MINISTRY OF
INVESTMENT, TRADE AND INDUSTRY

SIRIM

SIRIM QAS INTERNATIONAL

GUIDELINES FOR

CERTIFICATION AND LABELLING OF BATTERY ENERGY STORAGE

SEPTEMBER 2025
EDITION 1

sirim-qas.com.my

CONTENTS

1. INTRODUCTION

1.1 The certification of battery energy storage is carried out under the Product Certification Scheme (PCS).

1.2 All certification applications shall be governed by the provisions of the Product Certification Agreement [ePCS/DOC/01-3] and the Product Certification Requirements [ePCS/DOC/01-3.1].

1.3 This Guideline for Certification and Labelling of Battery Energy Storage ("this Guideline") establishes the specific standards and requirements applicable to the battery energy storage (BES).

1.4 Applicants seeking certification are required to comply with the standards, requirements and procedures outlined in this Guideline, in addition to the overarching provisions of the PCS.

1.5 All inquiries may be submitted to battery@sirim.my.

2. SCOPE OF PRODUCT

2.1 This Guidelines applies to the following types of BES, which include, but are not limited to, the categories listed below:

a) Lithium-ion batteries;
b) Lead-acid batteries;
c) Nickel based batteries;
d) Other emerging battery technologies

3. DEFINITIONS

For the purposes of this Guidelines, the following terms and definitions apply:

3.1 **Batch** - A portion of the total production, manufactured under uniform conditions, of such size that the finished product can be identified with particular raw material and/or components or processes used in its manufacture and that it can be segregated if required.

3.2 **Batch Verification Report** - A batch verification report is a document that record a detailed summary of the verification activities performed on a specific batch of products. It contains information such as batch

identification, shipping documents, product details, marking details, sample details, and other relevant information.

3.3 **Battery Energy Storage (BES)** - BES refers to rechargeable electrochemical storage units designed to store and deliver electrical energy.

3.4 **Electric Vehicle (EV)** - EV is a generic term used for Battery electric vehicle (BEV), Hybrid electric vehicle (HEV), Plug-in Hybrid electric vehicle (PHEV) and Fuel Cell electric vehicle (FCEV).

3.5 **EV battery** - Batteries used in EVs. The battery is the energy centre of the EV and is recharged by plugging the EV into an electrical outlet or charging station.

3.6 **General portable batteries** - A rechargeable battery designed for portable electronic devices, including phones, tablets, and battery packs. These batteries are typically small, self-contained, and may use lithium-ion, nickel based (NiMH, NiCd), or other non-acid electrolytes.

3.7 **Lead-acid batteries** - Rechargeable batteries where the electrodes are made of lead and lead dioxide and the electrolyte is sulfuric acid.

3.8 **Light Electric Vehicle (LEV) battery** - LEV battery is a specialized rechargeable lithium-ion battery pack designed specifically to power Light Electric Vehicles (LEVs) like e-bikes, e-scooters, and e-mopeds.

3.9 **Lithium-ion batteries** - A lithium-ion battery is a type of rechargeable battery in which lithium-ions move from the negative electrode to the positive electrode during discharge and back when charging.

3.10 **Nickel-based batteries** - Rechargeable batteries using nickel oxide hydroxide (NiOOH) as the positive electrode and either cadmium (NiCd) or metal hydride (NiMH) as the negative electrode.

3.11 **SIRIM Security Label** - SIRIM Security Label is a SIRIM label with QR code, unique serial number, and inherent security features affixed onto the packaging to denote that the product has been certified under SIRIM's certification scheme.

3.12 **UPS -** An uninterruptible power supply (UPS) is a rechargeable battery used to back up main power feeds and provide seamless power when there is a main line utility outage.

4. TYPE OF CERTIFICATION

4.1 There are two (2) types of certification available for battery energy storage under the PCS:

a) Type 5, or
b) Type 1B (Batch)

4.2 The applicant shall choose either Type 5 or Type 1B (Batch). Upon selection, all requirements and processes associated with the chosen certification type shall be undertaken. The requirements for each of these certification types are presented in Table 1.

