



# FACT SHEET

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## Public Q's & A's on PFOA

*In a **Federal Register** notice signed on April 14, 2003, EPA is releasing a preliminary risk assessment for the chemical PFOA, and is starting a public process to identify and generate additional information to strengthen the risk assessment. EPA is also inviting interested parties to monitor or participate in negotiations on one or more enforceable consent agreements to obtain additional data concerning PFOA and fluorinated telomers which may metabolize or degrade to PFOA. The first public meeting will take place on June 6, 2003.*

### **1. What is PFOA?**

PFOA is perfluorooctanoic acid. It is a synthetic (man-made) chemical and does not occur naturally in the environment. The "PFOA" acronym is used to indicate not only perfluorooctanoic acid itself, but also its principal salts. The most commonly used chemical in this grouping is the ammonium salt, ammonium perfluorooctanoate, or APFO, which is sometimes called "C8."

### **2. What is PFOA used for?**

PFOA is used as an essential processing aid in the manufacture of fluoropolymers. Fluoropolymers impart valuable properties, including fire resistance and oil, stain, grease, and water repellency. For example, they can be used to provide non-stick surfaces on cookware and protective finishes on carpets and clothing. They are employed in hundreds of uses in almost all industry segments, including the aerospace, automotive, building/construction, chemical processing, electrical and electronics, semiconductor, and carpet and textile industries. Although fluoropolymers are made using PFOA, the finished products themselves are not expected to contain PFOA.

### **3. What action is EPA taking?**

EPA is issuing a preliminary risk assessment of PFOA, requesting public comment on its scientific findings, and seeking additional data concerning these chemicals. EPA is also inviting interested parties to monitor or participate in negotiations on one or more enforceable consent agreements (ECAs) under section 4 of the Toxic Substances Control Act (TSCA) concerning PFOA and fluorinated telomers which may metabolize or degrade to PFOA. EPA is also announcing the first public meeting for these ECA

negotiations, which will be held on June 6, 2003. EPA is taking these steps to better understand the sources and exposure pathways leading to the presence of PFOA in human blood. Further information will help EPA determine whether and what additional actions are appropriate.

### **4. Why is this action necessary?**

The Agency is interested in collecting additional information because studies have indicated that PFOA causes developmental toxicity and other effects in animals. EPA's preliminary assessment indicates potential exposure of the U.S. general population to PFOA at very low levels. However, this assessment also reflects considerable scientific uncertainty regarding the potential risks. EPA has identified areas where additional information could be very helpful in allowing the Agency to develop a more accurate assessment of the potential risks posed by PFOA and by chemicals that may degrade to form PFOA, and to identify what voluntary or regulatory actions, if any, would be appropriate.

### **5. Are there steps consumers could take to reduce exposures to PFOA?**

At present, there aren't any steps that EPA recommends that consumers take to reduce exposures to PFOA, because the sources of PFOA in the environment and the pathways by which people are exposed are not known. Given the considerable scientific uncertainties, EPA has not made a determination as to whether PFOA poses an unreasonable risk to the public. This determination will be better informed as new exposure data are factored

into the risk assessment. EPA does not believe there is any reason for consumers to stop using any consumer or industrial related products.

### **6. How are people exposed to PFOA?**

Current information indicates that the general U.S. population may be exposed to very low levels of PFOA, but the available scientific information cannot determine how people are being exposed. The limited geographic locations of fluorochemical plants making or using the chemical suggest that there may be additional sources of PFOA in the environment, and exposures beyond those attributable to direct releases from industrial facilities. The degradation of telomer chemicals may be one of these additional sources. But whether human exposures are due to PFOA in the air, the water, on dusts or sediments, in dietary sources, or through some combination of routes is currently unknown.

### **7. What types of industrial and consumer products contain PFOA?**

Currently, consumer products are not believed to contain PFOA, although some products might contain other chemicals, called telomers, that might degrade over time in the environment to form PFOA. Some industrial fluoropolymer dispersion products contain PFOA, but these products are typically used in heat-treated applications that would remove the PFOA from final products before they leave the manufacturing plants.

### **8. What are fluorinated telomers, and how do they relate to PFOA?**

Fluorinated telomers, commonly called "telomers," are small fluorine-containing polymers, man-made chemicals produced by a specific process that utilizes the ability of certain chemicals to link together into chains of a defined length. Although telomers aren't made using PFOA, some data indicate that certain telomers may break down or degrade to form PFOA in the environment, and may be metabolized to form PFOA if they get inside living organisms.

### **9. What are telomers used for?**

Telomers are used in many products, including fire fighting foams; personal care and cleaning products; and oil, stain, grease, and water repellent coatings on carpet, textiles, leather, and paper.

