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TECHNICAL DATA SHEET

SafeCASE

April 2022

### ABOUT KULR TECHNOLOGY

KULR’S disruptive thermal management technologies strive to fulfill an addressable \$24 billion thermal management systems market. KULR’s integrated design approach offers comprehensive solutions in thermal interface materials, lightweight heat exchangers, and protection against lithium-ion battery thermal propagation. Our high-performance solutions can be designed to fit almost any power or electronic configuration, including extremely demanding spaces or for applications where size and weight restrictions are a concern.

### PRODUCT DESCRIPTION

KULR’s patent pending SafeCASE is a DOT permitted Passive Propagation Resistant (PPR) storage and transportation system for batteries. It is designed to mitigate thermal runaway, providing safe and sustainable storage and transportation for lithium-ion cells and battery packs that are up to 2.1 kWh per case and utilizes KULR’s patented Thermal Runaway Shield (TRS) technology. It is available in multiple sizes and can be customized upon request.

### FEATURES AND BENIFITS

- DOT approved for transportation
- Rated up to 2.1KWh per case
- Reusable
- Foldable for compact storage
- Sustainable
- Safe nontoxic construction

PROPERTY	TYPICAL VALUE	TEST METHOD
<b>External Case</b>		
Construction	Fiberglass/Silicone	N/A
Color	Black	Visual
Maximum Operating Temperature	1093°C	Material Prop
<b>TRS</b>		
Construction	Encapsulated Coolant	N/A
Maximum Energy Rating	Up to 2.1KWh (Standard Size)	DOT Approved TR Test <sup>2</sup>
<sup>1</sup> Thickness	0.005in	Micrometer
<sup>1</sup> Tensile Strength (at break)	>14 lbs	ASTM D882
<sup>1</sup> Tear Strength (375F;26psi; 1 sec)	>1.7lbs	ASTM689
Seal Strength (375F;26psi; 1 sec)	12 lbs/in	ASTM D882
<sup>1</sup> Puncture Strength	>25 lbs	TMS 101-C, Method A

<sup>1</sup>For further information see TRS Technical Data Sheet, <sup>2</sup>DOT test performed by KULR to receive permits #21139,21167,21193



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PROPERTY	TYPICAL VALUE	TEST METHOD
<b>Ablative Reinforcement</b>		
Construction	Composite	N/A
Density	1.3-1.5 g/cm <sup>3</sup>	ATM D792
Tensile Strength	>80MPa	ASTM D638
Compression Strength	>180MPa	ASTM D695
Flexural Strength	>80MPa	ASTM D790

PRODUCT	DIMENSIONS	RATING	INTERNAL DIMENSIONS	EMPTY WEIGHT	MAXIMUM WEIGHT	ABLATIVE REINFORCEMENT
Standard	18"W x12"D x 8"H	2.1 kWh	17.5"W x11.5"D x7.5"H	8.69lbs	66lbs	Yes
Laptop	16"W x0.5"D x 12"H	300 Wh	16"W x0.5"D x 12"H	1.87lbs	N/A	No

### AVAILABILITY

SafeCASE can be engineered in custom sizes. Please contact KULR Technology Group for additional information.

### TYPICAL APPLICATIONS

SafeCASE can be customized to fit any application within the rated energy limit but is typically used for lithium-ion cell/battery storage, transportation, and DDR/hazardous li-ion battery recovery and recycling.

### DISCLAIMER

Data on this Technical Data Sheet (TDS) are typical values and for reference only. The information provided in this TDS, including but not limited to the recommendations for use and application of the product, are based on our knowledge and experience of the product. The product can have a variety of different applications, as well as differing working conditions and environments that are beyond our control. Factors or events that could cause actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We cannot guarantee future results, performance or achievements. Furthermore, no representations or warranties are made as to the accuracy or reasonableness of any assumptions on which the data or information is based.

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