



**Saudi Standards, Metrology and Quality Organization**

**SASO**

## **Technical Regulation for Electric Batteries**

**This regulation was approved in the meeting of SASO board of directors No. (166) held on 13/09/2018.A.D**

**Published in the Official Gazette on  
14/04/1440 A.H. (21/12/2018 A.D.)**

**Version 1**

**Note:**

**Only the Arabic version of this Regulation is authentic in law and is applicable where there are differences with this translation**

## Contents

Preamble .....	3
Article (1): Terms And Definitions .....	4
Article (2) Scope .....	7
Article (3) Objectives .....	7
Article (4) Obligations Of Supplier.....	8
Article (5) Labelling .....	10
Article (6) Conformity Assessment Procedures.....	11
Article (7) Responsibilities Of Regulatory Authorities .....	11
Article (8)Responsibilities Of Market Surveillance Authorities .....	12
Article (9)Violations & Penalties .....	12
Article (10) General Provisions.....	13
Article 11: Transitional Provisions .....	14
Article 12: Publication.....	14
Annex No. (1) List Of Electric Batteries’ Products Subject To This Regulation And Relevant Standards .....	16
Annex No. (2) Form Of Safety Label For Batteries Batch .....	23
Annex No. (3) Conformity Assessment Form (Type 3) .....	25
Annex No. (4) List Of Hs Codes Of The Products Covered By This Regulation .....	29
 Annex No. (5) Supplier Declaration Of Conformity.....	30

## Preamble

In line with the accession of the Kingdom of Saudi Arabia (KSA) to the World Trade Organization (WTO), as per the Decree No. 244 of the Council of Ministers, dated 21/09/1426 A.H., concerning the approval of documentation on the Kingdom's accession to the WTO, and the requirements by which the KSA shall adapt its relevant systems with the principles of WTO agreements, particularly, the Technical Barriers to Trade (TBT), which stipulates that no unnecessary technical requirements shall impede the flow of commodities among the member states, and that technical requirements and methods of conformity assessment shall not discriminate between products on the basis of origin, through the issuance of Technical Regulations that include the essential requirements and standardized business procedures.

In accordance with Article 3 (Clause-1), Statute of Saudi Standards, Metrology and Quality Organization, issued in accordance with the Council of Ministers Decree No. 216, dated 17/06/1431 A.H. (31/05/2010 A.D.), stipulating that: **“SASO shall issue Saudi standards, quality systems and guidelines and conformity assessment, compatible with international standards and guidelines, that meet the requirements of the World Trade Organization (WTO) Agreement, in addition to their compliance with Islamic Sharia and serving the interests of Saudi Arabia”;**

In accordance with Article 4 (Clause-2), Statute of Saudi Standards, Metrology and Quality Organization, issued in accordance with the Council of Ministers Decree No. 216, dated 17/06/1431 A.H. (31/05/2010 A.D.), stipulating that: **“SASO shall issue regulations for conformity assessment procedures of commodities, products, and services according to approved standards”;**

In accordance with Article 4 (Clause-14), Statute of Saudi Standards, Metrology and Quality Organization, issued in accordance with the Council of Ministers Decree No. 216, dated 17/06/1431 A.H. (31/05/2010 A.D.), stipulating that: **“SASO shall review the laws and control regulations related to SASO's work fields, and develop them, and propose amendments thereto in line with quality and safety requirements, and refer them to competent bodies in order to review and issue them, in accordance with applicable procedures”;**

In accordance with Article 6 (Clause-1), Statute of Saudi Standards, Metrology and Quality Organization, issued in accordance with the Council of Ministers Decree No. 216, dated 17/06/1431 A.H. (31/05/2010 A.D.), stipulating that: **“ Subject to Article 4 of this Statute, SASO shall be the authority in charge of matters related to standards, conformity assessment procedures, granting the quality mark, metrology and calibration. All public and private sectors shall be adhered to the Saudi standards in all purchases”.**

Whereas the standards of the products included in a regulation shall be a basis for the conformity of such products with the essential safety requirements included in the specified regulation.

Therefore, SASO has developed this Technical Regulation.

**Note:** This preamble and all the annexes of this regulation shall form an integral part thereof.

#### **Article (1): Terms and Definitions**

**1/1** When applying the articles of this regulation, terms and expressions hereunder shall have the meanings indicated in front thereof, unless the context otherwise requires:

**KSA:** The Kingdom of Saudi Arabia.

**The Board:** SASO's Board of Directors.

**SASO:** Saudi Standards, Metrology and Quality Organization.

**Regulatory Authorities:** government body/ bodies with regulatory tasks according to their specializations, that are responsible for the implementation and enforcement of technical regulations, whether in customs, markets, or manufactories.

**Technical Regulation:** A document approved by the Board that provides the specifications of products, associated processes and production methods, including applicable administrative provisions; with which compliance is mandatory. It may include or pay attention to terms, definitions, packaging, and requirements of markings or labelling products, services, processes or production methods.

**Standard:** A document approved by the Board that provides, for regular and recurring use, non-mandatory rules, instructions, and specifications of products or processes and production methods. It may include or pay attention to terms, definitions, packaging, and requirements of markings or labelling products, services, processes or production methods.