Table 1: Requirements of Type 5 and Type 1B (Batch)

Scheme Type / Requirement	Type 5	Type 1B (Batch)
i) Type of Applicant		
Local	✓	✓
Foreign (Note: Foreign applicant shall appoint a local company to apply for the certification)	✓	✓
ii) Certificate validity	One (1) year	One-off to specific batch only
iii) Renewal	Annual renewal subjected to surveillance audit	Batch Verification Report issued to specific batch only
iv) Factory audit	✓	x
v) Sampling and testing	If required	✓
vi) Market surveillance	✓	✓

4.3 A Product Certification Licence or Batch Certificate shall be awarded upon compliance with all requirements and processes.

4.4 The detailed certification processes for Type 5 and Type 1B, including samples of Product Certification Licence and Batch Certificate, are provided in **Annex A.**

5. PRODUCT COMPLIANCE AND STANDARD

5.1 Conformity test(s) is conducted to confirm that the product complies with applicable standards.

5.2 The applicable standards for BES are presented in Table 2 below.

Table 2: List of Applicable Standards for BES

No.	Category	Scope of Standards	Application	Applicable Standard
1	Lithium-ion batteries	Uninterruptible power systems (UPS) - Part 1: Safety requirements	Storage System / Backup Battery for UPS, Emergency Backup Power	1. IEC 62040-1
		Batteries for Use in Light Electric Vehicles (LEV) covers the safety requirements for the design,manufacture, and testing of lithium-ion batteries	Light Electric Vehicles (LEV) Battery for Scooter, e-bike, small mobility devices	1. UN R136 and/or IEC 62619; and 2. IEC 62660-3; and 3. UN 38.3
		Lithium Battery used in Electric Vehicles including automobiles	EV Battery for EV Car, EV bus, EV Truck, etc.	1. UN R100; and 2. IEC 62660-3; and 3. UN 38.3
		Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications – Lithium systems	General portable batteries used for mobile phone, tab, battery pack, etc.	1. MS IEC 62133; or 2. IEC 62133-2; and 3. UN 38.3

No.	Category	Scope of Standards	Application	Applicable Standard
	Lithium-ion batteries	Secondary cells and batteries containing alkaline or other non-acid electrolytes.	Battery Energy Storage System for Stationary: Electrical energy storage system, utility switching, emergency power, and similar applications. Motive: Forklift truck, golf cart, automated guided vehicle (AGV), railway vehicles, and marine vehicles, with the exception of road vehicles.	1. IEC 62619; and/or 2. IEC 63056
2	Lead-acid Batteries	Stationary lead-acid batteries - Part 11: Vented types - General requirements and methods of test	Backup storage battery (UPS, Battery room, etc) – fix location, permanently stationary battery	1. IEC 60896-11
		Stationary lead-acid batteries - Part 21: Valve regulated types - Methods of test & Stationary lead-acid batteries - Part 22: Valve regulated types – Requirements	Backup storage battery (UPS, Battery room, etc) - Valve Regulated * This standard is used in conjunction with the common test methods described in IEC 60896-21	1. IEC 60896-21 1. IEC 60896-22

		Starter Batteries	For Passenger Car, Commercial and Industrial Vehicles	1. MS 45 2. IEC 60095-1; or 3. JIS D 5301; or
			For Motorcycles	1. IEC 60095-7; or 2. JIS D 5302
3	Nickel based batteries	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable application - Nickel systems	General portable batteries for digital camera, cordless phone, power tools, etc.	1. MS IEC 62133; or 2. IEC 62133-1

6. CERTIFICATION MARK & LABELLING

6.1 Upon the granting of the Product Certification Licence or a Batch Certificate, the following entitlements shall apply:

