

Saudi Authority for Specifications, Standards and Quality SASO

Technical Regulation for Tanks – Part 2: LPG Tankers

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First Edition

Version (1)

Note:

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





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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), Statue 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: Governmental authority/authorities with regulatory tasks in consonance according to their specializations, which are responsible for the implementation and enforcement of technical regulations, whether in customs, markets, or manufactories.

Competent authorities: The competent authorities legally in the Kingdom to issue licenses for the product, and to implement the provisions of this regulation.

Market Surveillance Authorities: governmental authority/ authorities responsible for carrying out market surveillance.

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 specification: A document approved by the Board that provides, for the regular and recurring use, non-mandatory rules and 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.

Essential Requirements: Special requirements of the products; that may affect the safety, health, and the environment; that must be adhered to.

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 renewal.
- An agent, if the manufacturer is outside the KSA or an importer in the absence of an agent of the manufacturer.



- The importer.
- 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 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 to the requirements herein and applicable legislations, 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.

Saudi Quality Mark: A mark granted by SASO, which declares that the establishment has an effective management system, which ensures that the products they supply are produced in accordance with the applicable regulations, granting procedures, and the relevant Saudi standards.

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.

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 the KSA, in the course of a commercial activity, in return for payment or free of charge.

Withdrawal: Any procedure that aims to prevent a product from being placed in the market and in a supply chain.

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

Tank: A fluid container that can be permanently mounted on the tanker/trailer.

Trailer: A vehicle whose design takes into account that no basic part of it depends on the locomotive (truck), and the small flat semi-trailer is considered a trailer.





Semi-trailer: A vehicle designed to pair with a locomotive via a tow tray, part of its weight is based on the locomotive.

Tank trailer: A tank mounted on a trailer, towed by a motor vehicle.

Truck: Motor vehicle to drag or tow the tank trailer.

Tanker: Motor vehicle with tank trailer.

Chassis number: Distinctive number for the tanker chassis (VIN)

Total maximum weight (Gross): The weight of the tanker, including the contents of the fully packaged cargo tank.

Article (2) Scope

This Technical Regulation shall apply to LPG transport tanks, where the requirements for designing, manufacturing, inspecting, and testing the tanks are determined in accordance with the standard specifications mentioned in Annex (1).

Article (3) Objectives

This Technical Regulation aims to lay out the special essential requirements of LPG tankers, included in the scope of this regulation, and to determine the conformity assessment procedures with which suppliers shall comply, in order to ensure the conformity of these products to the essential requirements aiming to preserve the environment, health and safety of the consumer, and road users.

Article (4) Supplier obligations

When manufacturing or importing LPG Tankers, the supplier shall adhere to the following requirements:

4/1 General requirements

The supplier must comply with the following requirements:

- 4/1/1 Technical and administrative requirements mentioned in the product-related regulations and standard specifications.
- 4/1/2 Obtaining the necessary licenses to practice the activity from the competent authorities.
- 4/1/3 That the factory has an effective quality management system, where the factory that has been certified to the quality management system in accordance with the requirements of ISO 9001 is considered to meet the requirements of this clause.







- 4/1/4 To meet the applicable administrative provisions and the provisions of this Technical Regulation to renew the licenses to engage in activity.
- 4/1/5 The factory should have the technical and administrative competencies capable of manufacturing tanks in accordance with the requirements of the relevant Technical Regulations and standard specifications included therein.
- 4/1/6 The tank factory must be registered with the Authority (SASO).
- 4/1/7 Issuing a certificate in accordance with the requirements of this Technical Regulation and the standard specifications set out in Annex (1).

4/2 Administrative requirements

- 4/2/1 LPG tankers must be subject to the vehicle traffic licensing system in force in the Kingdom after they have met the requirements of this Technical Regulation.
- 4/2/2 LPG tanker drivers must obtain the necessary licenses as decided by the competent authority.
- 4/2/3 A conformity certificate must be issued in accordance with the requirements of this Technical Regulation and the standard specifications set out Annex (1).

Article (5) Labelling

The label on the tank shall indicates the following requirements:

- 5/1 To write the supplier's name in Arabic and its commercial registration.
- 5/2 The trailer's chassis number.
- 5/3 Data shall be written on the right and left sides of the tank.
- Data shall be written in a location where it is clearly visible and easily accessible.
- Data shall be written by engraving (stamping- inscription), marking or any method that is difficult to obliterate or destroy.
- The name and logo of the Notified Body, the date of inspection, the expiry date of the inspection certificate, and the trailer chassis number.