**The Product:** Electric batteries

**Market Surveillance Authorities:** government body/ bodies responsible for carrying out market surveillance operations.

**Market Surveillance:** Activities and measures carried out by the market surveillance authorities to verify that products meet the requirements stipulated in the relevant technical regulations, and to ensure that they do not pose a risk to health, safety, environment, or any other aspect related to the protection of the public interest.



**Hazard(s):** A potential source of harm.

**Risk (s):** A potential risk causing damage; associated with the severity of damage.

**Supplier:**

- A product manufacturer, in case that he is resident in the KSA, or the person identified as the manufacturer of the product, through linking the product to their name, or to a relevant commercial description, or any person who provides a product replacement.
- An agent, when the manufacturer is resident outside the Kingdom or an importer in the absence of an agent of the manufacturer.
- Any person in the supply chain, whose activities may affect the product characteristics.

**Conformity Assessment Procedures:** A document approved by the Board, which describes the procedures used directly, or indirectly, for the conformity assessment.

**Notified (Approved) Bodies:** Conformity Assessment Bodies “Third Party”, approved by SASO in accordance with the Regulation of Conformity Assessment Bodies Acceptance.

**Certificate of Conformity:** A certificate issued by SASO or a notified body, which ensures the conformity of a product, or any batch thereof, with the requirements of relevant standards.

**Supplier Declaration of Conformity:** A declaration by the supplier by which it declares that a product conforms with the requirements herein and applicable legislation, without the mandatory intervention of a third party neither in the design stage, nor in the production stage of the manufacturing process. A declaration may depend on testing the product in accordance with the relevant legislation.

**Placing on Market:** Launching a product for the first time in the Saudi market for which the manufacturer/supplier is responsible.

**Making Available on the Market:** Any supply of the product for distribution, consumption or use in KSA, in the course of a commercial activity, in return for payment or free of charge.

**Withdrawal:** Any procedure that aims to prevent placing a product in the market or in a supply chain.

**Recall:** Any procedure that aims to recall products made available for the end-user.



**Definitions of Batteries:**

Technical terms and definitions of electric batteries are identified in the standard on the International Electrotechnical Vocabulary – Primary and Secondary Cells and Batteries, mainly:

**Battery:** A cell, or more, connected electrically and packed in a housing fitted with (Terminals), where electric power is obtained through direct transformation of chemical power into a direct electric current (DC). Batteries are coded as per voltage; marked as (U) and measured with (V); and capacity, marked as (C) and measured with (Ah).

**Cell:** The basic functional unit, consisting of poles and containers assembly in addition to terminals and separators assembly, which considers the source of electric power obtained by direct transformation of chemical power.

**Electric Conductor:** Any material that allows the flow of an electric current.

**Pole:** One of cell's terminals. The active material may form a part of the pole.

**Container:** A container that consists of electrically inert materials and contains all battery components.

**Labels:** Data posted or printed on the battery or its cover, including all product information.

**Molten-Salt Battery:** A cell that contains the electrolyte, which comprises one or more molten and non-aquatic salts. It may be in solid state (chemically static) and it is activated thermally.

**Built-in Battery:** A battery in a fixed certain place and is not generally intended for moving from a location to another. It is permanently connected and a continued source of power. It is integrated into fixed equipment or mounted to battery compartments for applications, such as telecommunications, power supplies, transformations and emergency power supply.

**Traction Battery:** A battery designed to provide motive power for electric or hybrid vehicles.

**Dry-cell Battery:** A battery of a small zinc container (negative pole) containing a carbon bar (positive pole), accommodating a paste of carbon and manganese dioxide saturated with Ammonium chloride solution in between.



**Lead–acid Battery:** A battery where poles are used in form of lead and lead oxide sheets dipped into an electrolyte of diluted sulfuric acid by a concentration ranging from 33 and 37 percent.

**Lithium-ion Battery:** A battery type that is rechargeable. The positive pole consists of lithium while the negative pole, typically, consists of porous carbon.

**Nickel–Cadmium Battery:** A type of battery which uses nickel oxide hydroxide and cadmium.

### **Article (2) Scope**

**2/1** This regulation shall apply to all types of electric batteries, regardless of their shape, size, weight, components or method of application. It covers two main categories of batteries:

- A) Auto Batteries: Batteries to power the starting system or lighting in cars;
- B) Portable batteries: They are in the form of (Button Cell). They are not autos batteries or industrial batteries, weighing no more than 1 kg. They are used in regular electrical devices, such as calculators, lamps, gauges and cell phones.

**2/2** This Regulation shall not apply to batteries used for the following purposes:

- A) Electric batteries used in military industries sectors;
- B) Electric batteries used in medical equipment;
- C) Equipment planned to be launched into space.

### **Article (3) Objectives**

This regulation aims to lay out the essential health and safety requirements for batteries, especially regarding chemicals used in manufacturing. It also intends to comply with relevant international rules and labelling requirements that should be available in any batteries before being offered or placed in KSA markets, including recommendations and notices required to be included in labels of battery waste recycling or management.

