
From: Fletcher, Steven G CIV NAVSEA HQ, SEA 05
To: Hunstad, Mary P CIV NAVSEA HQ, SEA 05
CC: Berkoski, Daniel T CIV NAVSEA, SEA 05
Sent: 4/14/2016 3:35:42 PM
Subject: DON PFC Strategy - Industry Feedback
Attachments: ATTACH000.eml

Mary,

Here is the feedback that I am getting from Industry:

Ansul/Chemguard (Tyco): Phil Novac confirms that there are no products that are 100% PFOA-free. All C6 products still have trace amounts of PFOA. The lowest detectable level currently is 20 ppb PFOA. Their products meet the intent of the EPA Stewardship program. Phil's recommended wording to identify C6 products on the NSN is, "C6 - 2015 EPA PFOA Stewardship Compliance". Recommended language to put into certification letter, "Tyco Fire Products' Type 3 and Type 6 Aqueous Film-Forming Foam (AFFF) Liquid Concentrates are formulated using fluorochemicals that meet the goals of the U.S. Environmental Protection Agency 2010/15 PFOA Stewardship Program. These fluorochemicals are manufactured using a telomer-based process with a minimum requirement of 97.5% C6. "

Phoschek: Craig McDonnell confirms that no AFFF products will be 100% PFOA-free. There will always be trace amounts of PFOA.

Solberg: Mitch Hubert confirms that no AFFF products will be 100% PFOA-free. There will always be trace amounts of PFOA. Can't call the products PFOA-free. Can't call the products 100% C6.

FFFC: Tom Cortina confirms that there will always be trace amounts of PFOA in the products in the parts per billion range (ppb). One of the other manufacturers had told me (Steve) that their product had less than 20 ppb and was therefore not detectable. Tom thought this was not true, that less than 20 ppb for an AFFF wasn't realistic. He said that the EU was trying to put a limit on PFOA (and its precursors) in products with a ppb number. First proposed limit was 2 ppb, but due to push back (partly because there are no tests that detect that low), that the next proposed limit was 25 ppb. This (25 ppb) is the current proposed limit, but firefighting foams will get an exemption and be allowed to have no greater than 1,000 ppb PFOA (and it's precursors).

One attachment from Tom indicates that a PFOA-related substance is, "Perfluorooctanoic acid (PFOA, CAS 335-67-1, EC 206-397-9) and its salts.

Any substance (including salts and polymers) having a linear or branched perfluoroheptyl group with the formula (C7F15)C- as one of the structural elements⁵,
6.

Any substance (including salts and polymers) having a linear or branched perfluorooctyl group with the formula C8F17- as one of the structural elements^{2,3}.

The following substances are exempted from the above two paragraphs:

C8F17-X, where X= F, Cl, Br.
C8F17-C(=O)O-X' or C8F17-CF2-X' (where X'=any group, including salts)."

The other attachment defines PFOA precursors. It's on the middle column of pg 2888, but Tom summarizes it as, " Basically it is any long-chain (greater than C7) content as I understand it".

v/r,

Steve Fletcher, P.E.
Fire Protection Engineer
NAVSEA HQ, SEA 05P5
202-781-0932

US00007677

