PLANETS

Safe and Sustainable by Design

SSbD

Understanding Flame Retardants

Why they matter, how they work, and what the future holds.

Why Flame Retardants?

Flame retardants stop materials from catching fire or at least slow the spread of flames.

Where Are They Used?

Common in household, electronic items, cushions, cables, cars, insulation, etc.

How Do They Work?

Flame retardants fight fire using four strategies.

The Four Strategies

1 Absorbing heat through an endothermic reactions, thereby cooling the burning material.

2 Releasing non-flammable gases that dilute oxygen and flammable vapors, smothering the fire.

3 Neutralizing flame-sustaining radicals, interrupting the chemical fire chain by flame poisoning.

4 Forming a protective char layer that blocks heat and inhibits pyrolysis gas release.

The PLANETS Solution

PLANETS is developing new flame retardants using SSbD (Safe and Sustainable by Design) principles.

- **Effective**
- **Sustainable**
- **Safe**

For more information about PLANETS and SSbD

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