** Given our ongoing cumulative exposures to PFAS, it accumulates in our bodies throughout our lifetime.
- **Pesticides do not require PFAS to be effective. There are dozens if not hundreds of alternative pesticides registered in the state for all pests, as noted in entomologist Dr. Todd’s submitted testimony.**

Four years ago, Md legislators wisely took a crucial first step by banning PFAS in firefighting foam, food packaging, carpets, and rugs.

Similar to other toxic chemicals that cause dangerous health impacts such as lead, asbestos, and the pesticide DDT, the first step is identifying the problem. As with these overwhelming issues we have conquered, once identified, the solutions were evasive, and the threat seemed insurmountable. This is where we are with PFAS. The issue and even the solutions have been scientifically clarified. **The time is now for addressing the solutions by turning off the tap from PFAS-pesticides.**

We have reduced lead levels in Md, thanks to needed state laws and policies. Problems that once seemed insurmountable are now, due to wise leaders acting, increasingly becoming success stories. Decades of hard work curbing these harmful chemicals has led to improvements in our environment and hope for better public health. Like all public health reforms once accomplished, **we need to tackle known PFAS in pesticides with a similar strategy.**

Why more PFAS use guardrails are needed

PFAS exposure through pesticides presents a broader risk to Marylanders and our environment than common household items because pesticides are so pervasive. Maryland’s 14,000 pesticides may be used everywhere.

- Everyone is exposed to pesticides where we work and play – in public spaces, healthcare facilities, schools, and our neighborhoods.
- Bifenthrin and Fipronil are two PFAS pesticides targeted by this bill and are heavily marketed to healthcare facilities and schools as indoor/outdoor solutions. Bifenthrin is a popular mosquito control product used by companies that contract with homeowners for scheduled spraying of yards in spring, summer, and fall.
- PFAS pesticides pollute drinking water. These chemicals have made their way into our drinking [water, the rivers we draw surface drinking water from—Potomac, Patuxent, and Susquehanna in drought](#), wells, the soil, [our food](#), and consequently, our bodies. **PFAS-pesticides cannot be extracted from water facilities with current technologies.**
- PFAS in pesticides is a farmer and overburdened communities’ health issue. Farmers, farmworkers and families in agricultural areas bear greater exposures from PFAS-pesticides applied in farming, and greater risk from handling PFAS-pesticides and crops that have been sprayed.
- Those living in poverty are more likely to fish to supplement protein, yet USGS has reported Md fish are testing with PFAS at levels as high as 500,000 parts per trillion.
- People of color are more likely to be harmed; pesticide use against rodent and cockroaches is often higher in lower-income housing due to age of buildings, poor maintenance and often crowded living conditions.
- While there is research underway to extract PFAS from water, there is still no way to safely dispose of the extracted *forever* chemical

Human health impacts

- **PFAS are linked to [serious health impacts even at low levels of exposure](#).** There is strong evidence linking PFAS to kidney, testicular, prostate, ovarian, and breast cancer, birth defects and developmental damage in infants, childhood obesity, thyroid disease, high cholesterol, non-alcoholic fatty liver disease, and impaired immune function. According to Dr. Birnbaum and as noted in her testimony, **PFA “causes” (beyond just linkage) certain cancers**, including one of the two authors of this testimony continues to battle ovarian cancer

with confirmation of notable PFAS levels in her blood.

- **Exposure to PFAS has been associated with increased [COVID-19 susceptibility](#) and with an [increased risk of more severe outcomes from the disease](#)**

Other species health impacts

- Science has shown **PFAS causes harm to [fish and wildlife](#), including pollinating bees and birds.**
- Maryland has found alarming levels of [PFAS in Bay waters, tributaries](#), and fish. These were so high that the [MDE issued a warning](#) against eating [three fish species caught in Piscataway Creek in Prince Georges County and issued 14 PFAS fish advisories](#).
- [New research](#) shows dangerous levels of toxic PFAS in freshwater fish. “You’d have to drink an incredible amount of water — we estimate a month of contaminated water — to get the same exposure as you would from a single serving of freshwater fish,” – *study co-author David Andrews*

The solution

HB 386 is a simple next step to reduce accumulating harm to our bodies, crops, lawns, and the environment by eliminating the unnecessary PFAS pollution from ubiquitous use of pesticides that contain PFAS as their active ingredient. EPA has identified these pesticide active ingredients as PFAS. [MDE’s PFAS action plan states](#) “[MDA will consider a pesticide product adulterated if PFAS is found in the formulation itself.](#)” And there are plenty of alternatives in the more than 13,000 other pesticides that Maryland registers, so H386 will not be a hardship for farmers and professional pesticide applicators to switch to another solution. It’s time to turn off this PFAS tap. **HB386 addresses the need to stop the use of pesticide-containing PFAS chemicals in our communities and is a critical step for states to fill the void now so blatantly left by federal regulators.**

We urge a positive report on HB386.

Bonnie Raindrop, Program Director, Smart on Pesticides Coalition

Ruth Berlin, Executive Director, Maryland Pesticide Education Network

Maryland Pesticide Education Network – Baltimore office: 2913 Overland Ave., Baltimore, MD 21214

Addenda:

1- SOPC membership list

2- Fact sheet/infographic

3- The 66 known PFAS compounds included as active ingredients in over 1,000 pesticides used in MD

4- **Scientist Statement on Defining PFAS – 168 scientist signers**The Smart on Pesticides Maryland Campaign is a coalition of 114 concerned Maryland citizens, organizations, groups, and businesses working for better protections and data to keep our families, our waterways, and our wildlife safe from toxic pesticides.



Smart on Pesticides Coalition members of 112 orgs and businesses

- A.I.R. Lawncare & Landscaping Services
- Alliance of Nurses for a Healthy Environment
- American Academy of Pediatrics – Md. Chapter
- American Bird Conservancy
- American Public Health Association – Md. Chapter
- Anacostia Watershed Society
- Anne Arundel Beekeepers Association
- Arundel Rivers Foundation
- Assateague Coastal Trust
- Audubon Maryland – DC
- Audubon Naturalist Society
- Baltimore Backyard Beekeepers Network
- Baltimore Bird Club
- Bee Friendly Apiary
- Beyond Pesticides
- Big City Farms
- Bowie-Upper Marlboro Beekeepers Association
- CATA, Farmworkers Support Committee
- Carroll County Beekeepers Association
- Cecil Bird Club
- Center for Biological Diversity
- Center for Food Safety
- Central Maryland Beekeepers Association
- Central Maryland Ecumenical Council/Ecumenical Leaders Group
- Centro de los Derechos del Migrante
- Charm City Meadworks
- Charles Smith Apiaries
- Chesapeake Physicians for Social Responsibility
- Children’s Environmental Health Network
- Clean Bread and Cheese Creek
- Clean Water Action
- Common Market Co-Op
- Conservation Community Consulting
- Cottingham Farm
- Crossroads Community Food Network
- Earth Coalition
- Earthjustice
- Eastern Shore Food Hub
- Environmental Working Group (EWG)
- Environment Maryland
- Fair Farms
- F&D Apiaries
- Farmworker Justice
- Food and Water Watch
- Fox Haven Farm and Learning Center
- Frederick County Beekeepers Association
- Friends of Briers Mill Run
- Friends of Lower Beaverdam Creek
- Friends of Quincy Run
- Friends of the Earth
- Greenbelt Forest Preserve
- Butterfly Brigade
- Heathcote – School of Living
- Healthy Campaigns
- Hampden Community Council
- Hereford Bed & Biscuit
- Honey Flower Foods
- Howard County Beekeepers Association
- Howard County Bird Club
- Interfaith Partners of the Chesapeake
- Interfaith Power and Light
- Johns Hopkins Center for a Livable Future
- Karma.Farm
- KW Landscaping
- Latino Farmers & Ranchers Association – Md Chapter
- League of Women Voters of Maryland
- Learning Disabilities Association – Md Chapter
- Lower Susquehanna Riverkeeper
- Maryland Autism Project
- Maryland Bass Nation
- Maryland Children’s Environmental Health Coalition
- Maryland Environmental Health Network
- Maryland Ethical Cannabis Association
- Maryland League of Conservation Voters
- Maryland Nurses Association
- Maryland Organic Food and Farming Association
- Maryland Ornithological Society
- Maryland Pesticide Education Network
- Maryland Public Interest Research Group
- Maryland United for Peace and Justice
- Maryland Votes for Animals
- McDaniel Honey Farm
- Migrant Clinicians Network
- Moms Clean Air Force
- MOM’s Organic Market
- Montgomery Countryside Alliance
- National Aquarium
- Natural Resources Defense Council
- Organic Consumers Association
- Pearlstone Conference. Center
- Perfect Earth Project
- Pesticide Action Network – North America
- Potomac Riverkeeper
- Queen Anne’s Conservation Association
- Rachel Carson Council
- Really Raw Honey Co.
- Red Top Farm
- Rodale Institute
- Rosedale Farm
- Ruscombe Community Health Ctr.
- SafeGrow Montgomery
- Safe Minds
- Safe Skies Maryland
- Severn River Association
- Sierra Club – MD Chapter
- Spa Creek Conservancy
- The Flower Factory
- Towson Estates Assn.
- Trout Unlimited
- Washington County Beekeepers Association
- Waterkeepers Chesapeake
- Westport Farmers Market
- Westport Neighborhood Association
- Wicomico Environmental Trust

Protect Maryland by REDUCING PFAS IN PESTICIDES

HB386/SB345: Pesticides – PFAS Chemicals – Prohibition

Protect Marylanders from Forever Chemicals

Some pesticides are much more dangerous to human health and our environment because they contain **PFAS**, also known as *forever chemicals*.

What Are Forever Chemicals?

A class of fluorinated chemicals, PFAS are known as *forever chemicals* because they do not break down in the environment. PFAS remediation is a massive problem and emerging technologies are limited and extremely expensive. These heavy costs will ultimately fall on communities, counties, and states. PFAS are already in our drinking water, in the Chesapeake Bay,¹ and in our soil, food,² and bodies.³ Nearly every U.S. resident now carries measurable levels of PFAS in their blood.⁴ Every exposure adds to the impact on our bodies.

The Problem

Maryland registers over 14,000 pesticides annually and over 1,000 contain toxic forever chemicals as their **active** ingredient. These pesticides are used widely in agriculture, homes, emergency rooms, health care facilities, and schools — among people who are already vulnerable. Also alarming is that there is no research on the synergistic effects of combining these *forever chemicals* with toxic pesticides that already have adverse health impacts.

Maryland has issued fish consumption warnings for PFAS in 15 fish species in the Bay watershed. Testing has found PFAS in drinking water from household taps in Maryland's Montgomery County⁵ and other locations around the state.