Article (6) Conformity Assessment Procedures

- 6/1 The supplier, which is responsible for the manufacturing of LPG Tankers, must obtain a Conformity Certificate issued by one of the Notified BodySASO's Notified Body, in accordance with Type 1a conformity assessment model stated in ISO/IEC 17067, as described in Annex (2).
- 6/2 The Notified BodyNotified Body shall carry out the conformity assessment procedures in accordance with the specified model, ensuring that the





- requirements of this regulation and the relevant Saudi standard specifications set out in Annex (1) are met.
- 6/3 Tanks transporting Liquefied Petroleum Gas are subject to an inspection process before entering service, and periodically every year after entering service from one of the accepted Notified Inspection Bodies by the Authority, in accordance with standard specifications and international practices followed in the field.
- 6/4 The Notified Inspection Body shall place the inspection label on the tank, indicating the name and logo of the Notified BodyNotified Body, the date of periodic inspection and the trailer chassis number, provided that the label is provided with the QR Code in order to verify the authenticity of its data.
- 6/5 The supplier shall cooperate with Regulatory Authorities and Conformity Assessment Bodies, such as providing technical file documentation, certificates of conformity, inspection reports and any other documented information that proves that the product complies with the requirements of this regulation, when requested to do so.
- 6/6 Manufacturers and/or Factories bearing the Saudi Quality Mark or its equivalent shall be deemed complying with the requirements set out in this regulation.

Article (7) Responsibilities of Regulatory Authorities and Competent Authorities

As part of their area of competences, shall carry out the following:

- 7/1 Regulatory Authorities shall verify that tanks fulfills of the specified conformity assessment procedures, and the technical documents attached to the consignment at the customs and manufacturers.
- Regulatory Authorities have the right to randomly withdraw a samples of the tanks and refer them to the relevant laboratories to ensure that they comply with the requirements contained in this regulation.
- 7/3 Regulatory Authorities have the right to charge suppliers (manufacturers/importers) for testing and other associated fees.
- 7/4 In case of non-conformity, the Regulatory Authorities shall withdraw such products from the warehouses and takes necessary legal measures.
- 7/5 The competent authority shall grant and renew the licenses for the transport of LPG Tanker included in the scope of this regulation after ensuring that they comply with the requirements of this Technical Regulation, and renew the licenses after ensuring their safety during the periodic inspection process, in accordance with the regulations and procedures in force in the Kingdom.





- 7/6 The competent authority shall verify the registration documents of the LPG Tankers and ensures that they comply with this regulations, in accordance with the laws and procedures in force in the Kingdom.
- 7/7 In case of non-conformity with the LPG Tankers displayed or stored with the requirements of this Technical Regulation, the Market Surveillance Authorities take all administrative actions including withdrawal and recall of such product. Apply the procedures and penalties stipulated in Article (8), after taking the necessary actions.

Article (8) Violations and Penalties

- 8/1 It is prohibited to manufacture, import and display tanks that do not comply with the requirements of this regulation, or even to declare it.
- 8/2 Failure of LPG Tankers to meet the requirements of this regulation is sufficient reason for Market Surveillance Authorities and Regulatory Authorities to consider that this product is non-conforming, which may pose a risk to the health and safety of the consumers and to the environment, including the following cases but not limited to:
 - A) Non-fixing or improper fixing of conformity labels, the Saudi Quality Mark or its equivalent.
 - B) Failure to issue a certificate of conformity, inspection certificate, supplier declaration of conformity, incorrect issuance, or contain incomplete or incorrect information.
 - C) Technical documents are not available or incomplete upon request.
 - D) The lack or incompleteness of the labelling, including the structure of chassis number, in accordance with the provisions of this regulation.
- 8/3 In case of any violation of the provisions of this regulation, Regulatory Authorities and Market Surveillance Authorities must, depend on the case and shall take all necessary actions to eliminate such violations and their effects from the market. As the case may be and to this end, they may:
 - A) Mandate the violating party that is responsible for placing or offering the product to withdraw it from warehouses or in the market in order to correct the violation, where possible, re-export or destroy it (depending on the nature of the product) within the period of time specified by those entities.
 - B) Withdrawing, impounding, or destroy the products, or taking any other necessary actions to recall them from the market. And the Market Surveillance Authorities depending on the case mayannounce the recall/withdrawal of the product from the market, with the violating party shall bear all the associated costs.