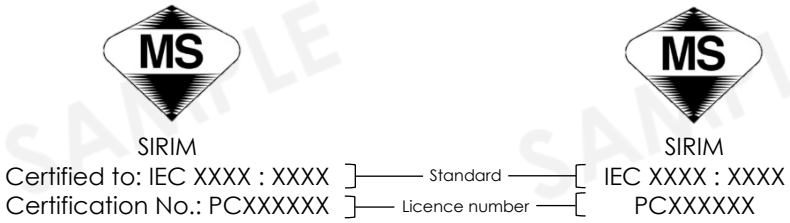
i) Permission to mark the certified product with the Certification Mark (not applicable to Batch Certification), where:

a) The marking of the certified battery and its packaging shall comply with the relevant standards, the certification requirements, and the Guidelines for the Usage and Application of the SIRIM Certification Mark (Product Certification) (ePCS/DOC/01-8);

b) The marking, including accompanying text, on the smallest packaging, shall be readily identifiable and legible;

c) Any misuse of the Certification Mark on the product shall be subject to the Product Certification Agreement (ePCS/DOC/01-3);

d) The illustration of Certification Marks is provided below:



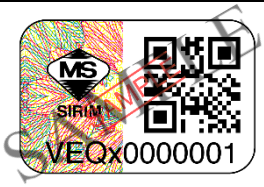
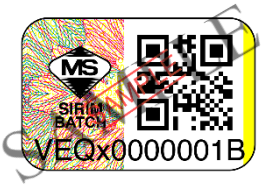
ii) The right to apply for and be issued with the SIRIM Security Label, where:

a) SIRIM Security Labels shall be purchased, subject to SIRIM's approval.

b) The SIRIM Security Label shall be affixed directly on the certified battery to indicate product conformity.

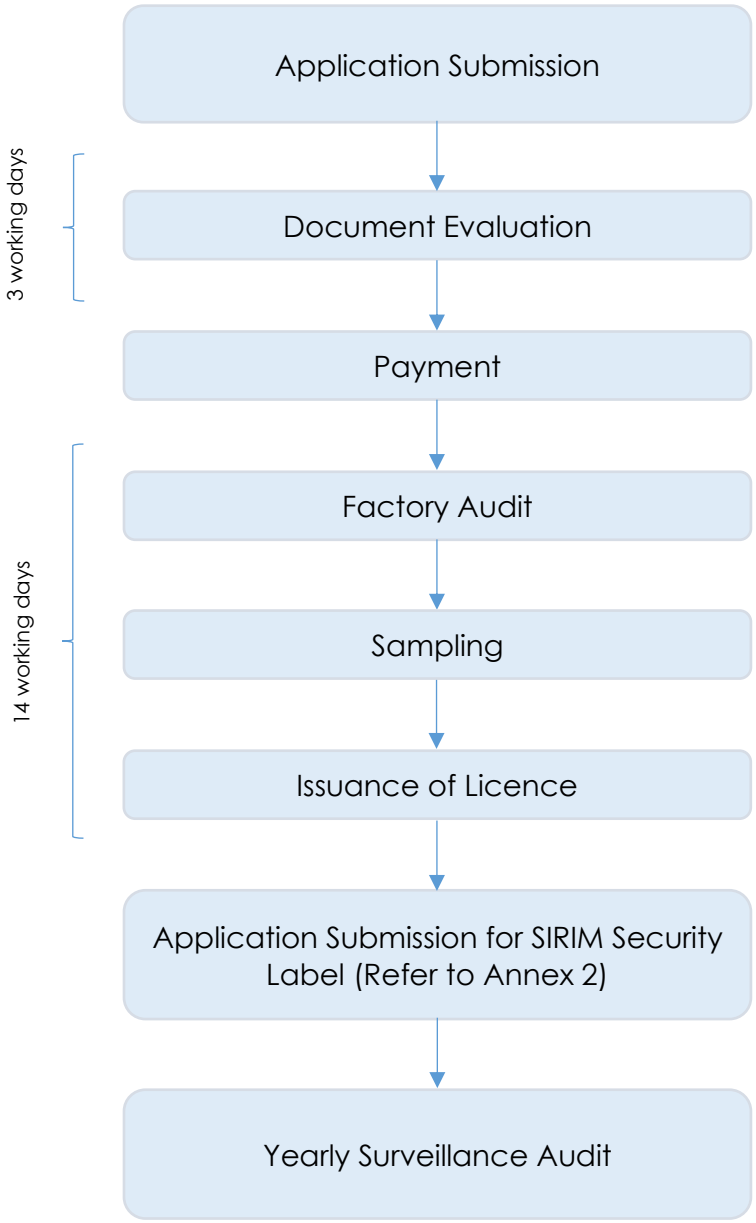
c) Records on the usage of SIRIM Security Label shall be maintained and submitted as required by SIRIM. The process for label application is provided in **Annex B**.