Included in the scope of this Technical Regulation are conformity assessment procedures with which suppliers shall comply.

## Article (4) Obligations of Supplier

### 4/1 General Requirements

- A) Supplier shall fulfil all general and technical requirements of this Regulation.
- B) Supplier shall provide safety labels with each battery production batch, subject to the international laws on safety in production, marketing and recycling of batteries (a form of such laws is referred to in Annex (2)).
- C) Supplier shall introduce and provide guidance on the methods of used or damaged batteries collection and recycling. Supplier shall be responsible for collection and receipt of expired batteries.
- D) Supplier shall provide all evidences on executed procedures to ensure safety of cells and batteries, at the request of Regulatory Authorities and relevant conformity assessment authorities as per the approved technical regulations.

### 4/2 Technical Requirements

The supplier shall, in order to achieve the requirements of this Regulation, fulfil the technical requirements for batteries covered by the relevant standards, which are set out in Annex (1), which are:

- A) **Products Overview:** The product overview (battery and cell) shall include all its specifications, contents and materials used in manufacturing.
- B) **Battery Classification:** Batteries, rechargeable or single-use, shall be classified . They vary - in terms of their components or use - to several types, including (as per their availability in markets):
  - 1) Stand-alone battery; easy-to-remove from any device (replaceable).
  - 2) Accessible battery; can be removed by related technicians for maintenance.
  - 3) Integrated battery; cannot be removed at disassembling the unit.
- C) **Technical properties of battery:** Battery specification shall be marked on the basis of: nature (rechargeable or non-rechargeable), type of current (DC), current intensity (A), voltage (v) and capacity (Ah).

### 4/3 Electrical Requirements:

- A) The battery shall be marked as non-rechargeable by printing “Do not charge” on battery case.
- B) Poles shall be marked with clear and permeant methods on batteries and cells:
  - 1) Positive pole: Use Red in marking tools or (+) mark.
  - 2) Negative pole: Use Blue (or black) in marking tools or (-) mark.
  - 3) Fix a plastic ring with appropriate color on the pole.
  - 4) Engrave the (positive or negative) mark in align with the appropriate pole.

#### 4/4 Mechanical Requirements:

- A) Features relating to battery power saving and anti-corrosion shall be considered as per recommendations of the manufacturer throughout the storage period of elements or batteries, in view of different climate conditions.
- B) Specifications relating to hazardous materials transport shall be considered during product transportation by road, sea or air.
- C) Vibration resistance, i.e. battery ability to resist against acceleration forces while maintaining its electric abilities and all features, shall be considered as per the relevant standard.
- D) Cells and batteries packages shall be designed to avoid mechanical damages during transportation, handling and storage.
- E) Packing materials shall be designed to prevent electrical contacts and accidental corrosions and to provide protection against leakage from cells and batteries.

#### 4/5 Chemical Requirements:

It is strictly prohibited to market or import the following:

- A) All batteries, whether stand-alone, integrated into a device or fixed, containing more than 0.0005% of mercury in respect of the total weight of battery.



- B) All batteries, whether stand-alone, integrated into a device or fixed, containing more than 0.0002% of cadmium in respect of the total weight of battery.
- C) Prohibition excludes Button Cells, where mercury content is less than 2 percent in respect of the total weight of battery, and portable batteries which are intended for the use of:
  - 1) Emergency and alert systems, including lighting of safety signs (such as exit signs).
  - 2) Medical equipment.
  - 3) Wireless power tools.

#### **4/6 Packaging Requirements**

- A) Batteries shall be packed based on nature as per the packaging requirements provided in the relevant standard.
- B) Consumers and users of batteries shall be warned of the dangerous components used in batteries, as they may cause eye and skin irritation or burns and may threat consumer's safety if inhaled or swallowed.
- C) Cells and batteries warehouses shall be well-ventilated and shall not contain any sources of ignition.

#### **Article (5) Labelling**

- 5/1 All batteries that contain electrically active components such as (mercury, cadmium and lead) shall bear a mark indicating the method of collection after completion of use and recycling as per the relevant standard.
- 5/2 Labels of batteries intended for offering and placing in the market shall include the following information:
  - A) Name and address of the supplier or the person responsible for offering the product in the market (information of supplier's registration);
  - B) Trademark of batteries;
  - C) Definition of products and all characteristics: nature (rechargeable or non-rechargeable), type of current, intensity (A), voltage (v) and capacity (Ah);
  - D) Country of origin;
  - E) Warnings and cautions necessary for use and safety;



- F) Labels posted on product shall be in compatible with the technical requirements provided herein and the relevant standard set out in Annex (1) hereof;
- G) All information used on labels shall be true, certified and verifiable;
- H) Images and statements used on the product packages shall not be contrary to the public order, public morals and Islamic values of KSA.