Even low PFAS exposure is linked to many long-term serious health impacts, including:^{6,7}



Birth Defects



Developmental Damage to Infants



High Cholesterol



Impaired Functioning of the Liver, Kidneys, and Immune System



Kidney, Testicular, and Breast Cancer



Less Effective Vaccine Response



More Serious Covid-19 Outcomes



Thyroid Disease





IF THE INTENT WAS TO SPREAD PFAS CONTAMINATION ACROSS THE GLOBE THERE WOULD BE FEW MORE EFFECTIVE METHODS THAN LACING PESTICIDES WITH PFAS.”

— Kyla Bennett, PEER Science Policy Director, attorney & scientist formerly with EPA

It's Not Too Late

The good news is we can stop further contamination from known PFAS pesticides. We can turn off *this* tap. Yes, forever chemicals are already here, but we can stop adding to the damage. There are numerous pesticides that can easily replace PFAS pesticides for all uses.

Our legislators can make a difference.

We can stop adding to the problem and compounding damage already done. We **can** remove PFAS from pesticides — and protect our families and future generations.

We are urging the Maryland General Assembly to help keep all Marylanders, especially children, pregnant women, families, the elderly — and our environment — safer from the life-threatening effects of PFAS when used as a pesticide's active ingredient by passing HB386/SB345.



For more information: email info@mdpestnet.org and visit smartonpesticides.org

¹ <https://www.epa.gov/food-safety/chemicals-pfas-testing-food-testing-food-pfas-and-assessing-dietary-exposure>

² https://www.cdc.gov/biomonitoring/PFAS_FactSheet.html

³ <https://www.scientificamerican.com/article/pesticides-are-spreading-toxic-forever-chemicals-scientists-warn>

⁴ <https://www.scientificamerican.com/article/pesticides-are-spreading-toxic-forever-chemicals-scientists-warn>

⁵ https://www.bayjournal.com/news/fisheries/forever-chemicals-found-in-chesapeake-seafood-and-maryland-drinking-water/article_2aa7a82a-28fa-11eb-ac61-9f14273a6e14.html

⁶ https://www.atsdr.cdc.gov/pfas/health-effects/index.html?CDC_AA_refVal=https%3A%2F%2Fwww.atsdr.cdc.gov%2Fpfas%2Fhealth-effects.html

⁷ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6380916>

Pesticide active ingredients: Verified as PFAS in EPA's PFAS Analytic Tool CompTox Chemicals Dashboard

Pesticide

EPA identification as PFAS - CompTox screenshot

3-trifluoromethyl-4-nitrophenol,
CAS #88-30-2

The screenshot shows the EPA CompTox Chemicals Dashboard for 3-(Trifluoromethyl)-4-nitrophenol. The URL is comptox.epa.gov/dashboard/chemical/details/DTXSID7021788?list=EPAPFASCAT. The page features the EPA logo and navigation tabs for Environmental Topics, Laws & Regulations, and About EPA. The main content area displays the chemical name, CAS number (88-30-2), and DTXSID (DTXSID7021788). A search box on the left is highlighted with a red box and labeled "EPAPFASCAT PFAS/EPA Structure-based Categories". A chemical structure diagram is shown next to the text.

3-(Trifluoromethyl)-4-nitrophenol
88-30-2 | DTXSID7021788
Searched by DTXSID7021788.

Acifluorfen, CAS #50594-66-6

The screenshot shows the EPA CompTox Chemicals Dashboard for Acifluorfen. The URL is comptox.epa.gov/dashboard/chemical/details/DTXSID0020022?list=EPAPFASCAT. The page features the EPA logo and navigation tabs for Environmental Topics, Laws & Regulations, and About EPA. The main content area displays the chemical name, CAS number (50594-66-6), and DTXSID (DTXSID0020022). A search box on the left is highlighted with a red box and labeled "EPAPFASCAT PFAS/EPA Structure-based Categories". A chemical structure diagram is shown next to the text.

Acifluorfen
50594-66-6 | DTXSID0020022
Searched by DTXSID0020022.

Benfluralin, CAS #1861-40-1

The screenshot shows the EPA CompTox Chemicals Dashboard for Acifluorfen. The URL is comptox.epa.gov/dashboard/chemical/details/DTXSID0020022?list=EPAPFASCAT. The page features the EPA logo and navigation tabs for Environmental Topics, Laws & Regulations, and About EPA. The main content area displays the chemical name, CAS number (50594-66-6), and DTXSID (DTXSID0020022). A search box on the left is highlighted with a red box and labeled "EPAPFASCAT PFAS/EPA Structure-based Categories". A chemical structure diagram is shown next to the text.

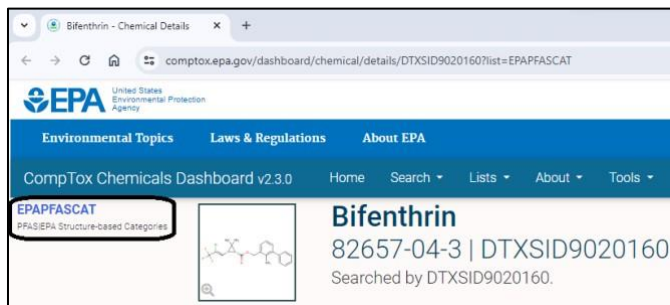
Acifluorfen
50594-66-6 | DTXSID0020022
Searched by DTXSID0020022.

Bicyclopyrone, CAS #352010-68-5

The screenshot shows the EPA CompTox Chemicals Dashboard for Bicyclopyrone. The URL is comptox.epa.gov/dashboard/chemical/details/DTXSID5058064?list=EPAPFASCAT. The page features the EPA logo and navigation tabs for Environmental Topics, Laws & Regulations, and About EPA. The main content area displays the chemical name, CAS number (352010-68-5), and DTXSID (DTXSID5058064). A search box on the left is highlighted with a red box and labeled "EPAPFASCAT PFAS/EPA Structure-based Categories". A chemical structure diagram is shown next to the text.

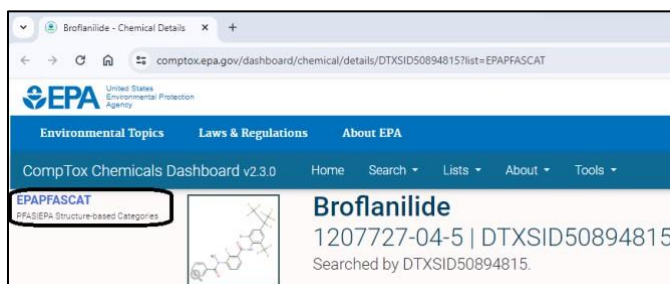
Bicyclopyrone
352010-68-5 | DTXSID5058064
Searched by DTXSID5058064.

Bifenthrin, CAS #82657-04-03



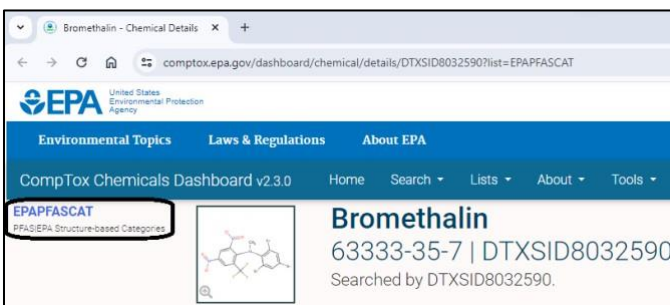
The screenshot shows the EPA CompTox Chemicals Dashboard for Bifenthrin. The browser address bar displays "comptox.epa.gov/dashboard/chemical/details/DTXSID9020160?list=EPAPFASCAT". The EPA logo and navigation menu are visible. The main content area features a blue header with "Environmental Topics", "Laws & Regulations", and "About EPA". Below this, the dashboard version "v2.3.0" and navigation links "Home", "Search", "Lists", "About", and "Tools" are shown. A red box highlights the "EPAPFASCAT" category label. To the right, the chemical name "Bifenthrin" is displayed in large blue text, followed by its CAS number "82657-04-3" and DTXSID "DTXSID9020160". A search query "Searched by DTXSID9020160." is shown at the bottom. A chemical structure is visible in the background.

Broflanilide, CAS #1207727-04-5



The screenshot shows the EPA CompTox Chemicals Dashboard for Broflanilide. The browser address bar displays "comptox.epa.gov/dashboard/chemical/details/DTXSID50894815?list=EPAPFASCAT". The EPA logo and navigation menu are visible. The main content area features a blue header with "Environmental Topics", "Laws & Regulations", and "About EPA". Below this, the dashboard version "v2.3.0" and navigation links "Home", "Search", "Lists", "About", and "Tools" are shown. A red box highlights the "EPAPFASCAT" category label. To the right, the chemical name "Broflanilide" is displayed in large blue text, followed by its CAS number "1207727-04-5" and DTXSID "DTXSID50894815". A search query "Searched by DTXSID50894815." is shown at the bottom. A chemical structure is visible in the background.

Bromethalin, CAS #63333-35-7



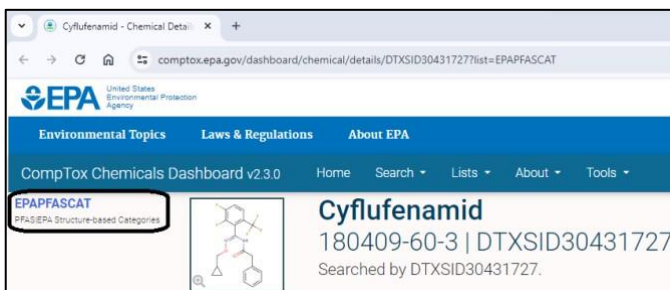
The screenshot shows the EPA CompTox Chemicals Dashboard for Bromethalin. The browser address bar displays "comptox.epa.gov/dashboard/chemical/details/DTXSID8032590?list=EPAPFASCAT". The EPA logo and navigation menu are visible. The main content area features a blue header with "Environmental Topics", "Laws & Regulations", and "About EPA". Below this, the dashboard version "v2.3.0" and navigation links "Home", "Search", "Lists", "About", and "Tools" are shown. A red box highlights the "EPAPFASCAT" category label. To the right, the chemical name "Bromethalin" is displayed in large blue text, followed by its CAS number "63333-35-7" and DTXSID "DTXSID8032590". A search query "Searched by DTXSID8032590." is shown at the bottom. A chemical structure is visible in the background.

Chlorfenapyr, CAS #122453-73-0



The screenshot shows the EPA CompTox Chemicals Dashboard for Chlorfenapyr. The browser address bar displays "comptox.epa.gov/dashboard/chemical/details/DTXSID9032533?list=EPAPFASCAT". The EPA logo and navigation menu are visible. The main content area features a blue header with "Environmental Topics", "Laws & Regulations", and "About EPA". Below this, the dashboard version "v2.3.0" and navigation links "Home", "Search", "Lists", "About", and "Tools" are shown. A red box highlights the "EPAPFASCAT" category label. To the right, the chemical name "4-Bromo-2-(4-chlorophenyl)-1-(ethoxymethyl)-5-(trifluoromethyl)-1H-p..." is displayed in large blue text, followed by its CAS number "122453-73-0" and DTXSID "DTXSID9032533". A search query "Searched by DTXSID9032533." is shown at the bottom. A chemical structure is visible in the background.

