**Halogen Free Flame Retardant (Taliya-HFFR1)**

1. **Introduction**

Taliya-HFFR1 is Halogen Free Flame Retardant for ABS . It is Phosphinate Based type. It complies with RoHS and REACH regulation. It has the characteristics of high flame retardant efficiency, good thermal stability, no precipitation, good water resistance, light aging resistance, halogen-free and non-toxic.

1. **Specifications**

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| Item | Specification |
| Appearance | White powder |
| P content % | ＞20 |
| Particle size mm | 1-3 |
| Melt Point℃ | 250-270 |
| pH | 5-6 |
| Compositing temperature 1% ℃ | 300 |
| Moisture % | ≤0.2 |

1. **Recommended addition to ABS**

|  |  |  |
| --- | --- | --- |
| Add ratio | standard | level |
| 20%~21% | UL94 | V-0(1.6mm) |

**4.Recommendation for usage**

Stir fully before feeding. Users with conditions can directly use metered feeding. The processing temperature should be moderate (within 200°C of extrusion temperature). However, since the shear heat of the screw is very high, heating and shearing should be avoided. The heat superimposing effect of the snail leads to local overheating of the snails, which causes the flame retardant to decompose, so the shear before the screw assembly is stronger, which helps the ABS and the flame retardant to mix.

 **Test Data**

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| **产品描述 Product Description** |
| **塑料类别 Plastic type** | **ABS** |
| **颜色 Colour** | **Primary color** |
| **样品处理 Samples handling**  | **23℃、24h、50%RH** |
| **阻燃剂添加比例 Flame retardant addition ratio** | **20%** |
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| **产品特性 Product Characteristics** |
| **典型性能Typical Properties** | **测试方法Test Method** | **检测值Result** | **单位Unit** |
|  |  |  |  |
| **物理特性Physical Properties** |
| **密度Density**  |  | **1.05-1.06** | **g/cm³** |
| **熔体流动速率 Melt flow rate**  | **GB/T3682** |  | **g/10min** |
| **灰分 ignition** |  |  | **%** |
| **含水量 moisture** |  | **0.5** | **%** |
|  |  |  |  |
| **拉伸强度Tensile Strength (50 mm/min)** | **GB/T1040** | **32.42** | **MPa** |
| **拉伸模量 Tensile modulus** |  | **2261** | **MPa** |
| **断裂伸长率 Elongation at break (50 mm/min)** | **GB/T1040** | **10** | **%** |
| **弯曲强度 Flexural Strength** | **GB/T9341** | **55.82** | **MPa** |
| **弯曲模量Flexural modulus** | **GB/T9341** | **2325** | **MPa** |
| **悬臂梁缺囗冲击强度 Izod impact strength** | **GB/T1043** | **15.45** | **kJ/m²** |
| **悬臂梁无缺囗冲击强度 Cantilever beam full impact strength** | **84.8** |
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|  |  |  |  |
|  |
| **阻燃性能 Flame retardant level** | **UL94** | **V0** | **1.6mm** |
| **灼热丝测试 Glow wire test** | **GB/T 5169** |  | **℃** |
|  |
| **维卡软化点 Vicat softening point（50℃/H 50N）** | **GB/T 1633** | **92** | **℃** |