#### **Article (6) Conformity Assessment Procedures**

- 6/1 The supplier shall adhere to the requirements of the conformity assessment procedures set out in this Technical Regulation.
- 6/2 The supplier, who is responsible for placement of batteries covered by this Regulation in market, shall obtain a Certificate of Conformity issued by an accredited body by SASO, in accordance with conformity assessment model (Type 3), stipulated in ISO/IEC 17067 as clarified in Annex (3).
- 6/3 The notified body shall carry out conformity assessment procedures as per the prescribed form in order to fulfill requirements of this Regulation and the relevant Saudi standards set out in Annex (1).
- 6/4 The product shall be accompanied by a technical file, which includes the following:
  - A) Supplier (manufacturer/importer) Declaration of Conformity;
  - B) Product description and potential area of use;
  - C) Country of Origin;
  - D) Description of the basic health and safety requirements for each batch of batteries on the product as per Annex (2);
  - E) List of tests carried out on the product and applied specifications.
- 6/5 Supplier shall collaborate with Regulatory Authorities, and Market Surveillance Authorities through the submission of technical file documentation, certifications of conformity, and any other certified information proving that the product is conformed to this Regulation and the relevant standards, if so requested.
- 6/6 Products subject to this Regulation, which are granted Saudi quality mark or equivalent certified marks shall be in conformity to the requirements stipulated herein.

#### **Article (7) Responsibilities of Regulatory Authorities**

 As part of their field of competence and powers, Regulatory Authorities shall:

- 7/1 Verify that batteries, subject to this regulation, fulfill the requirements of the specified conformity assessment procedures, and include associated technical documents with batches, in customs ports and factories.
- 7/2 Have the right to randomly take samples of products from production point subject to this regulation, and refer such samples to competent laboratories to ascertain if such sample conform to the requirements set out herein.
- 7/3 Have the right to charge suppliers (manufacturers/importers) with the costs of tests and associated fees.
- 7/4 In case of product non-conformity, withdraw such products from warehouses, and take necessary legal measures.

#### **Article (8) Responsibilities of Market Surveillance Authorities**

Market Surveillance Authorities, as a part of their competences, shall:

- 8/1 Enforce the market surveillance procedures to the products in markets and the products stored in warehouses, in order to check products' safety and the extent of fulfillment of the requirements stipulated in this Technical Regulation and relevant standards.
- 8/2 Sample the product, from the market or warehouses of suppliers (manufacturers and importers), in order to conduct necessary tests and verify the conformity of such products with the requirements set out herein.
- 8/3 In case of non-conformity of – supplied or stored – products with the requirements of this Technical Regulation, take all administrative measures including withdrawal and recall of such products. Procedures and penalties – stipulated in Article (9) – shall be applied after taking necessary actions.

#### **Article (9) Violations & Penalties**

- 9/1 It is prohibited to manufacture, import, place, offer, or advertise products non-conforming with the requirements of the articles stipulated herein.
- 9/2 9/2 Failure to meet the requirements of this Regulation shall be a sufficient reason for Market Surveillance Authorities and Regulatory Authorities to consider the product as non-conforming, including:
  - A) Non-fixing or improper fixing of conformity labels, Saudi Quality Mark, or its equivalent.
  - B) Failure to issue or improper issuance of the Certificate of Conformity or the Supplier Declaration of Conformity.
  - C) Lack, unavailability, or incompleteness of technical documents.
  - D) Lack, unavailability, or incompleteness of product data/labels or usage instructions.

- 9/3** In case of a violation of the provisions hereof, Market Surveillance Authorities shall take all necessary actions to eliminate such violations, and their effects from the market, as the case may be. To this end, Market Surveillance Authorities may:
- A) Order the violating body – that is responsible for placing and offering of the product – to withdraw the product from the warehouses or markets in order to remedy such violations, if possible. The product may be exported or destroyed (according to the nature of the product) within the period specified by Market Surveillance Authorities.
  - B) Withdraw, restrain or destroy the products, or take any other necessary action to recall such products from the markets. In addition, as the case may be, Market surveillance Authorities may announce the withdrawal of the product from markets, and the violating body shall bear all associated expenses.
  - C) Deal with non-conforming products covered by this regulation in accordance with laws and regulations applicable in the Regulatory Authorities and Market Surveillance Authorities.
- 9/4** In case of non-conformity of the products, SASO shall take the necessary actions concerning products non-conforming with the requirements herein, including the cancellation of the relevant Certificate of conformity, while taking the necessary measures with the notified body, which issued the certificate.
- 9/5** Without prejudice to any other law, a party that violates any of the provisions hereof shall be subject to the penalties stipulated in applicable Anti-Commercial Fraud Law or any other superseding law.

#### **Article (10) General Provisions**

- 10/1** Supplier shall bear full legal responsibility for the implementation of the requirements of this Technical Regulation, and shall be subject to the penalties stipulated in the Anti-Commercial Fraud law and/or any other related laws, in case any violation of the articles herein is proven.
- 10/2** This Technical Regulation shall not impede the supplier to comply with all other systems/regulations applicable in the Kingdom of Saudi Arabia; pertaining to trading, transporting, or storing the product, in addition to the rules/regulations related to the environment, security, and safety.
- 10/3** All suppliers of electric batteries subject to the provisions of this Technical Regulation shall provide the inspectors of the Regulatory and Market Surveillance Authorities with all facilitations and necessary information, when required, to carry out their assigned tasks.