Cyflufenamid, CAS #180409-60-3



The screenshot shows the EPA CompTox Chemicals Dashboard for Cyflufenamid. The browser address bar displays "comptox.epa.gov/dashboard/chemical/details/DTXSID30431727?list=EPAPFASCAT". The EPA logo and navigation menu are visible. The main content area features a blue header with "Environmental Topics", "Laws & Regulations", and "About EPA". Below this, the dashboard version "v2.3.0" and navigation links "Home", "Search", "Lists", "About", and "Tools" are shown. A red box highlights the "EPAPFASCAT" category label. To the right, the chemical name "Cyflufenamid" is displayed in large blue text, followed by its CAS number "180409-60-3" and DTXSID "DTXSID30431727". A search query "Searched by DTXSID30431727." is shown at the bottom. A chemical structure is visible in the background.

Cyflumetofen, CAS #400882-07-7

The screenshot shows the EPA's CompTox Chemicals Dashboard for Cyflumetofen. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID8058089?list=EPAPFASCAT. The page features the EPA logo and navigation tabs for Environmental Topics, Laws & Regulations, and About EPA. A search bar and utility links (Home, Search, Lists, About, Tools) are present. On the left, a box labeled 'EPAPFASCAT' is circled, with the subtext 'FPAS/EPA Structure-based Categories'. The chemical name 'Cyflumetofen' is prominently displayed, followed by its CAS number '400882-07-7' and DTXSID 'DTXSID8058089'. A search bar indicates it was searched by 'DTXSID8058089'. A chemical structure diagram is shown to the left of the text.

Dithiopyr, CAS #97886-45-8

The screenshot shows the EPA's CompTox Chemicals Dashboard for Dithiopyr. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID9032379?list=EPAPFASCAT. The page features the EPA logo and navigation tabs for Environmental Topics, Laws & Regulations, and About EPA. A search bar and utility links (Home, Search, Lists, About, Tools) are present. On the left, a box labeled 'EPAPFASCAT' is circled, with the subtext 'FPAS/EPA Structure-based Categories'. The chemical name 'Dithiopyr' is prominently displayed, followed by its CAS number '97886-45-8' and DTXSID 'DTXSID9032379'. A search bar indicates it was searched by 'DTXSID9032379'. A chemical structure diagram is shown to the left of the text.

Ethalfuralin, CAS #55283-68-6

The screenshot shows the EPA's CompTox Chemicals Dashboard for Ethalfuralin. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID8032386?list=EPAPFASCAT. The page features the EPA logo and navigation tabs for Environmental Topics, Laws & Regulations, and About EPA. A search bar and utility links (Home, Search, Lists, About, Tools) are present. On the left, a box labeled 'EPAPFASCAT' is circled, with the subtext 'FPAS/EPA Structure-based Categories'. The chemical name 'Ethalfuralin' is prominently displayed, followed by its CAS number '55283-68-6' and DTXSID 'DTXSID8032386'. A search bar indicates it was searched by 'DTXSID8032386'. A chemical structure diagram is shown to the left of the text.

Fipronil, CAS #120068-37-3

The screenshot shows the EPA's CompTox Chemicals Dashboard for Fipronil. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID4034609?list=EPAPFASCAT. The page features the EPA logo and navigation tabs for Environmental Topics, Laws & Regulations, and About EPA. A search bar and utility links (Home, Search, Lists, About, Tools) are present. On the left, a box labeled 'EPAPFASCAT' is circled, with the subtext 'FPAS/EPA Structure-based Categories'. The chemical name 'Fipronil' is prominently displayed, followed by its CAS number '120068-37-3' and DTXSID 'DTXSID4034609'. A search bar indicates it was searched by 'DTXSID4034609'. A chemical structure diagram is shown to the left of the text.

Flazasulfuron, CAS #104040-78-0

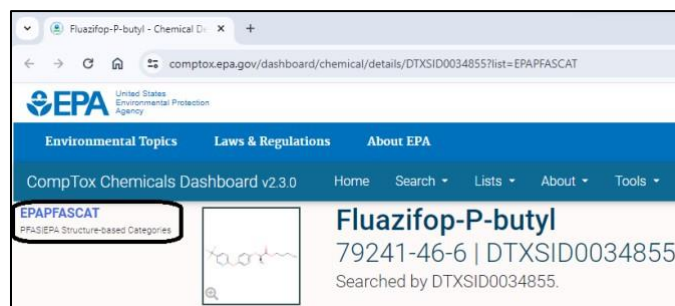
The screenshot shows the EPA's CompTox Chemicals Dashboard for Flazasulfuron. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID3034610?list=EPAPFASCAT. The page features the EPA logo and navigation tabs for Environmental Topics, Laws & Regulations, and About EPA. A search bar and utility links (Home, Search, Lists, About, Tools) are present. On the left, a box labeled 'EPAPFASCAT' is circled, with the subtext 'FPAS/EPA Structure-based Categories'. The chemical name 'Flazasulfuron' is prominently displayed, followed by its CAS number '104040-78-0' and DTXSID 'DTXSID3034610'. A search bar indicates it was searched by 'DTXSID3034610'. A chemical structure diagram is shown to the left of the text.

Flonicamid, CAS #158062-67-0



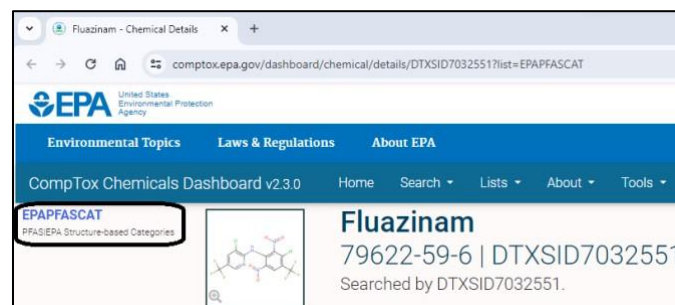
The screenshot shows the EPA CompTox Chemicals Dashboard for Flonicamid. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID8034611?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0. A search bar and navigation menu are present. On the left, a box labeled "EPAPFASCAT" with the subtext "PFAS/EPA Structure-based Categories" is highlighted. The chemical name "Flonicamid" is prominently displayed, followed by its CAS number "158062-67-0" and DTXSID "DTXSID8034611". A chemical structure of Flonicamid is shown, and the text "Searched by DTXSID8034611." is at the bottom.

Fluazifop-P-butyl, CAS #79241-46-6



The screenshot shows the EPA CompTox Chemicals Dashboard for Fluazifop-P-butyl. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID0034855?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0. A search bar and navigation menu are present. On the left, a box labeled "EPAPFASCAT" with the subtext "PFAS/EPA Structure-based Categories" is highlighted. The chemical name "Fluazifop-P-butyl" is prominently displayed, followed by its CAS number "79241-46-6" and DTXSID "DTXSID0034855". A chemical structure of Fluazifop-P-butyl is shown, and the text "Searched by DTXSID0034855." is at the bottom.

Fluazinam, CAS #79622-59-6



The screenshot shows the EPA CompTox Chemicals Dashboard for Fluazinam. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID7032551?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0. A search bar and navigation menu are present. On the left, a box labeled "EPAPFASCAT" with the subtext "PFAS/EPA Structure-based Categories" is highlighted. The chemical name "Fluazinam" is prominently displayed, followed by its CAS number "79622-59-6" and DTXSID "DTXSID7032551". A chemical structure of Fluazinam is shown, and the text "Searched by DTXSID7032551." is at the bottom.

Flucarbazone-sodium, CAS #181274-17-9



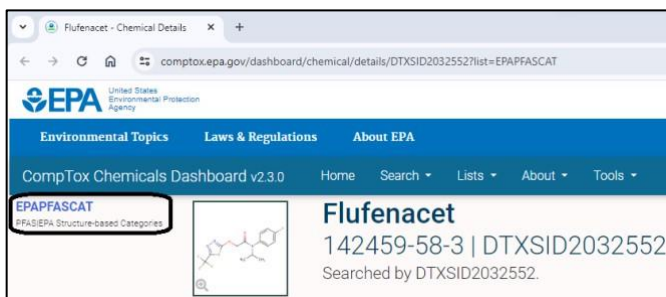
The screenshot shows the EPA CompTox Chemicals Dashboard for Flucarbazone-sodium. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID3034614?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0. A search bar and navigation menu are present. On the left, a box labeled "EPAPFASCAT" with the subtext "PFAS/EPA Structure-based Categories" is highlighted. The chemical name "Flucarbazone-sodium" is prominently displayed, followed by its CAS number "181274-17-9" and DTXSID "DTXSID3034614". A chemical structure of Flucarbazone-sodium is shown, and the text "Searched by DTXSID3034614." is at the bottom.

Fludioxonil, CAS #131341-86-1



The screenshot shows the EPA CompTox Chemicals Dashboard for Fludioxonil. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID2032398?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0. A search bar and navigation menu are present. On the left, a box labeled "EPAPFASCAT" with the subtext "PFAS/EPA Structure-based Categories" is highlighted. The chemical name "Fludioxonil" is prominently displayed, followed by its CAS number "131341-86-1" and DTXSID "DTXSID2032398". A chemical structure of Fludioxonil is shown, and the text "Searched by DTXSID2032398." is at the bottom.

Flufenacet, CAS #142459-58-3
BB



The screenshot shows the EPA CompTox Chemicals Dashboard for Flufenacet. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID2032552?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0, and there are links for Home, Search, Lists, About, and Tools. A search filter 'EPAPFASCAT' is highlighted in a red box, with the subtext 'PFAS/EPA Structure-based Categories'. The chemical name 'Flufenacet' is prominently displayed, followed by its CAS number '142459-58-3' and DTXSID 'DTXSID2032552'. The search criteria 'Searched by DTXSID2032552.' is also shown. A chemical structure diagram of Flufenacet is visible on the left side of the main content area.

Flumetralin, CAS #62924-70-3



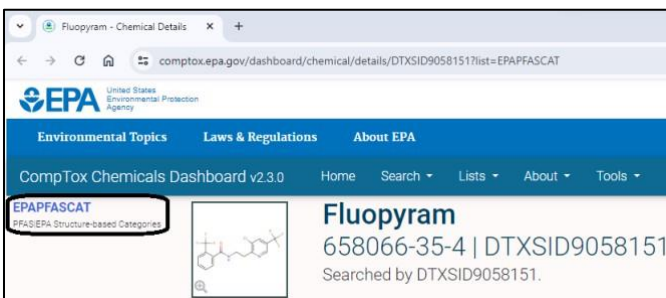
The screenshot shows the EPA CompTox Chemicals Dashboard for Flumetralin. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID7032553?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0, and there are links for Home, Search, Lists, About, and Tools. A search filter 'EPAPFASCAT' is highlighted in a red box, with the subtext 'PFAS/EPA Structure-based Categories'. The chemical name 'Flumetralin' is prominently displayed, followed by its CAS number '62924-70-3' and DTXSID 'DTXSID7032553'. The search criteria 'Searched by DTXSID7032553.' is also shown. A chemical structure diagram of Flumetralin is visible on the left side of the main content area.

