

**C6 AFFFs
and
European Commission
Regulation 2017/1000
of June 13, 2017**

Dynax Fact Sheet

European Commission Regulation (EC) 2017/1000 (June 13, 2017)

This REACH regulation states that PFOA and PFOA-related substances “shall not, from 4 July 2020, be used in the production of, or placed on the market in” such products as C6 Fluorosurfactants, C6 AFFF Concentrates and C6 AFFF Foam Solutions “in a concentration equal to or above 25 ppb of PFOA including its salts or 1000 ppb of one or a combination of PFOA-related substances.”

Facts and Comments

Data below and in the attached chart apply to Dynax C6 Fluorosurfactants and specific C6 AFFF Concentrates and Foam Solutions thereof. Similar dilution calculations can be applied to specific C6 AR-AFFF, C6 FFFP, C6 AR-FFFP and C6 FP Concentrates and Foam Solutions thereof.

- As of January 2017, Dynax has achieved ~50% lower impurity levels of PFOA and PFOA-related substances in all of its C6 Fluorochemicals than the maximum impurity levels permitted after July 4, 2020:

<12.5 vs. <25 ppb PFOA
<500 vs. <1,000 ppb PFOA-related substances

- Foam Concentrate producers using Dynax C6 Fluorosurfactants can calculate the impurity levels of PFOA and PFOA-related substances in their Foam Concentrates and can confirm these levels by analysis. Typically, EN/UL grade 6, 3 and 1% C6 AFFF Concentrates contain ~2 to ~12% of Dynax C6 Fluorosurfactants. This leads to:

~0.25 to ~1.50 vs. <25 ppb PFOA
~9.0 to ~54 vs. <1000 ppb PFOA-related substances

- C6 AFFF Foam Solutions derived from 6, 3 and 1% C6 AFFF Concentrates will have extremely low impurity levels:

~0.015 vs. <25 ppb PFOA
~0.540 vs. <1000 ppb PFOA-related substances

Note: 0.015 ppb = 15 ppt (parts per trillion)
= 0.0000000015%

Please note: Foam producers should be aware of potential contamination coming from such sources as plant water, blending/storage tanks and other production equipment contaminated with PFOA and PFOA-related substances that could adversely increase impurity levels.

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C6 Fluorosurfactants		
	PFOA Impurity ¹	PFOA-Related Impurities ²
Dynax C6 Fluorosurfactants since January 2017	<12.5 ppb	<500 ppb
REACH EU Regulation effective July 2020	<25 ppb	<1000 ppb

¹ Based on PFOA analyses of all Dynax C6 Fluorosurfactants and C6 Foam Stabilizers using LC/MS/MS.

² Calculated

C6 AFFF Concentrates for EN / UL Performance		
	PFOA Impurity ³	PFOA-Related Impurities
6% AFFF 3% AFFF 1% AFFF	~0.25 ppb ~0.50 ppb ~1.50 ppb	~9 ppb ~18 ppb ~54 ppb
REACH EU Regulation effective July 2020	<25 ppb	<1000 ppb

³ Based on typical use levels of ~2 to ~12% of Dynax C6 Fluorosurfactants in 6, 3 and 1% C6 AFFF Concentrates.

C6 AFFF Foam Solutions				
	PFOA Impurity	PFOA-Related Impurities		
6% AFFF Solution 3% AFFF Solution 1% AFFF Solution	~0.015 ppb (=15 ppt)	~0.54 ppb		
REACH EU Regulation effective July 2020			<25 ppb	<1000 ppb

One part per billion = 1 ppb = 0.001 ppm = 0.0000001%
One part per trillion = 1 ppt = 0.001 ppb = 0.000001 ppm = 0.0000000001%