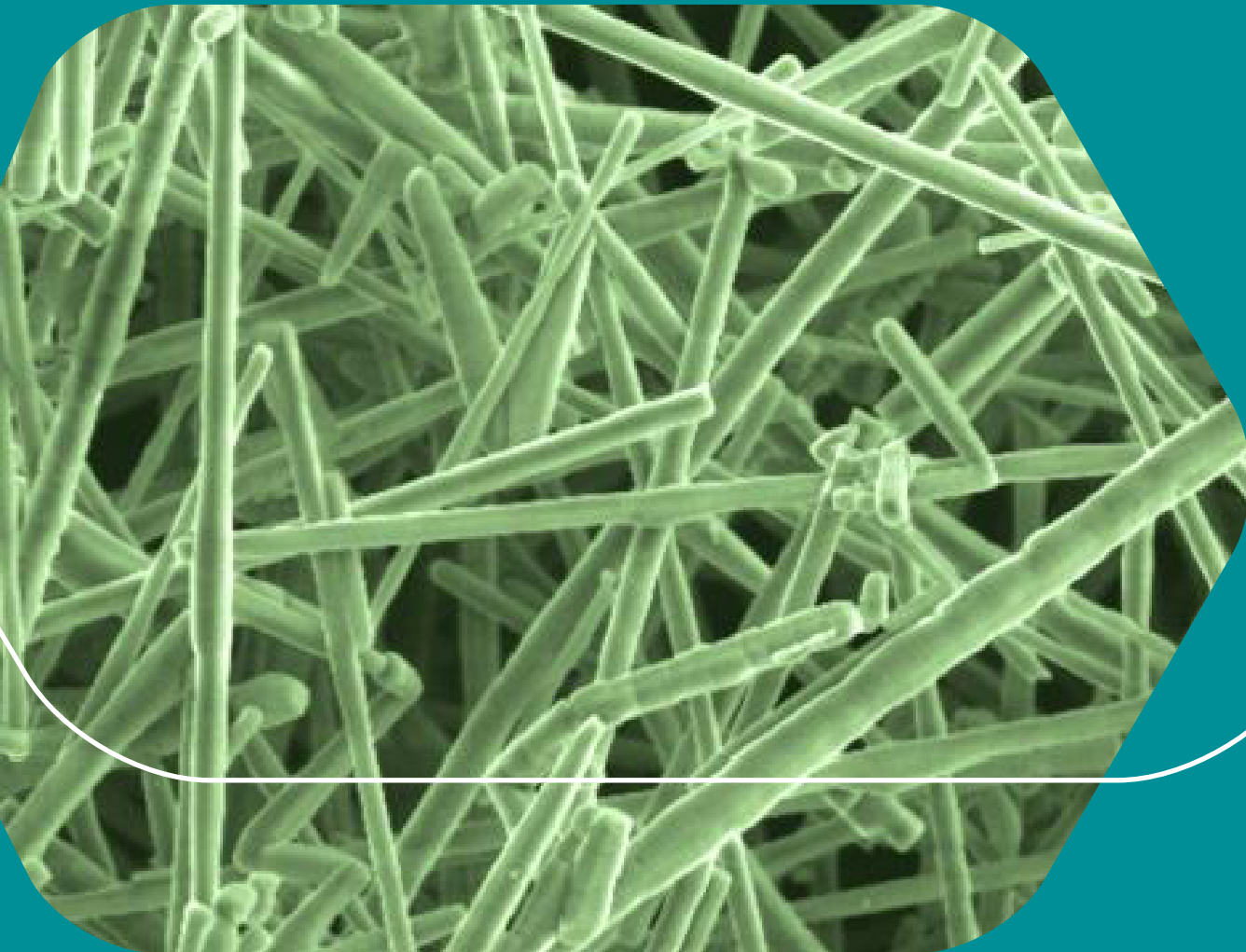


Creating Material Change



C-TUFF™ CT-8

Technical Data Sheet



*Innovation underpins everything we do*

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HaydaleGraphene



## CT-8 Dry Press-ready Ceramic Blend

C-TUFF™ CT-8 is a dry press-ready engineered blend of C-TUFF silicon carbide microfiber (SFC) and alumina used to produce highly wear resistant ceramics. It is characterized by excellent wear resistance and thermal and dimensional stability. CT-8 is completely inert and can be used in the most demanding physical and chemical environments.

### Processing and Applications:

For use in high performance ceramic wear parts, including:

- Dies
- Pipe liners
- Nozzles
- Other critical process equipment

CT-8 is de-binded in air or vacuum and fired in inert gas at atmospheric pressure. For applications which require the utmost fracture resistance, C-TUFF™ HA9S should be considered.

| Typical Properties                                     |             |
|--|-------------|
| Density, g/cm <sup>3</sup>                             | 3.87        |
| Flexural Strength, MPa                                 | 450-500     |
| Young's Modulus, GPa                                   | 385         |
| Vickers Hardness, GPa                                  | 18.3        |
| Fracture Toughness, MPa·m <sup>1/2</sup>               | 4.5-5       |
| Thermal Conductivity, W/m·K                            | 26          |
| Thermal Shock Resistance (ΔT)                          | 400°C       |
| Coefficient of Thermal Expansion, 10 <sup>-6</sup> /°C | 0.05 - 0.30 |



SUPER TOUGH



HEAT TRANSFER



SUPER STRONG

### Packaging and Product Handling:

C-TUFF™ CT-8 is produced commercially today and is available immediately for purchase.

- Powder - packaged as dry powder in 315lb (143kg) bags contained in drums
- Smaller quantities - available for purchase for development purposes

Dry CT-8 powder must be handled in a controlled environment. Please consult the SDS for additional safety and handling information.

**The content supplied in this technical data sheet ("Information") supersedes all previous versions supplied. Version 1, October 2019**

The Information should be used solely as guidance for the safe handling, storage, processing and/or use of the Product and is only typical of the methods described. The Haydale Group (Haydale Group means Haydale Technologies Inc., as a subsidiary of Haydale Graphene Industries plc., and any subsidiary or holding company from time to time and any subsidiary from time to time of any holding company of Haydale Limited) gives no express or implied warranty or guarantee or representation as to the behaviour of the Product described herein during any handling or storage or processing or use of the Product. To the extent permissible by law the Haydale Group shall under no circumstances whatever be liable whether in contract, tort (including negligence), breach of statutory duty, or otherwise, for any damage, including loss of profit, or any indirect or consequential loss arising under or in connection with any handling or storage or processing or use of the Product.



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