



Phosphinate Flame Retardants ProScale Case Study

Adrian Beard, Clariant, 12-May-2023

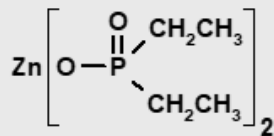
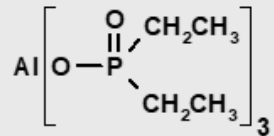


ProScale



Exolit[®] phosphinate flame retardants

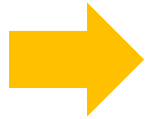
Exolit OP



Polyamides



Polyesters



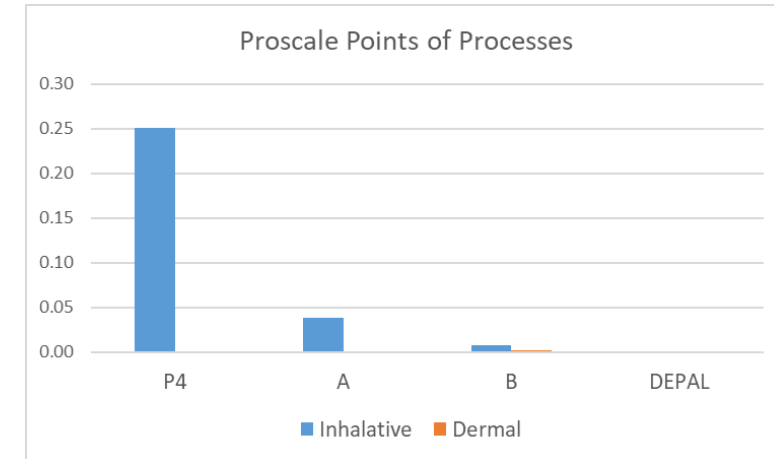
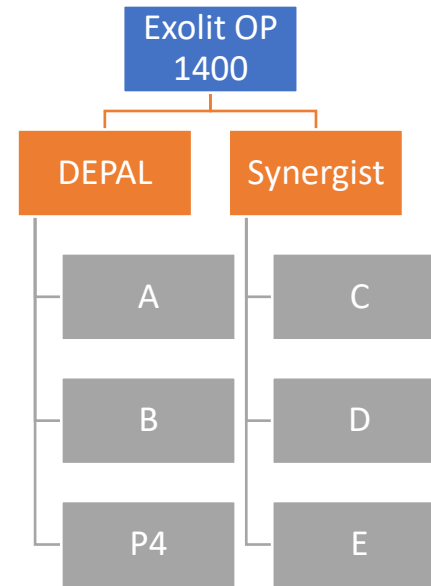
Thermoplastic Elastomers

**Epoxies, Adhesives,
Textile Coating . . .**

Non-melting filler like flame retardants,
available as single substance or
in the combination with synergists,
typical dosage 20%

Key results

- Big impact of protective measures
- Inhalative toxicity of P4 (yellow phosphorus) production dominates



Takeaways

- ProScale is straightforward to use, web version preferred
- As with all tools, input data quality is key
- Although simple, many parameters can be adjusted
- ProScale confirms hotspots from MSDS

Webinar co-sponsors

- The European Union (through project “Calimero”, number 101060546)
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