

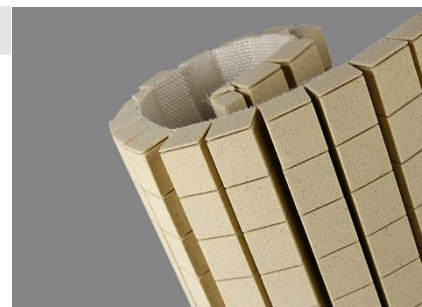
产品参数表

SOTECOFOAM® Fenix

Fenix 系列结构泡沫

产品特性/Product Properties

- 高温燃烧过程不传播火焰
- 燃烧时无有毒物质、烟密度低
- 取得 M1-F2 认证(AFNOR 列车内饰标准)
- 取得 HL2 和 HL3 认证 (EN45545-2 列车内饰标准)
- 游艇和船舶内饰的 IMO SOLAS MED 认证
- 适合生产阻燃、隔热、隔音制品
- 适用于不同工艺(预浸料、L-RTM、其他灌注工艺)
- 适用于各种树脂基体
- 力学性能好
- No flame transmission during high temperature combustion
- No toxic substances and low-density smoke during burning
- Certified M1-F2 according to AFNOR standards for train interiors
- Certified HL2 and HL3 according to EN 45545-2 standards for train interiors
- IMO SOLAS MED certification for yacht and ship interiors
- Suitable for flame-retardant, insulation and soundproof products
- Ideal for different manufacturing processes(pre-preg, L-RTM and other infusion processes)
- Compatibility with every type of resin
- Good features in terms of mechanical strength



Fenix 为 SOTECOFOAM® 泡沫系列产品之一，Fenix 泡沫夹芯是由微小闭孔泡沫构成的新型阻燃夹芯材料，适用于火车、地铁等运输制造业、航空航天、船舶以及对阻燃性能要求较高的领域。Fenix 泡沫不含卤素或类似物质，通过添加多种矿物质填料，所形成的难熔的石墨类物质，使产品优异的阻燃性、低烟密度和低烟毒性。

Fenix Foam is an innovatively expanded structural foam constituted of fine closed cells. It is suitable for transports, aeronautics, marine industries areas that require materials with strong fire resistance. It is produced with the use of neither halogen nor other substances of similar nature. In order to achieve its special formulation, different mineral charges have been used, which undergo an alteration in flame front, providing substances that direct the polymer decomposition towards the formation of graphitic-refractory substances. It follows an hindrance to fire propagation and the development of low-density smokes.

应用领域/Applications

- **公路和轨道交通:**
火车、地铁、巴士等
- **航空:**
内部结构、整流罩、厨房推车、民用飞机等
- **船舶:**
船体、舱壁等
- **工业:**
工装、罐、管道、盖板等
- **Road and Rail:**
Trains、subways、buses, ...
- **Aircraft and Aerospace:**
Interiors, radomes, galley carts, general aviation,...
- **Marine:**
Hulls, bulkheads, ...
- **Industries:**
Tooling, tanks, ductwork, covers, ...

应用工艺/ Applicable Processes

- 接触成型 (手糊/喷射)
- RTM 及真空导流
- 粘结
- 预浸处理
- 热成型
- Contact Forming (Hand/Spray)
- RTM and Vacuum Infusion
- Adhesive Bonding
- Pre-preg Processes
- Thermoforming

| 典型性能/Typical Performance | | 单位/unit | FENIX 60 | FENIX 80 | FENIX 100 | FENIX 200 | FENIX 300 |
|--|---|-------------------|----------------|----------------|----------------|---------------|----------------|
| 名义密度 Nominal Density | ISO 845 | Kg/m ³ | 57-65 | 76-85 | 94-108 | 185-215 | 280-320 |
| 压缩强度 Compressive Strength | ASTM D1621 | MPa | 0.6 (0.55) | 0.93 (0.85) | 1.3 (1.2) | 4.1 (3.8) | 7.7 (7.0) |
| 压缩模量 Compressive Modulus | ASTM D1621 | MPa | 31 (28) | 49 (45) | 66 (60) | 187 (170) | 275 (250) |
| 拉伸强度 Tensile Strength | ASTM - D 1623 | MPa | 0.6 (0.55) | 0.88 (0.80) | 1.2 (1.1) | 2.7 (2.5) | 6 (5.5) |
| 拉伸模量 Tensile Modulus | ASTM - D 1623 | MPa | 31 (28) | 44 (40) | 60 (55) | 176 (160) | 253 (230) |
| 剪切强度 Shear Strength | ASTM C273 | MPa | 0.38 (0.35) | 0.49 (0.45) | 0.66 (0.60) | 1.1 (1.00) | 1.95 (1.80) |
| 剪切模量 Shear Modulus | ASTM C273 | MPa | 7 (6) | 12 (11) | 15 (14) | 44 (40) | 77 (70) |
| 剪切伸长率 Shear Elongation | ASTM C273 | % | 12 (10) | 12 (10) | 12 (10) | 10 (8) | 10 (8) |
| 吸水率 Water Absorption | ISO 2896 | % | <2 | <2 | <2 | <2 | <2 |
| 初始导热系数 Initial Thermal Conductivity | ASTM C 518 | W/mK | 0.026 | 0.027 | 0.028 | 0.048 | 0.068 |
| 热变形温度 HDT | DIN-53424 | °C | 130 | 140 | 150 | 180 | 160 |
| 使用温度 Service Temperature | / | °C | -180,+110 | -180,+120 | -180,+120 | -180,+120 | -180,+120 |
| 火车阻燃性能 Fire Behaviour for trains | UNI 9177 | Class | Classe 1 | Classe 1 | Classe 1 | Classe 1 | Classe 1 |
| | AFNOR-NF P92.501 | Class | tbd | M1 | M1 | M1 | tbd |
| | AFNOR-NF F16.101 | Class | tbd | F2 | F2 | F2 | tbd |
| | EN 45545-2 | Class | HL2/HL3(*) | HL2/HL3(*) | HL2/HL3(*) | HL2/HL3(*) | HL2/HL3(*) |
| 船舶和游艇阻燃性能 Fire Behaviour for ships and yachts | IMO RES A754(18)-9 PERFORMANCE CRITERIA | Class | B15(*) | B15(*) | B15(*) | tbd | tbd |
| | IMO MSC 307(88) FTP CODE - Part 2-5 | Class | tbd | tbd | Passed(*) | Passed(*) | Passed(*) |

*加工方式，其他尺寸基于客户要求

*Finishing Options, other dimensions and closer tolerances upon request

*以上数据为 23±1°C 和 50±5%湿度条件下测试平均值

*Above are the average values measured at 23+1°C and 50+5% as RH.

*使用温度指持续使用温度，峰值温度可以更高

*Service temperature means for continuous service, peak temperature can be higher.

()基于适当的三明治系统选择

() based on proper sandwich system selection.

备注/Notes:

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