- 10/4** Where new cases that cannot be treated under the provisions of this Technical Regulation originate, or where a dispute arises as a result of the application of those provisions, such matter shall be referred to the competent committee in SASO, in order to issue a proper resolution regarding the case or dispute, while taking the public interest into consideration.
- 10/5** Supplier may submit a new request after elimination of the reasons of rejection for the conformity assessment procedures request after the necessary corrections have been made. The supplier shall be responsible for any additional expenses determined by SASO.
- 10/6** SASO shall examine the complaints received regarding the products having a Certificate of Conformity or a Quality Mark, if any, and verify the validity of such complaints, and take the necessary legal actions in case of any violations.
- 10/7** SASO shall have the right to annul the Certificate of Conformity or the Quality Mark license, if any, if the supplier violates the provisions herein, and shall take the legal actions to ensure the preservation of the rights of SASO.
- 10/8** If any modifications were made to the product during the validity period of the Certificate of Conformity or the Quality Mark license, if any, (except for morphological modifications), the certificate, license, or the Supplier Declaration of Conformity for such product shall be annulled, and a new request shall be submitted.
- 10/9** SASO shall, exclusively, have the right to construe the articles herein. All beneficiaries of the application of this Technical Regulation shall adhere to the interpretations issued by SASO.

#### **Article 11: Transitional Provisions**

- 11/1** Supplier shall adhere to the provisions of this Technical Regulation within a period of no more than six months of the date of publication in the Official Gazette.
- 11/2** Non-conforming products may be traded for a maximum of one year as of the date of the publication of this Technical Regulation.
- 11/3** This Technical Regulation, once enforced, shall supersede all the preceding regulations related to the scope of safety requirements of electric batteries before being placed and after advertising it on the market.



#### **Article 12: Publication**



This Technical Regulation shall be published in the Official Gazette.

## Annex No. (1)

## List of Electric Batteries' Products Subject to this Regulation and Relevant Standards

Standards of Electric Batteries				
No.	Product	Standard No.	Address	HS Code
1	Electrical Converters	SASO-GSO-IEC-60335-2-29	Household and similar electrical appliances - Safety - Part 2 - 29: Requirements for battery chargers.	850440
2		SASO- IEC- 62509	Battery charge controllers for photovoltaic systems - Performance and Operation.	850440
3		SASO- IEC- 62637-2	Battery charging interface for small handheld multimedia devices - Part 2: 2 mm barrel interface type conformity test	850440
4		SASO- IEC- 62680-1-1	Universal serial bus interfaces for data and power (USB) - Part 1-1: Common components - USB Power Delivery specification	850440
5		SASO-IEC- 62637-1	Battery charging interface for small handheld multimedia devices - Part 1: 2 mm barrel interface	850440
6		SASO- IEC- TR-61044	Charging Lead Acid Traction Batteries	850440
7	Dry-cell Batteries	SASO-269	Dry primary batteries	850600 850610 850630 850640 850650 850660 850680
8	Primary cells	SASO- IEC- 60086- 1	Primary batteries - Part 1: General	850600 850610 850630

				850640 850650 850660 850680
9		SASO-IEC-60086-2	Primary batteries - Part 2: Physical and Electrical specifications	850600 850610 850630 850640 850650 850660 850680
10		SASO- IEC-60086-3	Primary batteries - Part 3: Watch batteries	850600 850610 850630 850640 850650 850660
11		SASO- IEC-60130-17	Connectors for frequencies below 3 MHz - Part 17: Detailed specification for interconnection devices which permit multi- directional mating, for use with rechargeable batteries	850680
12	Secondary cells and batteries	SASO-IEC-60622	Secondary cells and batteries containing alkaline or other non- acid electrolytes - Sealed nickel- cadmium prismatic rechargeable single cells	850680
13	Secondary cells and batteries	SASO-IEC-60623	Secondary cells and batteries containing alkaline or other non- acid electrolytes - Sealed ventilated nickel-cadmium prismatic rechargeable cells	850680
14	Electricity generating	SASO- ISO-13064-1	Electric battery for three- wheeled mopeds and motorcycles - Performance -	8506800

	primary batteries		Part 1: Reference consumed power and range	
15		SASO- ISO-13064-2	Electric battery for three-wheeled mopeds and motorcycles - Performance - Part 2: Road operating characteristics	8506800
16		SASO- IEC-60050-482	International Electro technical Vocabulary - Chapter 482: Primary and secondary cells	850700 850710
17		SASO- IEC-60086-5	Primary batteries - Part 5: Safety of batteries with aqueous electrolyte	850700 850710
18		SASO- IEC-60092-305	Electrical installations in ships - Part 300: Accumulator (storage) batteries	850700 850710
19	Electric batteries	SASO- IEC-60952-1	Aircraft batteries - Part 1: General test requirements and performance levels	850700 850710
20		SASO- IEC-60952-2	Aircraft batteries - Part 2: Design and construction requirements	850700 850710
21		SASO- IEC-60952-3	Aircraft batteries - Part 3: External electrical connectors	850700 850710
22	Lead-acid Batteries	SASO-1919	Lead-acid starter batteries used for motor cars and internal combustion engines	850710 850720
23		SASO- IEC-60095-4	Lead-acid starter batteries - Part 4: Dimensions of batteries for heavy vehicles	850710 850720
24		SASO- IEC-60254-2	Lead-acid traction batteries - Part 2: Dimensions of cells and terminals and marking of polarity on cells	850710 850720
25		SASO- IEC-60896-22	Stationary lead-acid batteries - Part 22: Valve regulated types - Requirements	850710 850720

