Свойства пеноматериалов

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Состав | Никель | Медь | Нихром | Алюминий | Ферроникель | Оксид алюминия | Карбид кремния | Оксид циркония |
| Ni 99,9 % | Cu 99,5-99,9 % | Ni 75 %,Cr 25% | Al 96%,Si 4 % | Ni 5-80%, Fe – ост. | Al2O3 98%; Сa, K, Cr | Si 66 %,C 34 % | ZrO₂ |
| Плотность[[1]](#footnote-1), г/см3 | мин. | 0,35 | 0,4 | 0,4 | 0,16 | 0,15 | 0,2 |  |  |
| макс. | 0,7 | 0,8 | 0,6 | 0,4 | 0,45 | 0,8 |  |  |
| Пористость, % | мин. | 85 | 85 | 90 | 88 | 90 | 80 |  |  |
| макс. | 97 | 98 | 95 | 97 | 98 | 95 |  |  |
| Модуль Юнга[[2]](#footnote-2), ГПа | мин. | 0,40 | 0,17 |  | 0,06 |  |  |  |  |
| макс. | 1,00 | 0,37 |  | 0,30 |  |  | 2,80 |  |
| Коэффициент Пуассона  | мин. |  | 0,32 |
| макс. |  | 0,34 |
| Температура плавления, °С | 1445 | 1080 | 1400 | 660 |  |  | 3500 |  |
| Температура применения[[3]](#footnote-3) (в том числе на воздухе), °С | 650 (450) | 250 (100) | 800 | 250 (140) | 400 | 1350 | 1500 (315) | 1700 |
| Теплопроводность[[4]](#footnote-4), Вт/м⋅К | 3 | 15 |  | 7 |  |  | 0,04 |  |

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1. Плотность зависит от технологии производства, состава и пористости. [↑](#footnote-ref-1)
2. Оценочная характеристика, данные приведены справочно. [↑](#footnote-ref-2)
3. Оценочная характеристика, данные приведены справочно. Температурная область применения существенно зависит от технологии производства, состава, агрессивности среды. [↑](#footnote-ref-3)
4. Оценочная характеристика, данные приведены справочно и отражают теплопроводность матрицы материала, без учета конвективного и лучевого теплопереноса через поры. [↑](#footnote-ref-4)