Fluopicolide, CAS #239110-15-7



The screenshot shows the EPA CompTox Chemicals Dashboard for Fluopicolide. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID7034624?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0, and there are links for Home, Search, Lists, About, and Tools. A search filter 'EPAPFASCAT' is highlighted in a red box, with the subtext 'PFAS/EPA Structure-based Categories'. The chemical name 'Fluopicolide' is prominently displayed, followed by its CAS number '239110-15-7' and DTXSID 'DTXSID7034624'. The search criteria 'Searched by DTXSID7034624.' is also shown. A chemical structure diagram of Fluopicolide is visible on the left side of the main content area.

Fluopyram, CAS #658066-35-4



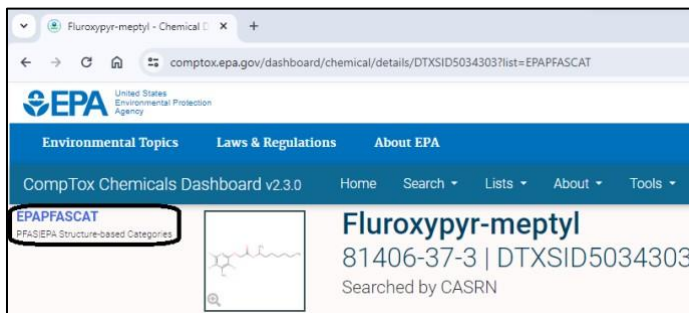
The screenshot shows the EPA CompTox Chemicals Dashboard for Fluopyram. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID9058151?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0, and there are links for Home, Search, Lists, About, and Tools. A search filter 'EPAPFASCAT' is highlighted in a red box, with the subtext 'PFAS/EPA Structure-based Categories'. The chemical name 'Fluopyram' is prominently displayed, followed by its CAS number '658066-35-4' and DTXSID 'DTXSID9058151'. The search criteria 'Searched by DTXSID9058151.' is also shown. A chemical structure diagram of Fluopyram is visible on the left side of the main content area.

Fluridone, CAS #59756-60-4



The screenshot shows the EPA CompTox Chemicals Dashboard for 1-Methyl-3-phenyl-5-(3-(trifluoromethyl)phenyl)-4-pyridone. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID8024107?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0, and there are links for Home, Search, Lists, About, and Tools. A search filter 'EPAPFASCAT' is highlighted in a red box, with the subtext 'PFAS/EPA Structure-based Categories'. The chemical name '1-Methyl-3-phenyl-5-(3-(trifluoromethyl)phenyl)-4-pyridone' is prominently displayed, followed by its CAS number '59756-60-4' and DTXSID 'DTXSID8024107'. The search criteria 'Searched by DTXSID8024107.' is also shown. A chemical structure diagram of the compound is visible on the left side of the main content area.

Fluroxypyr-meptyl, CAS #81406-37-3



Fluroxypyr-meptyl - Chemical Details

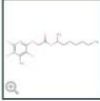
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United States Environmental Protection Agency

Environmental Topics | Laws & Regulations | About EPA

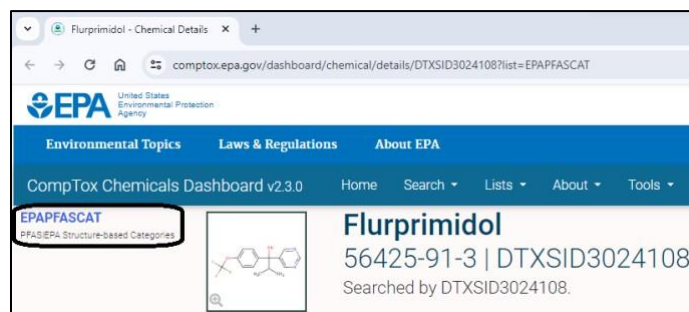
CompTox Chemicals Dashboard v2.3.0 | Home | Search | Lists | About | Tools

EPAPFASCAT
PFAS/EPA Structure-based Categories



Fluroxypyr-meptyl
81406-37-3 | DTXSID5034303
Searched by CASRN

Flurprimidol, CAS #56425-91-3



Flurprimidol - Chemical Details

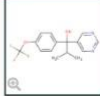
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United States Environmental Protection Agency

Environmental Topics | Laws & Regulations | About EPA

CompTox Chemicals Dashboard v2.3.0 | Home | Search | Lists | About | Tools

EPAPFASCAT
PFAS/EPA Structure-based Categories



Flurprimidol
56425-91-3 | DTXSID3024108
Searched by DTXSID3024108.

Flutianil, CAS #958647-10-4



Flutianil - Chemical Details

comptox.epa.gov/dashboard/chemical/details/DTXSID0058225?list=EPAPFASCAT

United States Environmental Protection Agency

Environmental Topics | Laws & Regulations | About EPA

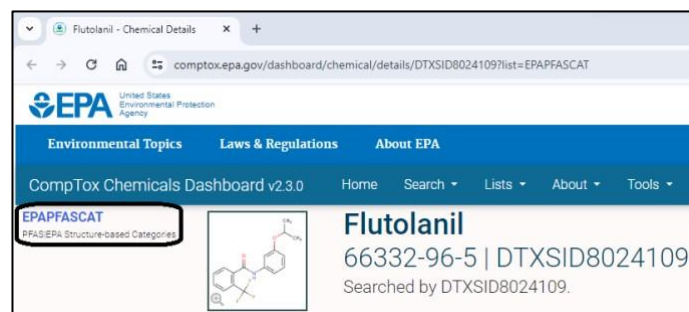
CompTox Chemicals Dashboard v2.3.0 | Home | Search | Lists | About | Tools

EPAPFASCAT
PFAS/EPA Structure-based Categories



Flutianil
958647-10-4 | DTXSID0058225
Searched by DTXSID0058225.

Flutolanil, CAS #66332-96-5



Flutolanil - Chemical Details

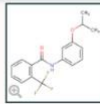
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United States Environmental Protection Agency

Environmental Topics | Laws & Regulations | About EPA

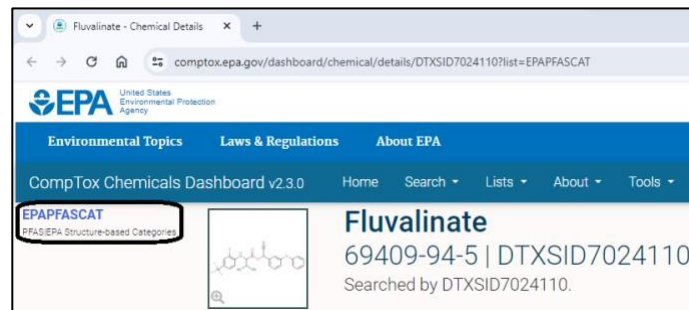
CompTox Chemicals Dashboard v2.3.0 | Home | Search | Lists | About | Tools

EPAPFASCAT
PFAS/EPA Structure-based Categories



Flutolanil
66332-96-5 | DTXSID8024109
Searched by DTXSID8024109.

Fluvalinate, CAS #69409-94-5



Fluvalinate - Chemical Details

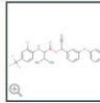
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United States Environmental Protection Agency

Environmental Topics | Laws & Regulations | About EPA

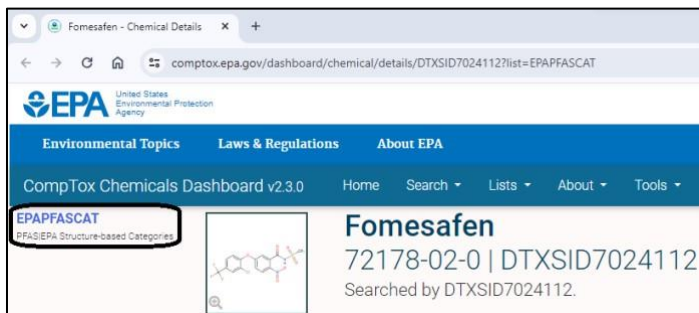
CompTox Chemicals Dashboard v2.3.0 | Home | Search | Lists | About | Tools

EPAPFASCAT
PFAS/EPA Structure-based Categories



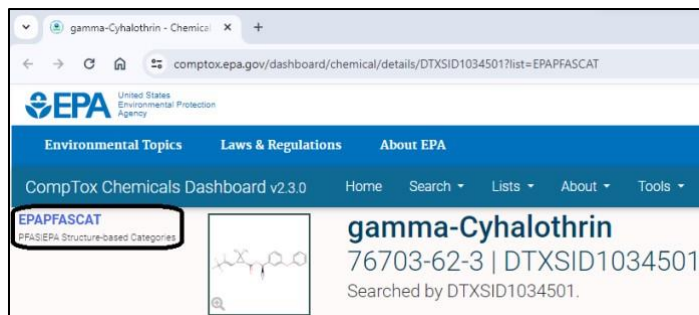
Fluvalinate
69409-94-5 | DTXSID7024110
Searched by DTXSID7024110.

Fomesafen, CAS #72178-02-0



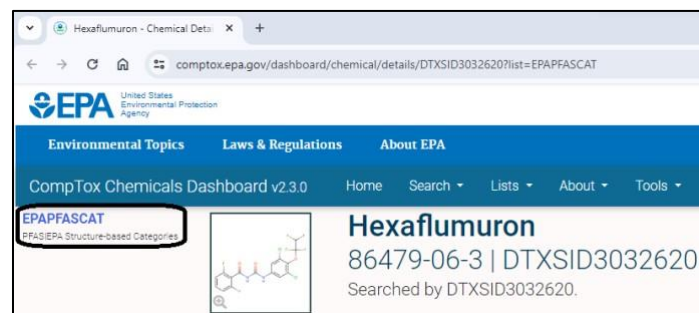
The screenshot shows the EPA CompTox Chemicals Dashboard for Fomesafen. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID7024112?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0, and there are links for Home, Search, Lists, About, and Tools. A box labeled "EPAPFASCAT" with the subtext "PFAS/IEPA Structure-based Categories" is highlighted. To the right of this box is a chemical structure diagram of Fomesafen. The main content area displays the chemical name "Fomesafen", its CAS number "72178-02-0", and its DTXSID "DTXSID7024112". It also notes "Searched by DTXSID7024112".

gamma-Cyhalothrin, CAS #76703-62-3



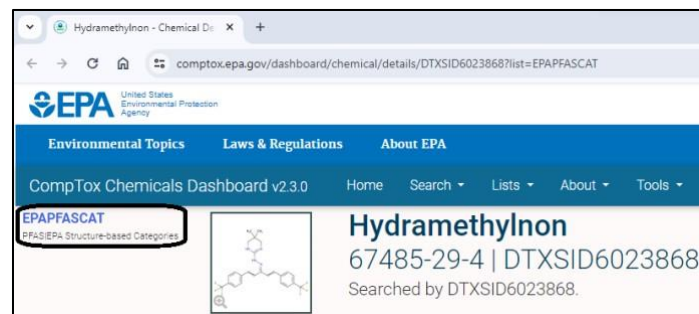
The screenshot shows the EPA CompTox Chemicals Dashboard for gamma-Cyhalothrin. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID1034501?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0, and there are links for Home, Search, Lists, About, and Tools. A box labeled "EPAPFASCAT" with the subtext "PFAS/IEPA Structure-based Categories" is highlighted. To the right of this box is a chemical structure diagram of gamma-Cyhalothrin. The main content area displays the chemical name "gamma-Cyhalothrin", its CAS number "76703-62-3", and its DTXSID "DTXSID1034501". It also notes "Searched by DTXSID1034501".

