

Product Data Sheet



Rockbrake® RB220ELS–Roxul®1000

Engineered mineral fibre (Note Q) for application in friction materials

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Rockbrake® RB220ELS–Roxul®1000 is a premium quality inorganic mineral fibre. Its percentage of non fibrous material of max. 0.50 % > 63 microns is extremely low. This results in even less material– and rotor wear and reduces NVH issues compared with the standard Rockbrake® RB220–Roxul®1000. Its surface treatment results in better reinforcement properties under extreme braking conditions. This fibre has been specially developed for use in NAO non–steel ("ceramic") formulations.

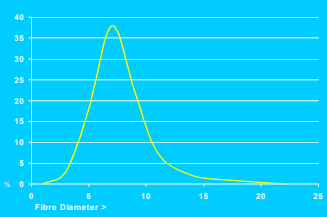
Roxul®1000 chemistry =biosoluble chemistry

All Roxul®1000 products are worldwide exonerated from classification as a carcinogen.

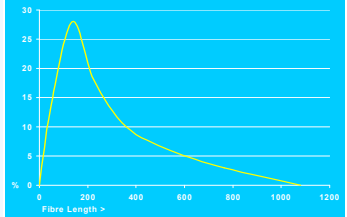
Chemical Analysis

| | Min. | Max. |
|------------------------------------|---------|---------|
| SiO ₂ | 38 %wt | 43 %wt |
| Al ₂ O ₃ | 18 %wt | 23 %wt |
| CaO+MgO | 23 %wt | 28 %wt |
| FeO | 4.5 %wt | 8 %wt |
| K ₂ O+Na ₂ O | 4.5 %wt | 4.5 %wt |
| Others | 6 %wt | 6 %wt |

Typical average fibre diameter



Typical average fibre length



ADVANTAGES OF ROCKBRAKE® RB220ELS–ROXUL®1000:

- Rockbrake® RB220ELS–Roxul®1000 also positively influences the following parameters :
 - material wear
 - noise and vibrations
 - rotor wear
- Rockbrake® RB220ELS–Roxul®1000 is consistent in quality in terms of :
 - chemical composition
 - surface treatment
 - purity
 - fibre length
 - fibre diameter
- Using Rockbrake® RB220ELS–Roxul®1000 gives formulators the opportunity to decrease the use of other fibres in the matrix (aramid, steel, glass, ceramic, copper, brass), resulting in significant cost savings on a price per volume base.

| Parameter | Average/Tolerance | Testmethod |
|-------------------------------|---------------------------------------|-----------------|
| Non-Fibrous Material | Norm. Max. N > 63 µm 0.2%wt 0.5%wt | TV 316 |
| Fibre Length | 230 ± 50 micron | TV 305 |
| Ignition Loss | max. 0.3 %wt | TV 302 |
| Moisture Content | max. 0.1 %wt | TV 302 |
| Fibre diameter (mass wt. av.) | approx. 9.0 micron | TV 165 |
| Fibre diameter (num. av.) | approx. 5.5 micron | TV 165 |
| Specific surface area | approx. 0.20 m ² /g | TV 165 |
| Hardness | 6 Moh | |
| Melting Point | > 1000 °C | Furnace, Visual |
| Specific Density | 2.75 ± 0.15 g/cm ³ | |
| Colour | Grey/Green | Visual |

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