Flame retardants decrease the ignitability of materials and inhibit the combustion process, limiting the amount of heat released.
Flame Retardant

Can be included in a wide range of applications in polyolefins (PE, PP and their copolymers) styrenics and highly engineered resins to provide improved protection against fire.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Masterbatch Series 92000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composition</td>
<td>Proprietary formulation of active ingredients for flame retardancy in a suitable polymeric resin, or liquid form</td>
</tr>
<tr>
<td>Masterbatch Colour</td>
<td>White</td>
</tr>
<tr>
<td>Mechanism</td>
<td>Vapour or Liquid Phase Inhibition. During combustion, d₂p®, flame retardant additives react with the polymer in the vapour or liquid phase, disrupting, at a molecular level, the production of free radicals and impeding the combustion process, char formation and water release</td>
</tr>
<tr>
<td>Applications</td>
<td>Textiles, automotive and aviation parts/products, paints and emulsions, electrical cables</td>
</tr>
<tr>
<td>Addition Rate</td>
<td>Between 5 and 25% (depending on certification requirements)</td>
</tr>
<tr>
<td>Odour</td>
<td>No odour</td>
</tr>
<tr>
<td>Stability</td>
<td>Extremely stable up to high temperatures. Stable when finely dispersed in a polymeric matrix, does not migrate to the surface of plastic materials in time (aging process). FR masterbatches have high heat stability, good FR efficiency, low cost and high UV stability</td>
</tr>
<tr>
<td>Storage</td>
<td>Indoor, away from excessive heat and direct UV exposure</td>
</tr>
</tbody>
</table>

Cost efficient flame retardants with exceptional UV stability with great dispersion and minimal or no colour impact, making d₂p® (fr) masterbatches the material of choice for a large variety of products.

The formulations are RoHS and EPA compliant, with a wide range of applications in polyolefin (PE, PP and their copolymers), styrenic homo and copolymers (GPPS, HIPS, ABS, SAN) as well as engineered thermoplastic resins, polyamides, PET/PBT, PC, silicone, PVC, etc.

Symphony supply high quality Brominated, Phosphorous, Inorganics and Nitrogen based Flame Retardant masterbatches to enhance safety and human well being.

**Benefits:**
- High performance.
- Exceptional heat and UV stability.
- Excellent dispersion.
- Recyclable.
- Minimum or no colour impact.
- The active ingredients do not pose environmental health risks.
- Applications are suitable for following RATINGS (testing methods):
  1. UL 94-HB
  2. UL94 - V0
  3. NFPA 701, Test Method 2
  4. NFP 92-503 (for M1 classification)
  5. BS LPS 1027 (Construction Industry)

**Disclaimer:** The information provided is general information. For specific applications, please consult our Technical Department. It is the customer’s responsibility to obtain regulatory approval for the intended purpose in the country or countries concerned.

Symphony Environmental Ltd
6 Elstree Gate, Elstree Way, Borehamwood, Hertfordshire WD6 1JD, UK
Tel: +44 (0)20 8207 59001 Fax: +44 (0)20 8207 7632 info@d2w.net

www.d2p.net