



**AUSTRALIAN
BATTERY
TRANSPARENCY
STANDARD**
— ABTS —
INDEPENDENT. TRANSPARENT. VERIFIED.

Australian Battery Transparency Standard

ABTS v0.1

Battery Product Transparency and Digital Product Record Framework

Status: Industry Consultation Draft

Version: 0.1

Organisation: Australian Battery Transparency Standard

Application: Batteries and battery energy storage systems supplied into the Australian market

1. Purpose

The Australian Battery Transparency Standard establishes a common, technology-neutral framework for disclosing material information about battery products supplied into the Australian market.

The purpose of ABTS is to improve transparency, comparability, traceability and consumer confidence by providing consistent product information at the point of sale, installation, operation and end of life.

ABTS does not prescribe a particular battery chemistry, manufacturer, cell technology or system architecture.

2. Core Principle

Every eligible battery participating in ABTS should have:

1. A physical ABTS transparency label

and

2. A linked digital product record

The physical label provides essential product information.

The digital record provides the detailed technical information, supporting evidence, test results and lifecycle information.

3. Physical Transparency Label

The physical label should remain concise and readable while providing sufficient information to identify the battery and its principal characteristics.

Mandatory Fields

Field	Requirement
Manufacturer	Legal or trading name
Product Model	Model designation
Unique Product ID	Serial number or ABTS identifier
Battery Chemistry	Chemistry and technology
Cell Manufacturer	Manufacturer name
Country of Manufacture	Battery assembly location
Date of Manufacture	Month and year
Nominal Energy	kWh
Usable Energy	kWh
Nominal Voltage	VDC
Maximum Continuous Charge	A
Maximum Continuous Discharge	A
Charge Temperature	Minimum and maximum temperature
Discharge Temperature	Minimum and maximum temperature
Cycle Life	Declared cycles and capacity retention endpoint
Warranty	Warranty period
ABTS Identifier	ABTS product reference
Digital Record	QR code / digital identifier

The physical label should also contain the ABTS logo, the below statement and a QR code:

SCAN FOR COMPLETE PRODUCT RECORD

4. Digital Product Record

The digital record shall provide the complete technical and lifecycle information associated with the individual product, model or production batch.

4.1 Product Identification

- Manufacturer
- Product model
- Product revision
- Unique product identifier
- Production batch
- Cell manufacturer
- Cell model
- Cell chemistry
- Cell format
- Country of cell manufacture
- Battery assembly location
- Date of manufacture

4.2 Electrical Characteristics

- Nominal energy
 - Usable energy
 - Nominal voltage
 - Minimum and maximum operating voltage
 - Maximum continuous charge current
 - Maximum continuous discharge current
 - Peak charge current
 - Peak discharge current
 - Recommended depth of discharge
 - Round-trip efficiency
 - Recommended operating conditions
 - Compatible inverter / power conversion equipment
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5. Temperature Performance

Temperature performance shall distinguish between the manufacturer's permitted operating range and independently demonstrated performance.

The digital record should include:

- Charge temperature range
- Discharge temperature range
- Storage temperature range
- Low-temperature performance
- High-temperature performance
- Capacity at specified temperatures

- Charge efficiency at specified temperatures
- Discharge efficiency at specified temperatures
- Charge and discharge rate during testing
- Test duration
- Test methodology
- Test laboratory
- Test report reference

Where applicable, performance should be reported at:

-20°C | -30°C | -40°C | 25°C | 45°C | 55°C | 60°C

Not every battery must demonstrate performance at every temperature. Where testing has not been undertaken, the field shall state:

Not tested

rather than allowing an unsupported claim.

6. Lithium Plating and Dendrite Risk

ABTS shall provide a transparent mechanism for recording evidence relating to lithium plating and dendritic growth.

Manufacturers shall not use ABTS to make unsupported claims such as:

“Dendrite Free”

or

“No Lithium Plating”

unless the claim is supported by an ABTS-recognised test methodology and appropriate evidence.