26		SASO- IEC- 61056-2	General purpose lead-acid batteries (valve-regulated types) - Part 2: Dimensions, terminals and marking	850710 850720
27	Secondary cells and batteries	SASO- IEC- 61434	Secondary cells and batteries containing alkaline or other non- acid electrolytes - Guide to designation of current in alkaline secondary cell and battery standards	850730 850740 850750
28	Secondary cells and batteries	SASO- IEC- 61951 - 1	Secondary cells and batteries containing alkaline or other non- acid electrolytes - Portable sealed rechargeable single cells - Part 1: Nickel-cadmium.	850730 850740 850750
29	Secondary cells and batteries	SASO- IEC- 61951-2	Secondary cells and batteries containing alkaline or other non- acid electrolytes - Portable sealed rechargeable single cells - Part 2: Nickel-metal hydride	850730 850740 850750
30	Secondary cells and batteries	SASO- IEC- 62133-1	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 - Part 1 - Nickel systems	850730 850740 850750
31	Secondary cells and batteries	SASO-IEC- 62259	Secondary cells and batteries containing alkaline or other non- acid electrolytes - Nickel- cadmium prismatic secondary single cells with partial gas recombination	850730 850740 850750
32	Electric batteries	SASO- IEC- 60086-4	Primary batteries - Part 4: Safety of lithium batteries	850750 850760

33	Secondary cells and batteries	SASO- IEC- 61960- 3	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Secondary lithium batteries and cells for use in portable applications - Part 3 - Lithium prismatic and cylindrical cells and batteries and batteries made from them	850750 850760
34	Secondary cells and batteries	SASO- IEC- 62133-2	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary batteries and cells, and for batteries made from them, for use in portable applications - Part 2 - Lithium systems	850750 850760
35	Electric batteries	SASO- IEC- 62281	Safety of primary and secondary lithium cells and batteries during transport	850750 850760

<b>Indicative Standards for Battery Safety Requirements</b>		
<b>No.</b>	<b>Standard No.</b>	<b>Title</b>
1	SASO- IEC-62485- 1	Safety requirements for secondary batteries and battery installations - Part 1: General safety information
2	SASO- IEC-62485-2	Safety requirements for secondary batteries and battery installations - Part 2: Stationary batteries
3	SASO- IEC-61429	Marking of secondary cells and batteries with the international recycling symbol ISO 7000-1135
4	SASO- IEC- TR-61431	Guide for the use of monitor systems for lead-acid traction batteries
5	SASO- IEC- TR-61438	Possible safety and health hazards in the use of alkaline secondary cells and batteries - Guide to equipment manufacturers and users
6	SASO- IEC- TR-62060	Monitoring of lead acid stationary batteries and cells - User guide
7	SASO- IEC- TR-62188	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Design and manufacturing recommendations for portable batteries made from sealed secondary cells
8	SASO-IEC- TS-62257- 8- 1	Recommendations for small renewable energy and hybrid systems for rural electrification - Part 8-1: Selection of batteries and battery management systems for stand-alone electrification systems - Specific case of self-propelled automotive flooded lead-acid batteries - Specific case of auto batteries
<b>Methods of Test for Batteries No.</b>		
1	SASO- IEC-61427- 2	Secondary cells and batteries for renewable energy storage - General requirements and methods of test - Part 2: Photovoltaic on-grid application.
2	SASO- IEC- TS-62393	Portable and hand-held multimedia equipment - Mobile computers - Battery run-time measurement

3	SASO- IEC-61959	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Mechanical tests for sealed portable secondary cells and batteries
4	SASO-IEC-61982	Secondary cells (except for Lithium batteries) for the propulsion of electric road vehicles - Endurance and performance testing
5	SASO-286	Terminals for dry primary batteries and their methods of test
6	SASO- ISO-12819	Methods of evaluation of the battery life of a battery-powered watch
7	SASO- 1920	Lead-acid starter batteries used for motor cars - Road vehicles and internal combustion engines
8	SASO-268	Methods of test for dry primary batteries
9	SASO- 795	Method of test for water for lead-acid batteries
10	SASO- IEC-60896-11	Stationary lead-acid batteries - Part 11: Vented types - General Requirements - Methods of test
11	SASO- IEC- 60896- 21	Stationary lead-acid batteries - Part 21: valve-regulated types - General Requirements - Methods of test
12	SASO- IEC- 61056- 1	General purpose of lead-acid batteries (valve-regulated types) - Part 1: General Requirements, functional properties - Methods of test
13	SASO- IEC- TS- 61430	Secondary cells and batteries - Test methods for checking the performance of devices designed for reducing explosion hazards - Lead-acid starter batteries

**Annex No. (2)**

**Form of Safety Label for Batteries Batch**

Type of battery: .....

