

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2023/0231248 A1 Miloaga et al.

Jul. 20, 2023 (43) **Pub. Date:**

(54) BATTERY ENCLOSURE

(71) Applicant: JOHNS MANVILLE, Denver, CO

(72) Inventors: Dana Gabriela Miloaga, Lakewood, CO (US); Georg Käsmeier, München (DE); Stefan Schierz, München (DE); Markus Freiberger, Olching (DE); Leonie van der Meulen. München

(21) Appl. No.: 18/127,869

(22) Filed: Mar. 29, 2023

Related U.S. Application Data

(62) Division of application No. 16/827,903, filed on Mar. 24, 2020.

Publication Classification

(51) Int. Cl. H01M 50/20 (2006.01)B60L 50/64 (2006.01) H01M 50/186 (2006.01)H01M 50/191 (2006.01)H01M 50/166 (2006.01)

(52) U.S. Cl.

CPC H01M 50/20 (2021.01); B60L 50/64 (2019.02); H01M 50/186 (2021.01); H01M 50/191 (2021.01); H01M 50/166 (2021.01); H01M 2220/20 (2013.01)

(57)ABSTRACT

A battery enclosure and method for manufacturing the same from organosheet materials. The battery enclosure includes a top cover with crossbeams integrated therein by overmolding that secures to a bottom panel to enclose a space for containing components of a battery. The bottom panel includes overmolded structural ribs to provide strength and rigidity to the bottom panel. An outer cover removably secure the top cover to the bottom panel and includes a honeycomb structure to crush upon impact and protect the battery components. The method comprises forming each of the components of the battery enclosure from a mixture of organosheets, reinforcing members, and overmolded elements to reduce the weight and complexity of manufacturing for the battery enclosure.