Hexaflumuron, CAS #86479-06-03



The screenshot shows the EPA CompTox Chemicals Dashboard for Hexaflumuron. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID3032620?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0, and there are links for Home, Search, Lists, About, and Tools. A box labeled "EPAPFASCAT" with the subtext "PFAS/IEPA Structure-based Categories" is highlighted. To the right of this box is a chemical structure diagram of Hexaflumuron. The main content area displays the chemical name "Hexaflumuron", its CAS number "86479-06-3", and its DTXSID "DTXSID3032620". It also notes "Searched by DTXSID3032620".

Hydramethylnon, CAS #67485-29-4



The screenshot shows the EPA CompTox Chemicals Dashboard for Hydramethylnon. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID6023868?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0, and there are links for Home, Search, Lists, About, and Tools. A box labeled "EPAPFASCAT" with the subtext "PFAS/IEPA Structure-based Categories" is highlighted. To the right of this box is a chemical structure diagram of Hydramethylnon. The main content area displays the chemical name "Hydramethylnon", its CAS number "67485-29-4", and its DTXSID "DTXSID6023868". It also notes "Searched by DTXSID6023868".

Indoxacarb, CAS #173584-44-6



The screenshot shows the EPA CompTox Chemicals Dashboard for Indoxacarb. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID1032690?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0, and there are links for Home, Search, Lists, About, and Tools. A box labeled "EPAPFASCAT" with the subtext "PFAS/IEPA Structure-based Categories" is highlighted. To the right of this box is a chemical structure diagram of Indoxacarb. The main content area displays the chemical name "Indoxacarb", its CAS number "173584-44-6", and its DTXSID "DTXSID1032690". It also notes "Searched by DTXSID1032690".

Isoxaflutole, CAS #141112-29-0

The screenshot shows the EPA's CompTox Chemicals Dashboard for Isoxaflutole. The browser address bar displays 'comptox.epa.gov/dashboard/chemical/details/DTXSID5034723?list=EPAPFASCAT'. The page header includes the EPA logo and navigation links for 'Environmental Topics', 'Laws & Regulations', and 'About EPA'. Below the header, there are links for 'Home', 'Search', 'Lists', 'About', and 'Tools'. A search filter 'EPAPFASCAT' is highlighted with a red box, with the subtext 'PFAS/EPA Structure-based Categories'. The chemical name 'Isoxaflutole' is prominently displayed, followed by its CAS number '141112-29-0' and DTXSID 'DTXSID5034723'. A search note indicates it was 'Searched by DTXSID5034723'. A chemical structure image is visible on the left side of the main content area.

Lactofen, CAS #77501-63-4

The screenshot shows the EPA's CompTox Chemicals Dashboard for Lactofen. The browser address bar displays 'comptox.epa.gov/dashboard/chemical/details/DTXSID7024160?list=EPAPFASCAT'. The page header includes the EPA logo and navigation links for 'Environmental Topics', 'Laws & Regulations', and 'About EPA'. Below the header, there are links for 'Home', 'Search', 'Lists', 'About', and 'Tools'. A search filter 'EPAPFASCAT' is highlighted with a red box, with the subtext 'PFAS/EPA Structure-based Categories'. The chemical name 'Lactofen' is prominently displayed, followed by its CAS number '77501-63-4' and DTXSID 'DTXSID7024160'. A search note indicates it was 'Searched by DTXSID7024160'. A chemical structure image is visible on the left side of the main content area.

Mefentrifluconazole, CAS #1417782-03-6

The screenshot shows the EPA's CompTox Chemicals Dashboard for Mefentrifluconazole. The browser address bar displays 'comptox.epa.gov/dashboard/chemical/details/DTXSID40894945?list=EPAPFASCAT'. The page header includes the EPA logo and navigation links for 'Environmental Topics', 'Laws & Regulations', and 'About EPA'. Below the header, there are links for 'Home', 'Search', 'Lists', 'About', and 'Tools'. A search filter 'EPAPFASCAT' is highlighted with a red box, with the subtext 'PFAS/EPA Structure-based Categories'. The chemical name 'Mefentrifluconazole' is prominently displayed, followed by its CAS number '1417782-03-6' and DTXSID 'DTXSID40894945'. A search note indicates it was 'Searched by DTXSID40894945'. A chemical structure image is visible on the left side of the main content area.

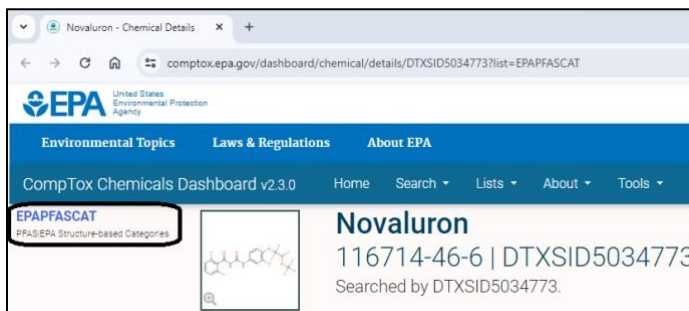
Metaflumizone, CAS #139968-49-3

The screenshot shows the EPA's CompTox Chemicals Dashboard for Metaflumizone. The browser address bar displays 'comptox.epa.gov/dashboard/chemical/details/DTXSID6040373?list=EPAPFASCAT'. The page header includes the EPA logo and navigation links for 'Environmental Topics', 'Laws & Regulations', and 'About EPA'. Below the header, there are links for 'Home', 'Search', 'Lists', 'About', and 'Tools'. A search filter 'EPAPFASCAT' is highlighted with a red box, with the subtext 'PFAS/EPA Structure-based Categories'. The chemical name 'Metaflumizone' is prominently displayed, followed by its CAS number '139968-49-3' and DTXSID 'DTXSID6040373'. A search note indicates it was 'Searched by DTXSID6040373'. A chemical structure image is visible on the left side of the main content area.

Norflurazon, CAS #27314-13-2

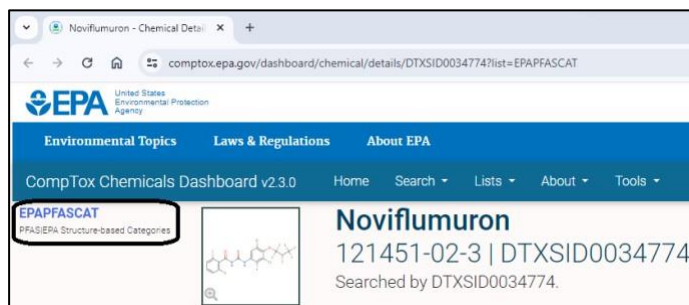
The screenshot shows the EPA's CompTox Chemicals Dashboard for Norflurazon. The browser address bar displays 'comptox.epa.gov/dashboard/chemical/details/DTXSID8024234?list=EPAPFASCAT'. The page header includes the EPA logo and navigation links for 'Environmental Topics', 'Laws & Regulations', and 'About EPA'. Below the header, there are links for 'Home', 'Search', 'Lists', 'About', and 'Tools'. A search filter 'EPAPFASCAT' is highlighted with a red box, with the subtext 'PFAS/EPA Structure-based Categories'. The chemical name 'Norflurazon' is prominently displayed, followed by its CAS number '27314-13-2' and DTXSID 'DTXSID8024234'. A search note indicates it was 'Searched by DTXSID8024234'. A chemical structure image is visible on the left side of the main content area.

Novaluron, CAS #116714-46-6



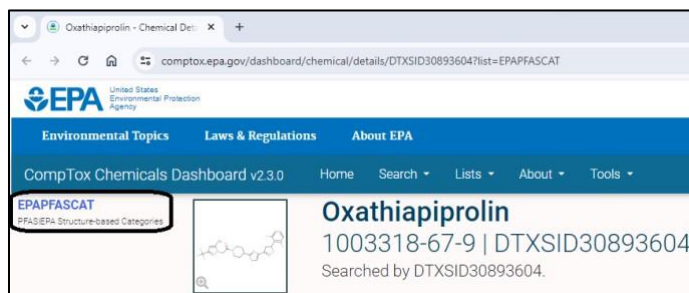
The screenshot shows the EPA CompTox Chemicals Dashboard for Novaluron. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID5034773?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version (v2.3.0) and utility links (Home, Search, Lists, About, Tools) are visible. A red box highlights the 'EPAPFASCAT' label, with the subtext 'PFAS/EPA Structure-based Categories' below it. To the right, the chemical name 'Novaluron' is displayed in large font, followed by its CAS number '116714-46-6 | DTXSID5034773' and the search criteria 'Searched by DTXSID5034773'. A chemical structure diagram is shown to the left of the name.

Noviflumuron, CAS #121451-02-3



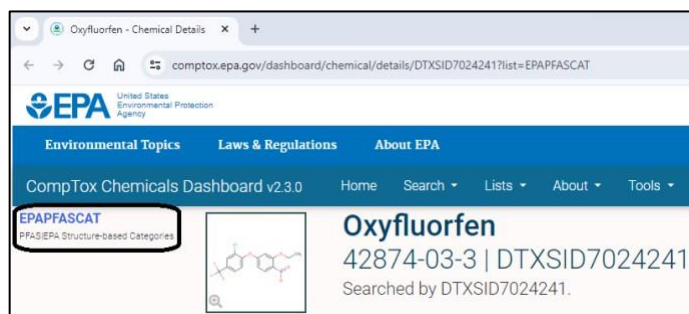
The screenshot shows the EPA CompTox Chemicals Dashboard for Noviflumuron. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID0034774?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version (v2.3.0) and utility links (Home, Search, Lists, About, Tools) are visible. A red box highlights the 'EPAPFASCAT' label, with the subtext 'PFAS/EPA Structure-based Categories' below it. To the right, the chemical name 'Noviflumuron' is displayed in large font, followed by its CAS number '121451-02-3 | DTXSID0034774' and the search criteria 'Searched by DTXSID0034774'. A chemical structure diagram is shown to the left of the name.