Or cells: .....

**1) Information of Supplier and Product**

**1/1 Information of Product:**

Rechargeable batteries:  Yes  No

Tradename: .....

Detailed description: .....

Chemical system: .....

- Poles: .....

- Electrolyte: .....

- Nominal voltage: .....

**2/1 Information of Manufacturer or Person Responsible for Manufacturing:**

Name and Address: .....

**3/1 Emergency Address:** .....

**2) Battery and cell components**

- Solid materials: Iron or plastic: .....

- Chemical substances: .....

**3) Risk identification**

Physical risks, if any: .....

Chemical risks: .....

- Risk rating: .....

- Classification of solutions: .....

**4) Required First Aids:**

In case of eye contact: .....

In case of skin contact: .....

In case of swallow: .....

In case of inhalation: .....

**5) Firefighting Procedures**

Fire or explosion risks: .....

Fire suppression systems: .....

Anti-explosion systems: .....

Anti-leakage measures: .....

Shipment, transportation and storage processes: .....

Personal protective equipment: .....



**6) Cross section spacing measures**

**7) Handling and storage**

**8) Exposure / personal protection controls**

**9) Physical and chemical properties**

- 1. Appearance: (Physical shape and color): .....
- 2. Temperature range: Usual use, occasional use, stored: .....
- 3. Energy density: .....
- 4. Instant power: .....
- 5. Mechanical resistance: As specified in the applicable standard:.....

**10) Stabilization and Sensitivity**

Conditions to avoid: Malformation, deformation, crush, carving, disassembly,

Overload, electric shock: .....

10/1)Information on toxicity: .....

10/2)Ecological information: .....

10/3)Disposal considerations:

10/4)Incineration (burning): Batteries shall never be incinerated by users, but by experienced specialists in approved facilities.

10/5)Conditions of disposal at landfills: .....

10/6)Recycling: .....

**14) Transport Information:** UN, International Conventions:

**15) Regulatory Information,** UN model regulation for transportation of batteries, which is described in the “Model Regulations on the Transport of Dangerous Goods”

**16) Other Information / Disclaimer**



Date: .....

Signature: .....

**Annex No. (3)****Conformity Assessment Form (Type 3) as per ISO/IEC 17067  
(Type Approval Based on Quality Assurance of Production Process)****1 Type Approval Based on Quality Assurance the Production Process**

A model of conformity assessment procedures, by which the supplier fulfills the obligations set out in the items below, while ensuring and acknowledging - on its sole responsibility - that the concerned products are in conformity with the type specified in the Type Approval Certificate and comply with the requirements of the relevant technical regulations.

**2 Manufacturing**

The supplier shall operate with a certified Product Safety Management System, to ensure the safety of the product, including production lines, final inspection and testing of the concerned products as per Clause (3), and shall be subject to periodic surveillance as per Clause (4).

**3 Product Safety Management System**

3/1 The supplier shall submit a request to a Notified Body "Third party" of its choice, in order to evaluate the safety management system of concerned products.

The request shall include:

- A) Name and address of the supplier, and the name and address of the official representative, in case the representative submits the request.
- B) The manufacturer shall be officially licensed by the relevant authorities in the country of origin.
- C) A written declaration not to submit the same request to any other Notified Body "Third Party".
- D) All relevant information regarding the concerned product category.
- E) Documentation of the Product Safety Management System.
- F) Technical documents of the certified type, and a copy of the Type Approval Certificate.

3/2 The Product Safety Management System shall guarantee that the manufactured products are in conformity with the type specified in the Type Approval Certificate, and with the requirements of the relevant technical regulations.

3/3 All the system elements and its requirements - adopted by the supplier - shall be documented in a systematic and orderly manner in a form of written policies, procedures and instructions. The documents of the Product Safety Management System shall provide a consistent understanding of the safety programs, plans, manuals and records. Such documents shall contain, in particular, an adequate description of the following:

