



SPINMATE

Scalable and Sustainable Pilot Line based on innovative manufacturing technologies towards the industrialisation of Solid-State Batteries for the automotive sector

D2.1 Technical requirements for small (1Ah) and large (10Ah) battery cells and protocols for testing

SPINMATE project has received funding from the European Union's Horizon Europe research and innovation program under Grant Agreement No 101069712.



Document details

Project Information	
Project Acronym/ Name:	SPINMATE
Project URL:	www.spinmate.eu
Project Type:	Research and Innovation Action (RIA)
EU CALL:	HORIZON-CL5-2021-D2-01-05 (Manufacturing technology development for solid-state batteries (SSB, Generations 4a - 4b batteries) (Batteries Partnership))
Grant Agreement No.:	101069712
Project Start Date:	01/08/2022
Project End Date:	31/07/2026
Document details	
Work package:	WP2 Specification Requirements and standardization for new SSBs
Deliverable:	Technical requirements for small (1Ah) and large (10Ah) battery cells and protocols for testing
Due date of Deliverable:	31/07/2023
Actual Submission Date:	31/07/2023
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Revision:	2.0
Dissemination Level:	Sensitive (SEN)



Document History

Version	Date	Comment	Modifications made by
V1.0	03.07.2023	First Version	Laurent Castro (TME)
V1.1	09.07.2023	1 st Review	Anh-Linh BUI VAN (CEA)
V1.2	12.07.2023	2 nd Review	Andrea Martinez (ABEE)
V1.3	14.07.2023	3 rd Review	Kevin Vogues (TUBS)
V2.0	18.07.2023	Final Version	Laurent Castro (TME)

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Executive Summary

This report describes part of the activity of Work Package 2 of the SPINMATE project. It provides different specifications to ensure the achievement of SPINMATE's targets in a proper and timely manner. WP2 has defined the cell design that needs to be achieved for the different cell formats produced, namely 10 Ah and 1 Ah pouch cells, according to KPIs but also according to cell processing planned for the project.

Different partners involved in this WP have developed a dynamic Python code that will be translated into a user-friendly interface program to estimate key cell parameters such as volumetric and gravimetric energy densities.

Thanks to this tool, the design of SPINMATE cells will be defined according to the performances of the materials that will be shown in Work Package 3. According to this, different formats have been established, as well as the necessary parameters to ensure the fulfillment of SPINMATE's final goals.

In the second part, clear criteria and protocols have been established to prepare WP7 activities.

This deliverable D2.1 resumes the work done within WP2 Tasks 2.1 and 2.2, and 2.3, including the creation of the cell design digital tool, the adaptation of real BEV's features to SPINMATE goals, the definition of different cell formats, and clarifications of cell performances. Furthermore, this report aims to provide a guideline for the execution of materials, components, and prototype cell development in the SPINMATE project.