The digital record should identify:

- Lithium plating assessment
- Dendrite-risk assessment
- Low-temperature charging assessment
- High-rate charging assessment
- Overcharge assessment
- Extended cycle assessment
- Evidence of lithium deposition
- Evidence of dendritic growth
- Cell inspection methodology
- Microscopy / analytical methodology

- Test temperature
 - Charge rate
 - Discharge rate
 - Number of cycles
 - Test endpoint
 - Laboratory
 - Independent verification status
 - Test report reference
-

7. Safety and Reliability

The digital record should identify applicable testing and certification, including where relevant:

- Thermal stability
- Overcharge
- Over-discharge
- Short circuit
- Crush / mechanical abuse
- Thermal propagation
- Thermal runaway
- Fire behaviour
- Battery Management System protection
- Electrical safety
- Transport certification
- Applicable Australian and international standards

Each declaration should identify the applicable test standard and supporting report where available.

8. Cycle Life and Degradation

Cycle-life claims shall identify the conditions under which the claim was established.

The record should include:

- Declared cycle life
- Initial capacity
- End-of-test capacity
- Capacity retention percentage
- Depth of discharge

- Charge rate
- Discharge rate
- Operating temperature
- Rest periods
- Test methodology
- Test laboratory
- Test report
- Test date

A cycle-life claim without test conditions should not be treated as a complete ABTS performance declaration.

9. Warranty

The digital record shall include:

- Warranty period
 - Cycle limitation, if applicable
 - Capacity warranty
 - Conditions of warranty
 - Operating restrictions
 - Environmental restrictions
 - Exclusions
 - Warranty provider
 - Warranty documentation
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10. Lifecycle and End of Life

Where information is available, the digital record should include:

- Expected service life
 - Repairability
 - Replaceable components
 - Second-life suitability
 - Battery removal requirements
 - Recycling pathway
 - End-of-life requirements
 - Material composition
 - Responsible recycling organisation
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11. Evidence Classification

Every technical declaration should be assigned an evidence status.

Level 1: Manufacturer Declared

Information provided by the manufacturer without independent verification.

Level 2: Manufacturer Tested

Information supported by documented manufacturer testing.

Level 3: Independently Verified

Information tested or verified by an independent laboratory.

Level 4: ABTS Verified

Information reviewed by ABTS against the applicable ABTS technical requirements and supporting evidence.

ABTS verification does not constitute a warranty, certification of product performance or guarantee of future product performance.

12. Data Integrity and Traceability

Each ABTS product record should be associated with a unique identifier.

Where practical, the digital record should maintain:

- Product ID
- Production batch
- Manufacturing date
- Record revision
- Evidence revision
- Test report references
- Date of update
- Manufacturer authorisation
- ABTS verification status

Material changes to a product or manufacturing process should trigger a review of the relevant product record.

13. Technology Neutrality

ABTS shall not favour or exclude a particular chemistry or technology.

The framework may be applied to:

- LFP
- LTO
- NMC
- Sodium-ion
- Lead-acid
- Solid-state
- Other rechargeable battery technologies

Different technologies may require different technical fields or test methodologies.

Where a field is not technically applicable to a particular chemistry, the record shall state:

Not applicable

rather than leaving the field blank.

14. ABTS Label Governance

ABTS shall establish:

- Approved label format
- Digital record format
- Data dictionary
- Evidence requirements
- Verification methodology
- Manufacturer onboarding process
- Product change process
- Audit process
- Dispute and correction process
- Version control

The ABTS framework should be reviewed periodically with participating manufacturers, technical experts, testing organisations, recyclers and other industry stakeholders.

15. ABTS Founding Principle

Transparency without technology bias.

ABTS does not determine which battery is best.

It provides the information required for customers, installers, developers, financiers, regulators and other stakeholders to make better-informed decisions about battery products.

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Industry Consultation Draft - This document is intended for consultation and further development with battery manufacturers, technology providers, testing organisations, industry bodies and other relevant stakeholders.