Oxathiapiprolin, CAS #1003318-67-9



The screenshot shows the EPA CompTox Chemicals Dashboard for Oxathiapiprolin. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID30893604?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version (v2.3.0) and utility links (Home, Search, Lists, About, Tools) are visible. A red box highlights the 'EPAPFASCAT' label, with the subtext 'PFAS/EPA Structure-based Categories' below it. To the right, the chemical name 'Oxathiapiprolin' is displayed in large font, followed by its CAS number '1003318-67-9 | DTXSID30893604' and the search criteria 'Searched by DTXSID30893604'. A chemical structure diagram is shown to the left of the name.

Oxyfluorfen, CAS #42874-03-03



The screenshot shows the EPA CompTox Chemicals Dashboard for Oxyfluorfen. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID7024241?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version (v2.3.0) and utility links (Home, Search, Lists, About, Tools) are visible. A red box highlights the 'EPAPFASCAT' label, with the subtext 'PFAS/EPA Structure-based Categories' below it. To the right, the chemical name 'Oxyfluorfen' is displayed in large font, followed by its CAS number '42874-03-3 | DTXSID7024241' and the search criteria 'Searched by DTXSID7024241'. A chemical structure diagram is shown to the left of the name.

Penoxsulam, CAS #219714-96-2



The screenshot shows the EPA CompTox Chemicals Dashboard for Penoxsulam. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID0034803?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version (v2.3.0) and utility links (Home, Search, Lists, About, Tools) are visible. A red box highlights the 'EPAPFASCAT' label, with the subtext 'PFAS/EPA Structure-based Categories' below it. To the right, the chemical name 'Penoxsulam' is displayed in large font, followed by its CAS number '219714-96-2 | DTXSID0034803' and the search criteria 'Searched by DTXSID0034803'. A chemical structure diagram is shown to the left of the name.

Penthiopyrad, CAS #183675-82-3



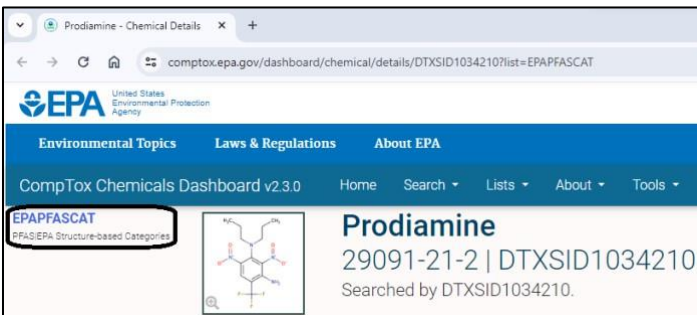
The screenshot shows the EPA CompTox Chemicals Dashboard for Penthiopyrad. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID6058005?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0, and there are links for Home, Search, Lists, About, and Tools. A box labeled "EPAPFASCAT" with the subtext "PFAS/EPA Structure-based Categories" is highlighted. To the right of this box is a chemical structure diagram of Penthiopyrad. Further right, the chemical name "Penthiopyrad" is displayed in large font, followed by its CAS number "183675-82-3" and DTXSID "DTXSID6058005". Below this, it states "Searched by DTXSID6058005".

Picoxystrobin, CAS #117428-22-5



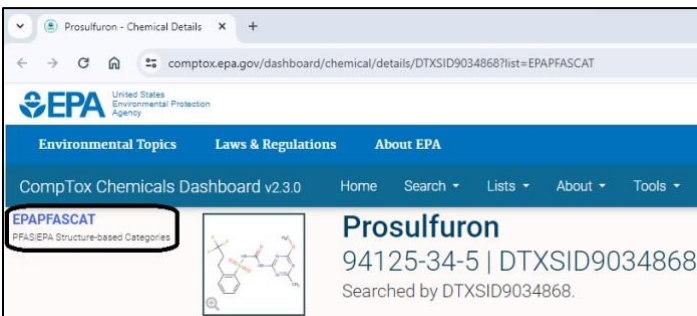
The screenshot shows the EPA CompTox Chemicals Dashboard for Picoxystrobin. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID9047542?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0, and there are links for Home, Search, Lists, About, and Tools. A box labeled "EPAPFASCAT" with the subtext "PFAS/EPA Structure-based Categories" is highlighted. To the right of this box is a chemical structure diagram of Picoxystrobin. Further right, the chemical name "Picoxystrobin" is displayed in large font, followed by its CAS number "117428-22-5" and DTXSID "DTXSID9047542". Below this, it states "Searched by DTXSID9047542".

Prodiamine, CAS #29091-21-2




The screenshot shows the EPA CompTox Chemicals Dashboard for Prodiamine. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID1034210?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0, and there are links for Home, Search, Lists, About, and Tools. A box labeled "EPAPFASCAT" with the subtext "PFAS/EPA Structure-based Categories" is highlighted. To the right of this box is a chemical structure diagram of Prodiamine. Further right, the chemical name "Prodiamine" is displayed in large font, followed by its CAS number "29091-21-2" and DTXSID "DTXSID1034210". Below this, it states "Searched by DTXSID1034210".

Prosulfuron, CAS #94125-34-5



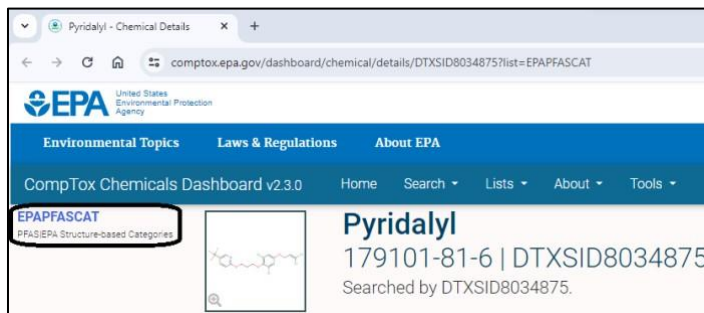
The screenshot shows the EPA CompTox Chemicals Dashboard for Prosulfuron. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID9034868?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0, and there are links for Home, Search, Lists, About, and Tools. A box labeled "EPAPFASCAT" with the subtext "PFAS/EPA Structure-based Categories" is highlighted. To the right of this box is a chemical structure diagram of Prosulfuron. Further right, the chemical name "Prosulfuron" is displayed in large font, followed by its CAS number "94125-34-5" and DTXSID "DTXSID9034868". Below this, it states "Searched by DTXSID9034868".

Pyrasulfotole, CAS #365400-11-9



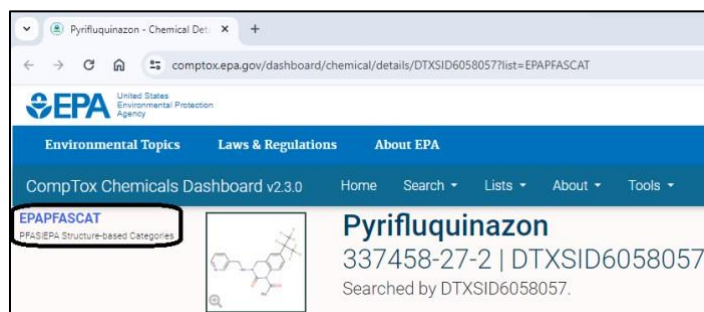
The screenshot shows the EPA CompTox Chemicals Dashboard for Pyrasulfotole. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID2044343?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0, and there are links for Home, Search, Lists, About, and Tools. A box labeled "EPAPFASCAT" with the subtext "PFAS/EPA Structure-based Categories" is highlighted. To the right of this box is a chemical structure diagram of Pyrasulfotole. Further right, the chemical name "Pyrasulfotole" is displayed in large font, followed by its CAS number "365400-11-9" and DTXSID "DTXSID2044343". Below this, it states "Searched by DTXSID2044343".

Pyridalyl, CAS #179101-81-6



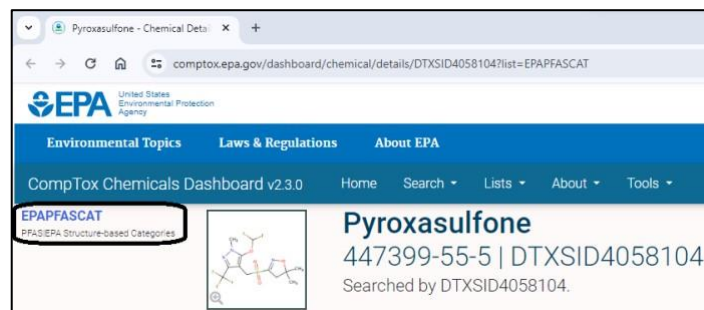
The screenshot shows the EPA CompTox Chemicals Dashboard for Pyridalyl. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID8034875?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard title is "CompTox Chemicals Dashboard v2.3.0" with links for Home, Search, Lists, About, and Tools. A search filter "EPAPFASCAT" is highlighted with a red box, with "PFAS(EPA Structure-based Categories)" listed below it. The chemical name "Pyridalyl" is displayed in large font, followed by its CAS number "179101-81-6" and DTXSID "DTXSID8034875". The text "Searched by DTXSID8034875." is also present. A chemical structure diagram of Pyridalyl is shown to the left of the text.

Pyrifluquinazon, CAS #337458-27-2



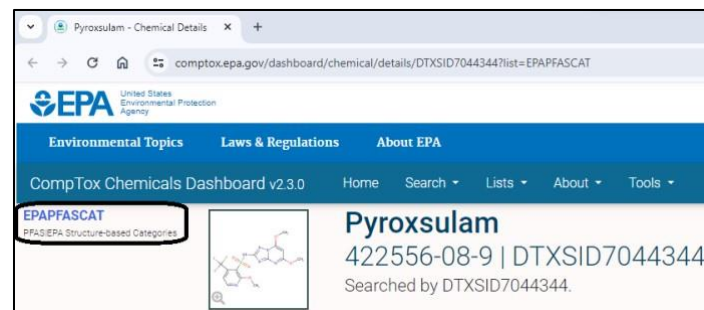
The screenshot shows the EPA CompTox Chemicals Dashboard for Pyrifluquinazon. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID6058057?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard title is "CompTox Chemicals Dashboard v2.3.0" with links for Home, Search, Lists, About, and Tools. A search filter "EPAPFASCAT" is highlighted with a red box, with "PFAS(EPA Structure-based Categories)" listed below it. The chemical name "Pyrifluquinazon" is displayed in large font, followed by its CAS number "337458-27-2" and DTXSID "DTXSID6058057". The text "Searched by DTXSID6058057." is also present. A chemical structure diagram of Pyrifluquinazon is shown to the left of the text.