d) The illustration of SIRIM Security Labels is provided below:

	
Type 5	Type 1B
Label size:15 mm x 22 mm	

Annex 1

Certification process for Type 5 : Product Certification Scheme



Documents required:

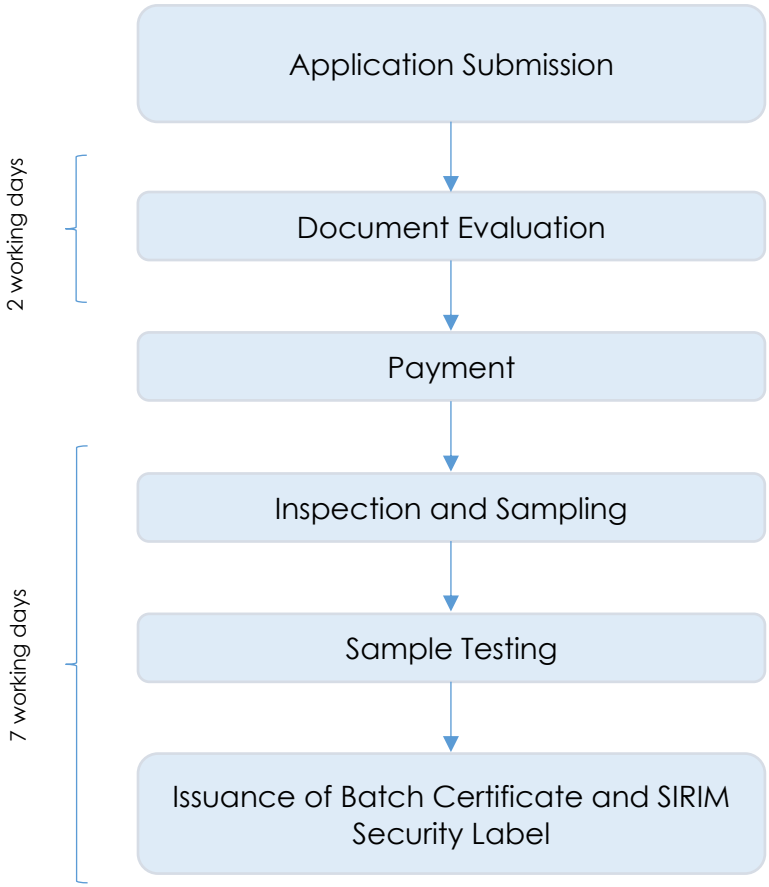
- Application form
- Product Specifications
- Declaration of Approval for Trademark Registration / Brand Name
- Authorization letter of trademark to SIRIM (for non-trademark owner)
- Declaration of Approval from Relevant Authority
- Authorization of manufacturer by trademark owner agreement
- Declaration by Manufacturer
- Full type test report – accordance with the relevant product standard, issued by an accredited laboratory.

Factory audit at manufacturing site including QC plan adequacy, test equipment calibration, and record-keeping system and safety routine test.

Sampling for confirmatory test (if any).

Annual renewal is subject to the surveillance audit.

Certification process for Type 1B : Batch Certification Scheme



Documents required:

- Application form
- Product Specifications
- Declaration of Approval for Trademark Registration / Brand Name
- Authorization letter of trademark to SIRIM (for non-trademark owner)
- Full type test report – accordance with the relevant product standard, issued by an accredited laboratory.
- Shipping documents

Batch Certificate and SIRIM Security Label issued to specific batch only.

