

The time after- 2006/122/EG (PFOS)



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2006/122/EG

Dez.2002: PFOS on the US EPA List of Chemicals to be regulated.

EU: 27.11.2006 PFOS-ban 4,5 y after EU-directive 2006/122/EC (27.06.2011)

Producers of AFFF- and FFFP-foam concentrates:
Replacement of PFOS-based fluorosurfactants by telomer-based fluorosurfactants, if not already used (PFOS < 50 mg/L)

2006/122/EC is no general ban of fluorosurfactants!!!



EPA 2010/15 Stewardship Program

PFOA (containing in trace levels in telomer based products)

In 2006 EPA and the eight major producers in the industry launched a Stewardship Program. They commit to reduce the facility emission and product content of **PFOA**.

US-report 2008 confirms for the major part of producers significant reduction of PFOA (up to 100%).



The history of foam!



1930



1950



**The time after
2006/122 EG**

The Challenge!





Why using fluorosurfactants?

Advantages of fluorosurfactants in foam concentrates:

- Fastest and most effective way for extinguishing big fires of hydrocarbons to reduce high toxic combustion byproducts
- Stable barrier against evaporation and re-ignition
- Low application rate in comparison to fluorine free foams

Disadvantages

- Man made and no natural product, not biodegradable .



Why using fluorosurfactants?

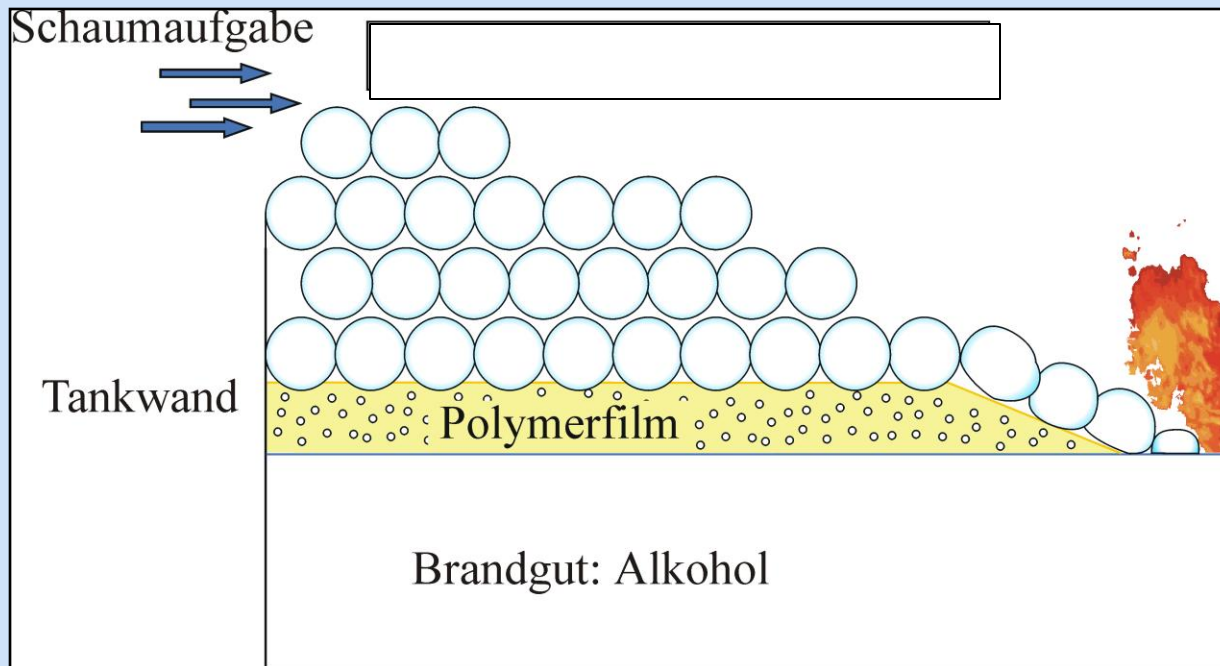
On hydrocarbon fires

- **Fluorine free foam:** Performance: class **IIIC (EN 1568-3)**
- **AFFF/FFFP:** Extinguishing performance class **IA/IB**

For large scale storage tank fires no equal alternative to AFFF by now!!!

Fluorinefree AR-foams- an alternative?

- Yes! On plenty of polar liquids.
- **Not recommended for large scale hydrocarbon fires!**





The right application!

- To **reduce the emission** of the man made fluoro-surfactants please check, whether the usage of AFFF/AR foams are necessary. (e.g. training purposes, Class A fires, etc.)
- Until now there is no alternative to the **high performance of AFFF** foams on large Class B fires (non polar).
- Low levels of environmental toxicities of fluorosurfactants can't be compared with the high potential of healthy an environmental risks of high toxic combustion byproducts caused by ineffective extinguishing.



End

**Thank You
for your attention!**