Certification of Safer Alternatives for PFAS-Free Firefighting Foams

Nov. 1, 2018
International Symposium on Alternatives Assessment

Holly Davies

Local Hazardous Waste Management Program in King County, Washington
Local Governments for Health and the Environment: King County, City of Seattle, Sound Cities Association
Mul1-agency regional program
• 2 million residents
• 60,000 businesses
• Collection and management
• Technical assist. and $
• Equity Social Justice

Working Together to Reduce Hazardous Waste
www.HazwasteHelp.org
Safer Alternatives Strategy

- Increase adoption and avoid regrettable substitutions
- Uniform system
- Regional partnerships
- Equity lens
- April 2018 King Co BOH resolution
- Examples
  - Dry cleaner pilot
  - Safer cleaning
  - Autobody paint*
  - MeCl
Per- and poly-fluorinated alkyl substances
Human Health

Widespread exposure
- Drinking water, food, dust
  - Children
  - Occupational
- CDC biomonitoring

Health effects
- Inc. cholesterol levels
- Liver damage
- Immune system
- Thyroid disease
- Developmental effects
- Decreased fertility
- Cancer
WA Environmental Monitoring

Widespread presence in surface waters, WWTP effluent, fish tissue, and osprey eggs
Selected Regulations

• EPA looking at clean up, drinking water standards (PFOS/PFOA/GenX), tox screening, methods
• Voluntary phase out of PFOS and PFOA

• 2018 WA state law- entire class
  • AFFF ban
  • PPE notification

• New federal law to remove PFAS requirement from FAA regulation within three years
• Other countries use fluorine free foam (ICAO)
Safer Alternatives

• Purchasers
  • Avoid regrettable substitutes
  • Focus on performance and cost

• Hazard and Exposure

• Lack of information
  • SDS example

3. Composition/Information on Ingredients

[Redacted] is a blend of organic surfactants being anionic, nonionic and amphoteric surfactants. [Redacted] does not contain PFOS or PFOA.
Lack of hazard information

SDS

3. Composition/information on Ingredients

3.1. Mixture

The following component(s) in this product are considered hazardous under applicable OSHA(USA)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No</th>
<th>weight-%</th>
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<tbody>
<tr>
<td>2-Methyl-2,4-pentanediol</td>
<td>107-41-5</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Proprietary Hydrocarbon Surfactants</td>
<td>Proprietary</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Proprietary Hydrocarbon Surfactants</td>
<td>Proprietary</td>
<td>3 - 7</td>
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<td>Proprietary</td>
<td>1 - 5</td>
</tr>
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<td>Propan-2-ol</td>
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<tr>
<td>3-Butoxy-2-propanol</td>
<td>5131-06-8</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

Data Commons
Safer Alternatives

• Third party certification (GreenScreen Certified)
  • Disclosure and evaluation
  • GreenScreen hazard screen- Benchmark (1-4, U)
  • Lab analysis

• Contacted 24 manufacturers/100 F-free foams
Thank you

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