

# 面向电子电气产品防火外壳S.2测试的阻燃材料解决方案

具有优良阻燃性能的塑料材料，可用于制造防火外壳，为各类电子电气产品的电源提供功能性的同时，保障防火安全。

符合中国的产品安全法规和满足CCC（中国强制性产品认证，或称为“3C”）认证要求的电子电气防火防护外壳及其材料应具备如下特征：

- 防火防护外壳由V-0级材料制成
- 防火防护外壳应通过国标GB 4943.1-2022附录S.2针焰试验，并且判定要求依照GB 4943.1-2022第六章（“S.2测试”）

LEXAN™ 945S（ER014479）是一种不透明的阻燃聚碳酸酯树脂，可以通过1.5 mm厚度样品板的S.2测试，并具有优良的抗冲击性能和UL94 V-0@1.5mm阻燃等级

## 行业和产品对于选材的要求

- 优良的抗冲击性能
- UL黄卡及阻燃等级认证
- 通过设计使用厚度上的S.2测试
- 材料长期稳定性
- 符合WEEE/RoHs法规
- 符合REACH法规

## SABIC 材料特性

- 无卤（符合UL746H）
- 材料阻燃等级UL94 V-0 @ 1.5 mm\*
- 具有优良耐热性能
- 不透明

\*基于UL黄卡



SABIC材料解决方案典型性能数据

|  |                | LEXAN 945S<br>(E9014479) | LEXAN 945   | LEXAN 945M  | Unit    |
|--|----------------|--------------------------|-------------|-------------|---------|
| 卤素 (氯、溴)                                 |                | 无                        | 无           | 无           | -       |
| REACH法规符合性                               |                | 是                        | 是           | 是           | -       |
| MVR                                      | ISO 1133       | 10                       | 10          | 10          | cm³/10' |
| 悬臂梁缺口冲击, +23°C                           | ISO 180/1A     | 70                       | 70          | 70          | kJ/m²   |
| 拉伸模量                                     | ISO 527        | 2750                     | 2350        | 2350        | MPa     |
| 拉伸屈服强度                                   | ISO 527        | 63                       | 60          | 61          | MPa     |
| 热变形温度, 1.82 MPa, 3.2mm                   | ISO 75/Af      | 119                      | 125         | 125         | °C      |
| UL 94 V-0阻燃等级                            | UL 94, UL 746C | 1.5(*)                   | 1.0         | 1.2         | mm      |
| 相对温度系数 RTI<br>(Electr, Impact, Strength) | UL 746B        | 80/80/80<br>(更高RTI正在测试中) | 130/120/125 | 130/120/120 | °C      |
| 可通过S.2测试的厚度                              | GB 4943.1-2022 | 1.5                      | 2.5         | 2.5         | mm      |
| S.2测试报告 (第三方) *                          | GB 4943.1-2022 | 有                        | 有           | 有           | -       |

\* S.2测试和测试报告由CNAS认可的第三方实验室完成。按GB 4943.1-2022附录S.2的试验方法进行，温度70°C，预处理时间168h，施加针焰时间60s。判定依据：纱布不得被引燃，不得产生大于GB 4943.1-2022第6.4.8.3.3节（5mm）或第6.4.8.3.4节（3mm）中允许的任何孔洞。请联系SABIC获取相关S.2测试报告。

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