Sample of Product Certification Licence for Type 5 : Product Certification Scheme

No Lesen : **PCxxxxxx**
Licence No :

LESEN PENSIJILAN BARANGAN
Product Certification Licence

SIRIM QAS International Sdn. Bhd. dengan ini menganugerahkan kepada
SIRIM QAS International Sdn. Bhd. hereby grants to

<COMPANY NAME>
<COMPANY ADDRESS>

Lesen untuk menggunakan Tanda Pensijilan di atas barangan
a licence to use the Certification Mark on

ELECTRICAL VEHICLE BATTERY

Please refer to detail in the SCHEDULE

sebagai mematuhi keperluan
as complying with

UN R100
IEC 62660-3: 2022
UN 38.3

Chief Executive Officer
SIRIM QAS International Sdn. Bhd.

SIRIM QAS International Sdn. Bhd.
(No. Syarikat 199601037981(410334-X))

1, Persiaran Dato' Menteri
Seksyen 2, Peti Surat 7035
40700 Shah Alam
Selangor Darul Ehsan
MALAYSIA.

Tel : 603-5544 6000
Emel : cserviceqas@sirim.my

https://www.sirim-qas.com.my
https://www.malaysiancertified.com.my

Tarikh Mula Pensijilan	**: 10 March 2025**	**Tarikh Dikeluarkan**	**: 23 April 2025**
Certified Since		*Issue Date*	
Sah Sehingga	**: 10 March 2026**	**No Siri**	:
Valid Until		*Serial No*	

Lesen ini dianugerahkan tertakluk kepada syarat-syarat Perjanjian Pensijilan Barangan SIRIM QAS International Sdn. Bhd.
This Licence is granted subject to the provisions of the Product Certification Agreement of SIRIM QAS International Sdn. Bhd.

Sample of Batch Certificate for Type 1B : Batch Certification Scheme

SIRIM QAS INTERNATIONAL

CERTIFICATE OF CONFORMITY

Application Number:

xxxxxxxx

This certificate is granted to

<COMPANY NAME>

Company Address

It is hereby certified that

MODEL: XX

BRAND: XX

For product category

XXXX

Standard: XXXX
XXXX

Approval Date: 18 August 2025

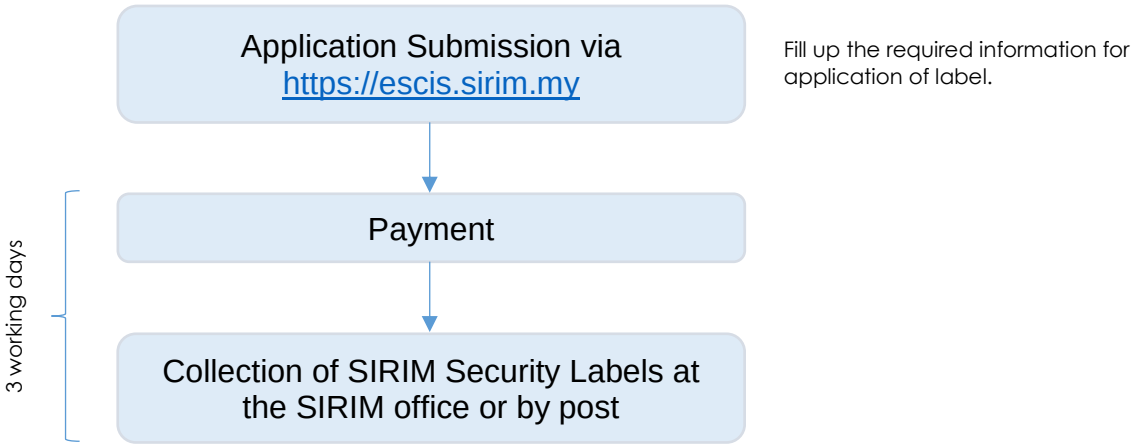
THIS CERTIFICATE CONSTITUTES A ONE-TIME APPROVAL.

Certification of Electrical and Electronic Equipment (Equipment) means the certified product has met the requirements of the standards specified in this certificate. The certification of the equipment does not in itself confer a right on the certificate holder to operate the equipment.

SIRIM QAS International
SIRIM QAS International Sdn. Bhd. (Company No.: 199601037561 (410334-X))
No. 1, Persiaran Dato' Menteri Section 2, P.O Box 7035, 40700 Shah Alam, Selangor Darul Ehsan, Malaysia
Telephone: 603 5544 6400

Annex 2

Process flow for the purchase of SIRIM Security Labels.



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