Pyroxasulfone, CAS #447399-55-5



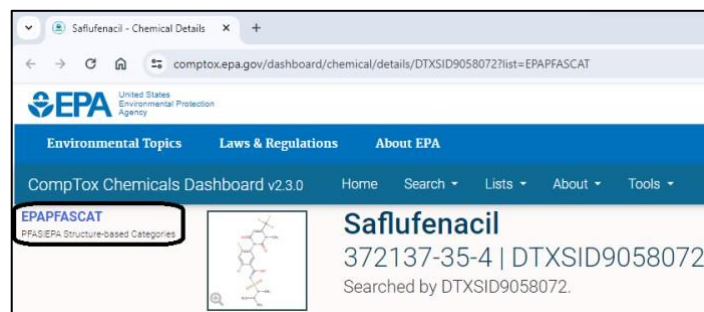
The screenshot shows the EPA CompTox Chemicals Dashboard for Pyroxasulfone. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID4058104?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard title is "CompTox Chemicals Dashboard v2.3.0" with links for Home, Search, Lists, About, and Tools. A search filter "EPAPFASCAT" is highlighted with a red box, with "PFAS(EPA Structure-based Categories)" listed below it. The chemical name "Pyroxasulfone" is displayed in large font, followed by its CAS number "447399-55-5" and DTXSID "DTXSID4058104". The text "Searched by DTXSID4058104." is also present. A chemical structure diagram of Pyroxasulfone is shown to the left of the text.

Pyroxulam, CAS #422556-08-9



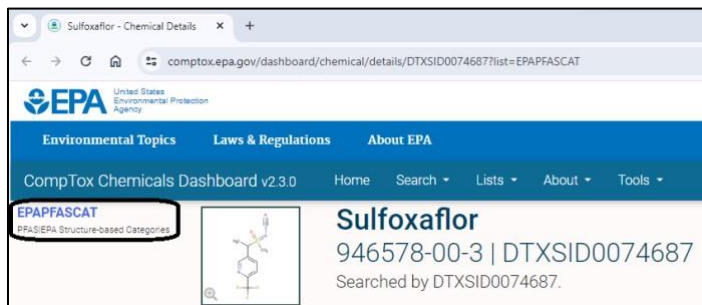
The screenshot shows the EPA CompTox Chemicals Dashboard for Pyroxulam. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID7044344?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard title is "CompTox Chemicals Dashboard v2.3.0" with links for Home, Search, Lists, About, and Tools. A search filter "EPAPFASCAT" is highlighted with a red box, with "PFAS(EPA Structure-based Categories)" listed below it. The chemical name "Pyroxulam" is displayed in large font, followed by its CAS number "422556-08-9" and DTXSID "DTXSID7044344". The text "Searched by DTXSID7044344." is also present. A chemical structure diagram of Pyroxulam is shown to the left of the text.

Saflufenacil, CAS #372137-35-4



The screenshot shows the EPA CompTox Chemicals Dashboard for Saflufenacil. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID9058072?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard title is "CompTox Chemicals Dashboard v2.3.0" with links for Home, Search, Lists, About, and Tools. A search filter "EPAPFASCAT" is highlighted with a red box, with "PFAS(EPA Structure-based Categories)" listed below it. The chemical name "Saflufenacil" is displayed in large font, followed by its CAS number "372137-35-4" and DTXSID "DTXSID9058072". The text "Searched by DTXSID9058072." is also present. A chemical structure diagram of Saflufenacil is shown to the left of the text.

Sulfoxaflor, CAS #946578-00-3



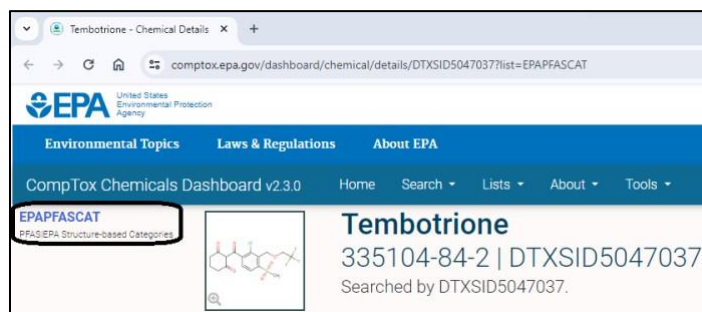
The screenshot shows the EPA ComTox Chemicals Dashboard for Sulfoxaflor. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID0074687?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0, and there are links for Home, Search, Lists, About, and Tools. A search filter 'EPAPFASCAT' is highlighted with a red box. The chemical name 'Sulfoxaflor' is prominently displayed, followed by its CAS number '946578-00-3' and DTXSID 'DTXSID0074687'. A search note indicates it was searched by DTXSID0074687. A chemical structure image is visible to the left of the text.

Tefluthrin, CAS #79538-32-2



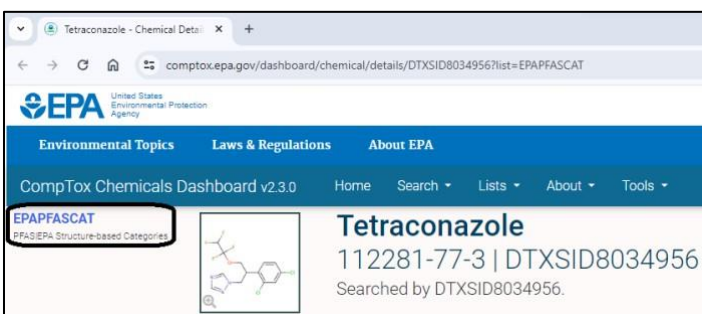
The screenshot shows the EPA ComTox Chemicals Dashboard for Tefluthrin. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID5032577?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0, and there are links for Home, Search, Lists, About, and Tools. A search filter 'EPAPFASCAT' is highlighted with a red box. The chemical name 'Tefluthrin' is prominently displayed, followed by its CAS number '79538-32-2' and DTXSID 'DTXSID5032577'. A search note indicates it was searched by DTXSID5032577. A chemical structure image is visible to the left of the text.

Tembotrione, CAS #335104-84-2



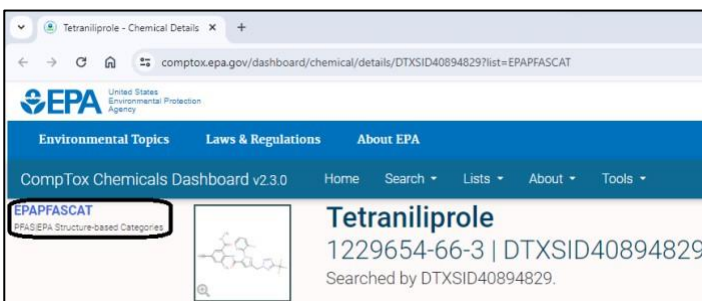
The screenshot shows the EPA ComTox Chemicals Dashboard for Tembotrione. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID5047037?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0, and there are links for Home, Search, Lists, About, and Tools. A search filter 'EPAPFASCAT' is highlighted with a red box. The chemical name 'Tembotrione' is prominently displayed, followed by its CAS number '335104-84-2' and DTXSID 'DTXSID5047037'. A search note indicates it was searched by DTXSID5047037. A chemical structure image is visible to the left of the text.

Tetraconazole, CAS #112281-77-3



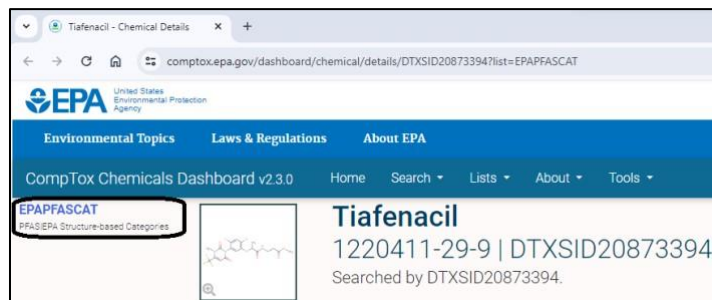
The screenshot shows the EPA ComTox Chemicals Dashboard for Tetraconazole. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID8034956?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0, and there are links for Home, Search, Lists, About, and Tools. A search filter 'EPAPFASCAT' is highlighted with a red box. The chemical name 'Tetraconazole' is prominently displayed, followed by its CAS number '112281-77-3' and DTXSID 'DTXSID8034956'. A search note indicates it was searched by DTXSID8034956. A chemical structure image is visible to the left of the text.

Tetraniliprole, CAS #1229654-66-3



The screenshot shows the EPA ComTox Chemicals Dashboard for Tetraniliprole. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID40894829?list=EPAPFASCAT. The page header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. Below the header, the dashboard version is v2.3.0, and there are links for Home, Search, Lists, About, and Tools. A search filter 'EPAPFASCAT' is highlighted with a red box. The chemical name 'Tetraniliprole' is prominently displayed, followed by its CAS number '1229654-66-3' and DTXSID 'DTXSID40894829'. A search note indicates it was searched by DTXSID40894829. A chemical structure image is visible to the left of the text.

Tiafenacil, CAS #1220411-29-9



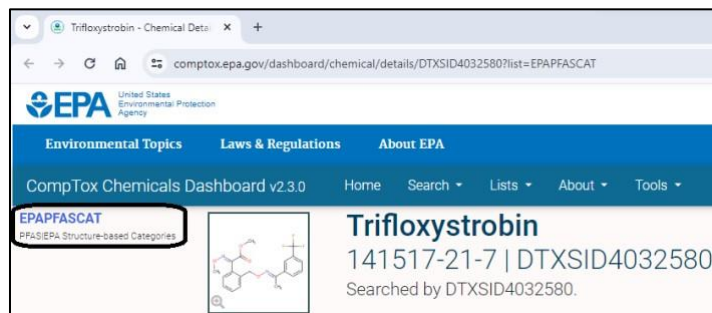
The screenshot shows the EPA ComTox Chemicals Dashboard for Tiafenacil. The page title is "Tiafenacil - Chemical Details". The URL is "comptox.epa.gov/dashboard/chemical/details/DTXSID20873394?list=EPAPFASCAT". The EPA logo is at the top left. The navigation bar includes "Environmental Topics", "Laws & Regulations", and "About EPA". Below the navigation bar, it says "CompTox Chemicals Dashboard v2.3.0" and "Home Search Lists About Tools". On the left, there is a box labeled "EPAPFASCAT" with "PFAS/IEPA Structure-based Categories" below it. In the center, there is a chemical structure of Tiafenacil. On the right, the name "Tiafenacil" is displayed in large font, followed by "1220411-29-9 | DTXSID20873394" and "Searched by DTXSID20873394".