- 8/4 In case of non-conformity of the products, the authority (SASO) shall take the necessary actions concerning the products that violate the requirements of this regulation, including cancellation of the relevant certificate of conformity, while taking the necessary measures with the Notified Body who issue the certificate..
- 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 (9) General provisions

- 9/1 The annexes attached to this regulation, including the terms and definitions set out in the standard specifications, are an integral part of its provisions, and the Authority may amend any of these supplements whenever necessary.
- 9/2 This regulation does not prevent the supplier from complying with all other regulations in force in the Kingdom pertaining to the trading and use of LPG Tankers, as well as regulations related to the environment, security, safety, traffic system and its implementing by laws thereof.
- 9/3 All suppliers of tankers subject to the provisions of this regulation must provide the inspectors of Regulatory Authorities, Market Surveillance Authorities, Traffic Departments and the Ministry of Transport with all the facilities and information they request to carry out their tasks.
- 9/4 The Tanker Trucks covered by this regulation must undergo a periodic inspection, in order to ensure that there is a special structure or the existence of the trailer chassis number f and that they provide all road safety requirements, in accordance with the applicable rules in force in the Kingdom.
- 9/5 If any situation arises that cannot be addressed under the provisions of this regulation, or any disagreement arises in its application, the matter is submitted to a competent committee in SASO for the appropriate decision on this case or dispute, in the public interest.
- 9/6 The Authority (SASO) has only the right to interpret the articles of this regulation, and all beneficiaries of the application of this regulation must abide by the interpretations issued by the Authority.

Article (10) Transitional Provisions

- 10/1 The supplier shall adhere to the provisions of this Technical Regulation, no more than 180 days from the date of publication in the Official Gazette.
- 10/2 Taking into account the provisions of paragraph (1) of this article, suppliers are given time to correct their market conditions, in accordance with the





- requirements of this technical regulation within no more than 365 days of publication in the Official Gazette.
- 10/3 Once adopted, this Technical Regulation supersedes all previous regulations related to the scope of this regulation.

Article (11) Publication

This Technical Regulation shall be published in the Official Gazette.





Annex (1)

A) Standard specifications for LPG tankers

No.	Product	Standard specification address	Standard specification number	
1	LPG Transport Tanks	LPG equipment and accessories - Equipping of LPG road tankers	SASO 12252	EN
2		LPG equipment and accessories - welded steel pressure vessels for LPG road tankers - design and manufacturing	SASO 12493	EN
3		LPG equipment and accessories -Filling and discharge procedures for LPG road tankers	SASO 13776	EN
4		LPG equipment and accessories - Inspection and testing of LPG road tanker	SASO 14334	EN
5		Motor Vehicles - Periodic Technical Examination Manual	SASO-12	84
6		Motor Vehicles - Dimensions and Weights	SASO-46	9

Note: The list of standard specifications mentioned in this Annex are subject to review, and suppliers are responsible for verifying the standards on SASO website and they are using the latest standards or specifications versions thereof.







B) List of products and customs coding

No.	Product	Customs coding
1	Reservoirs, tanks, vats and similar containers for any material	7309
2	Containers of compressed or liquefied gas, iron or steel	7311
3	Reservoir, tanks, vats and other similar containers of materials made of copper	7419
4	Aluminum containers for compressed or liquified gas	7613
5	Trailers and semi-trailers (tanks)	8716

Note: The products and customs coding found in the Saber electronic platform are the updated and approved version.



Annex (2)

Conformity assessment form (Type 1a) according to ISO/IEC 17067 Type Approval

1 Type Approval

The Type Approval is defined as one of the conformity, assessment procedures whereby the Notified BodyNotified Body reviews and verifies the technical design of the product, confirms its authenticity, and declares that the technical design of the product meets the requirements of the relevant Saudi Technical Regulations.

The Type Approval may be conducted in one of the following methods:

- A) Examine a representative sample of the entire product, that it represents the expected production (production model)
- B) Assessment of the conformity of the product's technical design by reviewing technical documents and manuals (design model), examining of a representative sample of the expected production, for one part or more involving hazardous parts of the product (a combination of the production model and the design model).

2 Type Approval procedures

2/1 Submission of a Type Approval request to a Notified Body

The manufacturer shall submit a request for type approval to a Notified Body of its choice, provided that the application contains:

- A) Manufacturer's name and address
- B) Written declaration that the same application/request has not been submitted to any other Notified Bodies.
- C) Technical documentation that enable the product to assess the product's compliance with the requirements of Saudi Technical Regulations. Such documentation shall include appropriate risk analysis and assessment.
- D) Technical documentation shall identify the requirements that apply to the product. Including, as required by the assessment, the design of the product, manufacturing and operation (use) of the product. -
- E) Technical documents shall include, at least, the following:
 - 1) General description of the product
 - 2) Design, manufacturing drawings, and horizontal projections (diagrams), components, units and partial divisions, etc.





- 3) Description and explanations, referred therein, necessary to understand the drawings, diagrams and the operation (use) of the product.
- 4) A list of Saudi standards or specifications or any other appropriate technical specifications adopted by the Authority (SASO), whether fully or partially applied, and a description of the solutions adopted to meet the essential requirements of the Saudi Technical Regulations, in the event that the aforementioned standards or specifications referred to are not applied. In case of partial use of Saudi standards or specifications, the technical documentation shall clarify the applied clauses.
- 5) Report results (graph calculations) of the design, operation control, tests conducted, etc.,.
- 6) Test reports.
- 7) Samples represented for planned production, Notified Bodythe Notified Body may further request additional samples, if needed.
- 8) Evidence (proofs) that supports the appropriateness of technical solutions applied in the design. Such evidence shall refer to all documents used, especially if the Saudi standards or specifications and/or the aforementioned appropriate technical standards or specifications referred to are not applied. The supporting evidence shall include, as necessary, the results of tests conducted in the appropriate laboratory of the manufacturer or any another laboratory under his responsibility.