### **10. Are there reasonable and cost effective alternatives to PFOA and telomers?**

PFOA is an essential processing aid in the manufacture of fluoropolymers. Fluoropolymer manufacturers have indicated that there are no known alternatives to PFOA. Some manufacturing processes can use different technologies that don't employ PFOA, but these processes could not currently be used to produce most fluoropolymer products.

EPA does not know all of the uses of the telomer chemicals, and thus does not have readily available information concerning alternatives for those uses. The industry has committed to provide additional information as part of its ongoing voluntary activities with respect to these chemicals.

### **11. What companies manufacture PFOA and telomers?**

3M Company formerly manufactured PFOA in the United States, but discontinued manufacturing the chemical during the period 2000-2002. Currently, DuPont is the only domestic manufacturer of PFOA. Other companies may manufacture PFOA elsewhere in the world.

DuPont, Clariant GmbH, Daikin Industries, and Asahi Glass all manufacture telomers at various facilities worldwide. There may be additional producers of telomer chemicals.

### **12. What exactly is an ECA?**

An enforceable consent agreement (ECA) is a publicly negotiated agreement among EPA, industry, and interested parties that requires certain signing parties to generate data and submit those data to EPA on a specified schedule. EPA has found that, in instances where there is substantial agreement that particular data are necessary or important, ECAs can be a much quicker way to obtain data than pursuing a test rule under section 4 of the Toxic Substances Control Act. Test rules can take up to two years to complete, while ECA's can often be concluded in less than a year. ECAs are enforceable, meaning that EPA can compel the submission of information agreed to under the ECA. Because they are negotiated in public, all parties who are interested in the data have the opportunity to participate.

### **13. Is PFOA more toxic to children than to adults?**

EPA is not aware of any studies that would provide evidence that PFOA is either more or less toxic to children than to adults.

### **14. Is PFOA present in my food, drinking water and indoor air?**

EPA does not know the source of PFOA in the environment, or the pathways by which it is getting into humans. There are only very limited data on the general environmental presence of PFOA. Additional studies are attempting to determine answers to these questions.

### **15. What are the health benefits from EPA taking this action?**

EPA's preliminary assessment indicates that the general U.S. population may be exposed to PFOA at very low levels. Receiving the information that EPA has requested will allow the Agency to better characterize the exposure, refine its risk assessment, and determine what additional actions, if any, would be appropriate to protect human health and the environment.

### **16. What additional data is the Agency requesting and why?**

EPA is asking for use and production volume data, to better define the universe of chemicals which may contribute to the presence of PFOA in the environment and in people, and additional data on chemical and product biodegradation to help explain the sources of PFOA. EPA is also requesting any additional information that would help in the development of an understanding about the pathways by which people may be exposed to PFOA.

### **17. What are the next steps to evaluate PFOA?**

EPA has requested additional information that would help to reduce the uncertainties in its scientific risk assessment and improve the understanding of the presence of the chemical in the environment. EPA expects to submit a more comprehensive risk analysis incorporating some of this additional information to the Agency's Science Advisory Board for independent peer review and comment in Fall 2003. EPA has also

solicited interested parties to participate in the negotiation of enforceable consent agreements to produce additional data. Industry has already committed to providing some additional information through letters of intent submitted to the Agency in March 2003.

### **18. What is a Letter of Intent?**

A Letter of Intent is a unilateral statement by a company, group, or individual describing activities they are undertaking, and making voluntary commitments to perform those activities as described. Because the commitments in such a letter are voluntary, the letters are not binding or enforceable.

### **19. What has industry committed to do in their letters of intent on PFOA and telomers?**

In brief, the companies have committed to providing additional data that should help to develop the understanding of PFOA sources and exposures. 3M Company has indicated that it will not resume the manufacture of PFOA, and it will continue its medical monitoring efforts for workers and continue monitoring groundwater, surface water, and other environmental media and provide reports to EPA. The members of the Fluoropolymer Manufacturing Group have committed to reduce emissions, to study their products to determine whether they may be a source of PFOA, and to follow principles of product stewardship in their efforts to support toxicological research, control occupational exposures in their own facilities, monitor employee health, assist customers in protecting their employees, and meet the general commitment to reduce emissions to the environment. The members of the Telomer Research Program have committed to evaluating telomer products sold in the U.S. to determine whether they contribute to significant human or environmental exposure to PFOA. All of the Letters of Intent are available in the public docket.

### **FOR MORE INFORMATION:**

For general information about PFOA, or about these standards, contact:

\*TSCA Hotline 202-5541404

\* EPA's web site at [www.epa.gov/oppt/](http://www.epa.gov/oppt/)