- A) Quality objectives, organizational structure, responsibilities and competences of the management regarding the safety of the product.
  - B) Manufacturing techniques, product safety and quality assurance procedures, and applied processes and procedures.
  - C) Executed inspections and tests; before, during, and after manufacturing, and the frequency with which they will be carried out.
  - D) Records: such as inspection, testing, calibration reports, and the qualification documents of relevant personnel, etc.
  - E) Means of control for achieving the required product safety and the effective operation of the Product Safety Management System.
- 3/4 The Notified Body, approving the Product Safety Management System, shall assess such system to determine whether it satisfies the requirements referred to in Clause (3/3), during the period of the approval of the system, which shall be three years.
- 3/5 The product shall be presumed to comply with the requirements of the technical regulations, in relation to the items of the Product Safety Management System, whenever it conforms to the standards.
- 3/6 In addition to experience in the relevant product safety, the auditing team shall have one technical expert - at least – who is experienced in the assessment of the field and techniques of manufacturing of the product, and is fully aware of the technical requirements stipulated in the relevant technical regulations.
- 3/7 The audit shall include an assessment visit to the factory. The auditing team shall review the technical documents referred to in Clause (3/3), in order to verify the manufacturer's ability to identify the requirements of the technical regulations and carry out the necessary examinations and tests to ensure compliance of the product with these requirements.
- 3/8 The manufacturer shall be notified of the decision after the end of the assessment, provided that such notice include audit findings, assessment decision, along with the justifications on which the decision was based.
- 3/9 The manufacturer shall be committed to satisfy the obligations of the Product Safety Management System, as approved, and to maintain the system so that it remains adequate and efficient.
- 3/10 The manufacturer shall notify the conformity assessment body, which approved the Product Safety Management System, of any proposed modifications to the system.
- 3/11 The Notified Body shall evaluate any proposed modifications and decide whether the modified Product Safety Management System will continue to satisfy the requirements referred to in Clause (3/3) or a reassessment is necessary. The Notified Body shall notify the manufacturer of its decision; the



notification shall include testing results along with the justifications of the assessment decision.

#### **4 Periodic Surveillance Under the Responsibility of the Notified Body**

- 4/1 The purpose of periodic surveillance is to verify the extent of which the supplier meets the obligations of the certified Product Safety Management System.
- 4/2 For assessment purposes, the supplier shall allow the Notified Body, during the validation period, to enter the manufacturing, inspection, testing and storage sites. The supplier shall provide the Notified Body with all necessary information, particularly, the Product Safety Management System documents and safety records, such as testing and calibration reports, and the qualification documents of relevant personnel, etc.
- 4/3 The Notified Body shall carry out periodic audit visits to verify that the manufacturer applies and maintains the Product Safety Management System, and shall provide the supplier with an audit report.
- 4/4 The Notified Body have the right to perform unexpected visits to the factory. During such visits, the Notified Body may, as necessary, carry out product tests, or have them carried out by a third party, in order to verify that the Product Safety Management System is properly functioning. The Notified Body shall provide the supplier with an assessment report, and testing reports, in case of testing.

#### **5 Certificate of Conformity and Declaration of Conformity**

- 5/1 The Notified Body shall issue a Certificate of Conformity for the product in case the supplier has an effective and certified Product Safety Management System, upon the request of the supplier, within the validity period.
- 5/2 The Notified Body shall identify the product details in each request, clarify such details in the issued Certificate of Conformity, and record them in the electronic portal for conformity (in SASO).
- 5/3 The supplier shall provide a written Declaration of Conformity for each approved product type (Type Approval), and shall put it at the Regulatory Authorities and Market Surveillance Authorities disposal for a period of ten (10) years, at least, after the placement of the product in the market. The Declaration of Conformity of the supplier shall identify the approved product type. Furthermore, a copy of the Certificate of Conformity and the Declaration of Conformity shall be at the Regulatory Authorities and Market Surveillance Authorities disposal request.
- 5/4 The supplier shall put the following documents at the Regulatory Authorities and Market Surveillance Authorities disposal, for a period of ten (10) years, at least, after placement of the product in the market:
  - Documentation referred to in Clause (3/3).
  - The amendments referred to in Clause (9/3), as approved.

- Decisions and reports of the Notified Body, referred to in Clause (7/3).
- 5/5 Each Notified Body shall inform the Regulatory Authorities and Market Surveillance Authorities of issued or withdrawn Product Safety Management System approvals, and shall periodically or upon request, provide lists of Product Safety Management System approvals that have been rejected, suspended, or restricted by any means; on a regular basis or upon request. Each Notified Body shall inform, upon request, the other Notified Bodies of Product Safety Management System approvals it has rejected, suspended, withdrawn, or restricted; and notify such bodies of Product Safety Management System approvals issued by it.



**Annex No. (4)****List of HS Codes of the products covered by this Regulation**

854800000000	Waste and scrap of primary cells- primary batteries and electric accumulators; spent primary cells- spent primary batteries and spent electric accumulators; electrical parts of machinery or apparatus- not specified or included elsewhere in this Chapter.
850610100000	Dry Batteries 1.5 volt and over- portable
850650000000	Lithium
850660000000	Air- zinc
850600000000	Primary cells and primary batteries.
850700000000	Electric accumulators- including separators therefor- whether or not rectangular (including square).
850710000000	Lead- acid- of a kind used for starting piston engines

**Annex No. (5)**

**Supplier Declaration of Conformity**

*This Form shall be filled in on company's letterhead*

**1) Supplier's Data**

- Name: .....
- Address: .....
- Contact Person: .....
- Email: .....
- Telephone Number: .....
- Fax: .....

**2) Product Details:**

1. Product's Trademark: .....
2. Type: .....
3. Product Description: .....
4. Class (as per specifications): .....
5. Reference                      Standards/Technical                      Specifications:  
.....

We declare that the product referred to herein is conformed to SASO Technical Regulation (                      ) and the attached SASO Standards.

Person in Charge: .....

Company Name: .....



Signature: .....

Date: ..