2/2 Tasks of the Notified Body

2/2/1 Concerning the product, the Notified Body shall:

Study of technical documentation and supporting evidence for the purpose of assessment of the technical design of the product.

2/2/1 Concerning the samples, the Notified Body shall:

- 1) Ensure that the manufacturing of samples are conformant to the technical documentation, in addition to identifying the elements designed according to Saudi standard specifications, and the elements designed according to other standards or specifications.
- 2) Carry out appropriate examinations and tests, or outsource them in order to verify that the technical solution adopted by the manufacturer meets the essential





- requirements specified in the relevant standards or specifications, in case of non-application of the appropriate standards.
- 3) Carry out appropriate tests, or outsource them, in order to verify that if Saudi standards or specifications and/or other appropriate specifications are not applied- technical solutions adopted by the manufacturer meet the essential requirements of Saudi Technical Regulations.
- 4) In agreement with the manufacturer on the venue where to conduct the tests.

c) For the decisions to be made by the Notified BodyNotified Body

- 1) The Notified Body shall issue an assessment report of the procedures carried out and their outputs., The Notified Body shall not publish fully of partially the report without the consent of the manufacturer.
- 2) In case the type meets the requirements of the Saudi Technical Regulations relevant to the concerned product, the Notified Body shall issue a Type Approval Certificate for the manufacturer. Such certificate shall include the name and address of the manufacturer, test results, the validity conditions thereof, if any, and all the information required for the identification of the certified type. The certificate may also include attachments.
- 3) The certificate along with its attachments shall contain all the necessary information to assess the conformity of products manufactured in accordance with the tested type and to monitor during operation.
- 4) In case the type is non-conforming to the requirements of the Saudi Technical Regulations applicable to the product, the Notified Body shall not issue the Type Approval Certificate and shall notify the applicant of its decision, stating detailed justifications for such decision.
- 5) The Notified Body shall follow all recognized technological developments. Whenever such developments indicates that the approved type may no longer with the requirements of the Saudi Technical Regulations, the Notified Body shall determine to what extent and further tests are required., It shall inform the manufacturer accordingly.
- 6) The manufacturer shall inform the Notified Body, which maintains the technical documentation related to the Type Approval Certificate, of all changes or modifications to the approved type which may affect the product conformity to the requirements of the Saudi Technical Regulations, or the terms and conditions of validity of the Type Approval Certificate. As such, changes or modifications requires additional approval other than primary Type Approval Certificate.





- 7) Notified Bodies shall inform the authorities (SASO) of the Type Approval Certificates and any additions issued or withdrawn and shall periodically periodically provide or upon request provide a list of the Type Approval Certificates and any additions that has been rejected, suspended or restricted in any way.
- 8) Each Notified Body shall inform other Notified BodyNotified Bodies of the Type Approval Certificates and any additions that has been rejected, suspended or restricted in any way, In addition, they shall be informed, upon request, about the Type Certificates or any additions released.
- 9) Upon request, the Authority (SASO) and other Notified Body can obtain copies of the Type Approval Certificates and/or additions thereto. SASO may obtain copies of technical documentation and the tests results carried by the Notified Body upon request. The Notified Body shall keep a copy of the Type Approval Certificate, its annexes and supplementary, in addition to the technical documentation (including documents attached by the manufacturer) up until the validity of the certificate.
 - 10) The manufacturer shall keep a copy of the Type Approval Certificates, its annexes and supplementary thereto, in addition to the technical documentation. Furthermore, the manufacturer shall make all documents available to Regulatory Authorities and Market Surveillance Authorities for 10 years, after putting the product on the market.
 - 11) The supplier may submit the request mentioned in clause (2/1) above, and carry out the aforementioned tasks on behalf of the manufacturer, on the condition of the manufacturer's consent.





Annex (3)

Supplier Declaration of Conformity

This form is filled in the company's official paper

1) Supplier information
- Name:
- Address:
- The person you can contact:
- E-mail:
- Phone number:
• Fax:
2) Product details:
- Product Brand/Trademark:
- Model:
- Product Description:
- Type (according to specifications):
- Reference standard specifications/technical specifications:
We declare that the above mentioned product is in conformity to the Saudi
Technical Regulations () and the Saudi standards
or specifications thereto.
Person in charge:
Company name:
Signature: date:/