Tralopyril, CAS #122454-29-9



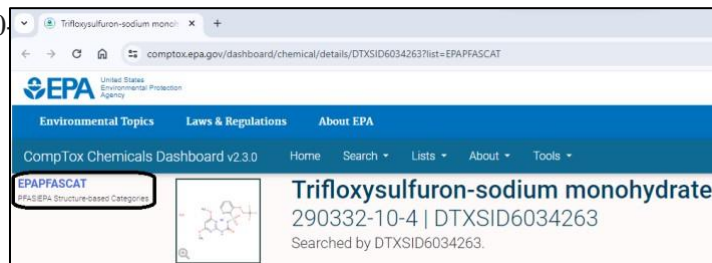
The screenshot shows the EPA ComTox Chemicals Dashboard for Tralopyril. The page title is "Tralopyril - Chemical Details". The URL is "comptox.epa.gov/dashboard/chemical/details/DTXSID6041503?list=EPAPFASCAT". The EPA logo is at the top left. The navigation bar includes "Environmental Topics", "Laws & Regulations", and "About EPA". Below the navigation bar, it says "CompTox Chemicals Dashboard v2.3.0" and "Home Search Lists About Tools". On the left, there is a box labeled "EPAPFASCAT" with "PFAS/IEPA Structure-based Categories" below it. In the center, there is a chemical structure of Tralopyril. On the right, the name "Tralopyril" is displayed in large font, followed by "122454-29-9 | DTXSID6041503" and "Searched by DTXSID6041503".

Trifloxystrobin, CAS #141517-21-7



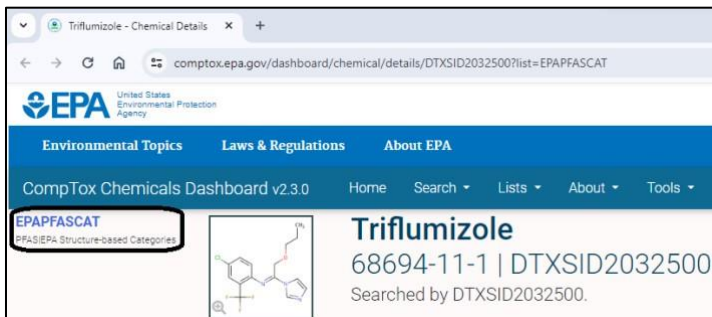
The screenshot shows the EPA ComTox Chemicals Dashboard for Trifloxystrobin. The page title is "Trifloxystrobin - Chemical Details". The URL is "comptox.epa.gov/dashboard/chemical/details/DTXSID4032580?list=EPAPFASCAT". The EPA logo is at the top left. The navigation bar includes "Environmental Topics", "Laws & Regulations", and "About EPA". Below the navigation bar, it says "CompTox Chemicals Dashboard v2.3.0" and "Home Search Lists About Tools". On the left, there is a box labeled "EPAPFASCAT" with "PFAS/IEPA Structure-based Categories" below it. In the center, there is a chemical structure of Trifloxystrobin. On the right, the name "Trifloxystrobin" is displayed in large font, followed by "141517-21-7 | DTXSID4032580" and "Searched by DTXSID4032580".

Trifloxysulfuron-sodium, CAS #290332-10-4



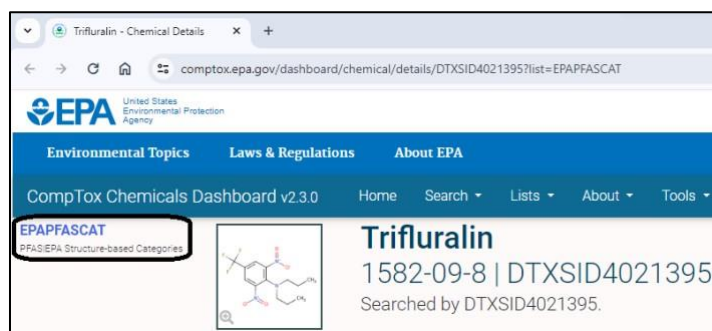
The screenshot shows the EPA ComTox Chemicals Dashboard for Trifloxysulfuron-sodium monohydrate. The page title is "Trifloxysulfuron-sodium monohydrate - Chemical Details". The URL is "comptox.epa.gov/dashboard/chemical/details/DTXSID6034263?list=EPAPFASCAT". The EPA logo is at the top left. The navigation bar includes "Environmental Topics", "Laws & Regulations", and "About EPA". Below the navigation bar, it says "CompTox Chemicals Dashboard v2.3.0" and "Home Search Lists About Tools". On the left, there is a box labeled "EPAPFASCAT" with "PFAS/IEPA Structure-based Categories" below it. In the center, there is a chemical structure of Trifloxysulfuron-sodium monohydrate. On the right, the name "Trifloxysulfuron-sodium monohydrate" is displayed in large font, followed by "290332-10-4 | DTXSID6034263" and "Searched by DTXSID6034263".

Triflumizole, CAS #68694-11-1



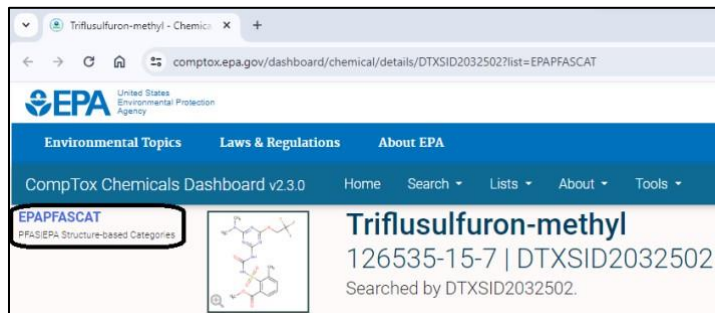
The screenshot shows the EPA ComTox Chemicals Dashboard for Triflumizole. The page title is "Triflumizole - Chemical Details". The URL is "comptox.epa.gov/dashboard/chemical/details/DTXSID2032500?list=EPAPFASCAT". The EPA logo is at the top left. The navigation bar includes "Environmental Topics", "Laws & Regulations", and "About EPA". Below the navigation bar, it says "CompTox Chemicals Dashboard v2.3.0" and "Home Search Lists About Tools". On the left, there is a box labeled "EPAPFASCAT" with "PFAS/IEPA Structure-based Categories" below it. In the center, there is a chemical structure of Triflumizole. On the right, the name "Triflumizole" is displayed in large font, followed by "68694-11-1 | DTXSID2032500" and "Searched by DTXSID2032500".

Trifluralin, CAS #1582-09-08



The screenshot shows the EPA's CompTox Chemicals Dashboard for Trifluralin. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID4021395?list=EPAPFASCAT. The EPA logo is visible at the top left. The main navigation bar includes 'Environmental Topics', 'Laws & Regulations', and 'About EPA'. Below this, the dashboard version 'v2.3.0' and navigation links 'Home', 'Search', 'Lists', 'About', and 'Tools' are shown. A red box highlights the 'EPAPFASCAT' category label, which is linked to 'PFAS/EPA Structure-based Categories'. To the right of this label is a chemical structure diagram of Trifluralin. The chemical name 'Trifluralin' is displayed in large text, followed by its CAS number '1582-09-8 | DTXSID4021395' and the search criteria 'Searched by DTXSID4021395'.

Triflurosulfuron-methyl, CAS #126535-15-7



The screenshot shows the EPA's CompTox Chemicals Dashboard for Triflurosulfuron-methyl. The browser address bar displays the URL: comptox.epa.gov/dashboard/chemical/details/DTXSID2032502?list=EPAPFASCAT. The EPA logo is visible at the top left. The main navigation bar includes 'Environmental Topics', 'Laws & Regulations', and 'About EPA'. Below this, the dashboard version 'v2.3.0' and navigation links 'Home', 'Search', 'Lists', 'About', and 'Tools' are shown. A red box highlights the 'EPAPFASCAT' category label, which is linked to 'PFAS/EPA Structure-based Categories'. To the right of this label is a chemical structure diagram of Triflurosulfuron-methyl. The chemical name 'Triflurosulfuron-methyl' is displayed in large text, followed by its CAS number '126535-15-7 | DTXSID2032502' and the search criteria 'Searched by DTXSID2032502'.

Scientists' Statement on Defining PFAS

The undersigned are scientists with expertise in per- and polyfluoroalkyl substances (“PFAS”). We study the use and health & environmental effects of PFAS, and support reducing the adverse impacts of PFAS, the “forever chemicals”. Here, we address the necessity for government agencies and legislatures to adopt complete PFAS definitions grounded in science without political interference.

PFAS are used in consumer and industrial applications as surfactants and to impart oil, water, and stain resistance. There are thousands of PFAS chemicals and all well-studied PFAS show human health harms ranging from immune system dysfunction to increased risk of certain cancers.¹ All PFAS are distinguished by the presence of at least one fully fluorinated carbon atom. The carbon-fluorine bond is the strongest single bond in organic chemistry², giving all PFAS the shared trait of persistence, leading to their accumulation in our bodies and ecosystems. The health and environmental risks of PFAS coupled with their extreme environmental persistence³ requires a class-based approach⁴ and a definition that reflects that.

The following are science-based definitions:

- The “at least one fully fluorinated carbon” definition that has been used by 23 US states, the Department of Defense, and Congress.⁵
- The nearly identical 2021 OECD definition that was crafted by a panel of international PFAS experts, including those representing the chemical industry and US EPA.⁶

PFAS definitions that exclude polymers and gases are overlooking the most widely used PFAS. Claims that these PFAS are needed to fulfill climate and infrastructure goals are irrelevant to the definition of PFAS and are continuing to be refuted through the development of safer alternatives.

PFAS polymers can be thought of as plastics that contain carbon-fluorine bonds. They have been exempted in some PFAS regulations and definitions due to their lack of direct toxicity, but life-cycle effects must be considered to protect our health and our ecosystems.⁷ The manufacturing, use, and disposal of PFAS polymers emits harmful fluorinated building blocks and PFAS greenhouse gases, with *80% of historical PFAS environmental contamination estimated to have originated from polymer production*.⁸ PFAS polymers are also persistent, contributing to the ongoing microplastic crisis. Any PFAS definition grounded in science must include all PFAS polymers.

Fluorinated gases must also be included in the class of PFAS. Many persist in the environment or decay into trifluoroacetic acid (TFA), a PFAS that has been building up in the environment since the introduction of CFC replacements like hydrofluoroolefin (HFO) gases. We are concerned that TFA has been increasingly detected in people and drinking water worldwide.^{9,10} The low global warming potential of some fluorinated gases does not justify their exclusion from the definition of PFAS.

Government agencies and legislatures should continue to define PFAS accurately using the above definitions, and if any exemptions are needed, e.g., for certain pharmaceuticals, then those can be given without changing the definition of PFAS.

Respectfully signed,

The views expressed are those of the signatories and do not represent their affiliated organizations.

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