

JAMES CROPPER

EMITEC™

NICKEL COATED CARBON VEIL

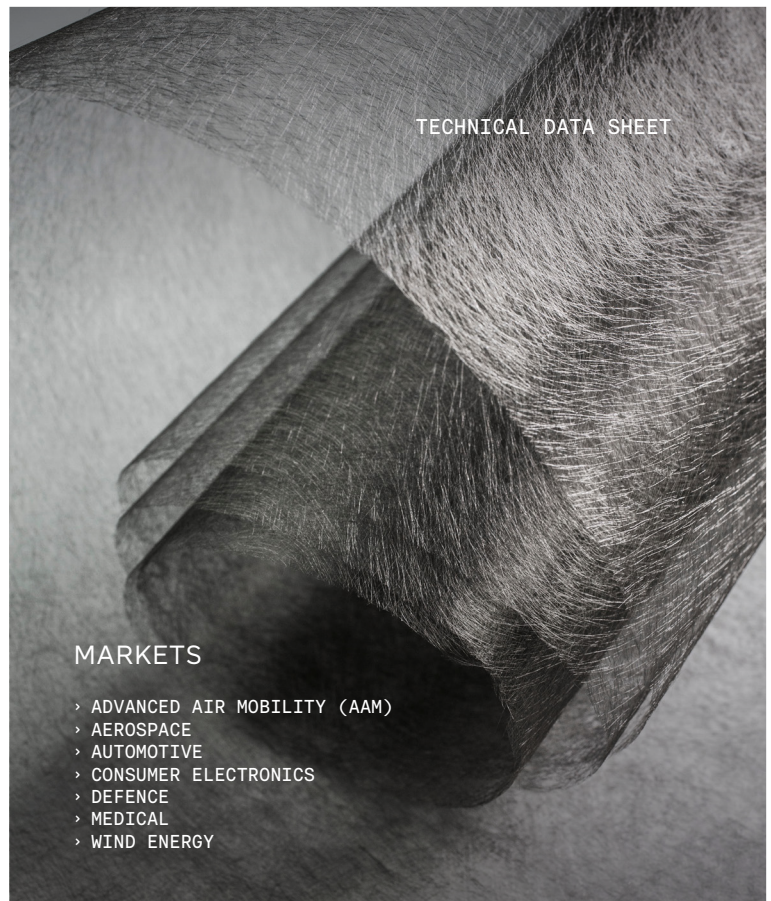
20404E

James Cropper is a leading advanced materials supplier, offering wide range of highly porous technical nonwovens. Our materials are designed for use in composites and can be customised to meet specific customer or market needs, ensuring an optimum performance benefit as well as process and resin compatibility. They are used across a broad range of industries, improving the finish, fabrication and performance of composites to create market leading products for our customers.

EMITEC™ 20404E

MATERIAL INFORMATION

Our conductive nonwovens provide a lightweight, flexible solution for imparting tunable EMI shielding and electrical conductivity to composites.



TECHNICAL DATA SHEET

MARKETS

- › ADVANCED AIR MOBILITY (AAM)
- › AEROSPACE
- › AUTOMOTIVE
- › CONSUMER ELECTRONICS
- › DEFENCE
- › MEDICAL
- › WIND ENERGY

DESCRIPTION	Wet-laid nonwoven nickel coated carbon fibre mat
FIBRE TYPE	Nickel coated carbon
FIBRE LENGTH	6mm / 0.25"
FIBRE DIAMETER	8µm
BINDER TYPE	Cross-linked polyester
KEY PROPERTIES	EMI shielding, electrical conductivity, thermal conductivity, static dissipation
TYPICAL APPLICATIONS	Delivering a high quality surface finish in combination with electrical conductivity and EMI shielding, ground plane solutions, EMI shielding of electronics and avionics as well as heat sink or thermal management applications.

LIGHTWEIGHT



- › MINIMUM WEIGHT ADDITION
- › FROM 4 g/m²
- › EXCEPTIONAL SHIELDING EFFICIENCY FOR ITS WEIGHT

FLEXIBLE



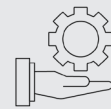
- › FLEX FATIGUE RESISTANCE
- › CONFORMABLE TO COMPLEX SHAPES

TUNEABLE



- › SHIELDING EFFECTIVENESS CAN BE TAILORED TO MEET APPLICATION REQUIREMENTS
- › IN-HOUSE COATING PROCESS
- › UNIFORM FIBRE DISTRIBUTION FOR CONSISTENT PERFORMANCE

PROCESSING EASE



- › COMPATIBLE WITH ALL COMMON COMPOSITE RESINS AND MANUFACTURING PROCESSES
- › INTEGRATED INTO COMPOSITE WITHOUT ANY ADDITIONAL STEPS

EMITEC™ 20404E

MATERIAL PROPERTIES

AREAL WEIGHT	g/m ² oz/yd ²	8 0.2	11 0.3	20 0.6	34 1.0	50 1.5	80 2.4
THICKNESS AT 10 kPa (1.45lb/in ³)	mm mil	0.09 4	0.11 4	0.18 7	0.32 13	0.45 18	0.75 30
MD TENSILE STRENGTH	N/15mm lb/in	8 3	15 6	25 10	40 15	50 19	70 27
CD TENSILE STRENGTH	N/15mm lb/in	4 2	7 3	14 5	21 8		
TYPICAL SURFACE RESISTANCE*	ohm/sq	0.5 - 2.0					

The values shown in the table are the typical surface resistance range for this material. If you require a specific surface resistance please contact us - we have the experience and capability to design and manufacture material to deliver a specific level of surface resistance and would welcome the opportunity to discuss this.

The data in the table represents indicative values only. The user must be satisfied that the product is entirely suitable for the intended application.

* Surface resistance is measured using a Vermason 75mm square contact block. The contact block is placed on a sample measuring 10cm x 10cm and a 1.0kg deadweights.

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MATERIAL SUPPLY

SUPPLY FORM	Continuous Rolls
MAX ROLL WIDTH	1650mm
MIN ROLL WIDTH	10mm
OTHER SUPPLY FORMS	Sheets and cut shapes

ACCREDITATIONS

We provide assurance that all EMITEC™ materials are of the highest possible quality and our manufacturing processes are accredited to BS EN (AS) 9100: 2018 Global Aerospace Quality Standard, ISO 9001 : 2015 Quality Standard, ISO 14001 : 2015 Environmental Management and the OHSAS 18001 : 2007 Occupational Health & Safety Standard.