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Edition 3

SOUTH AFRICAN NATIONAL STANDARD

The handling, storage, distribution and maintenance of liquefied petroleum gas in domestic, commercial and industrial installations

Part 4: The transportation of LP gas including the design, construction, inspection, fittings, filling, maintenance and repair of LP gas bulk vehicles and rail tank cars

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Table of changes

Change No.	Date	Scope

Acknowledgement

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British Standards Institution
National Fire Protection Association (USA)
Shell and BP Service Company (Proprietary) Ltd
LP Gas Association (UK)

Foreword

This South African standard was approved by National Committee SABS SC 1019A, *Gas supply, handling and control (fuel and industrial gases) – Fuel gases*, in accordance with procedures of the SABS Standards Division, in compliance with annex 3 of the WTO/TBT agreement.

This document was published in January 2011.

This document supersedes SABS 10087-4:1979 (edition 2, reprinted 1985).

Reference is made in NOTE 1 and NOTE 3 to 1.4 to "relevant national legislation". In South Africa this means the Road Transportation Act, 1977 (Act No. 74 of 1977).

Reference is made in 3.2.1 to "relevant national legislation". In South Africa this means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) (as amended from time to time).

Reference is made in 3.2.2, 5.2 and 7.1.1 to "relevant national legislation". In South Africa this means the National Road Traffic Act, 1996 (Act No. 93 of 1996).

Reference is made in 3.2.3 and 8.2.1 to "relevant national legislation". In South Africa this means the Trade Metrology Act, 1973 (Act No. 77 of 1973).

Reference is made in 5.1, 5.4.4.6, 5.5.2, 11.5, annex D (two references) and annex E (two references) to "relevant national legislation". In South Africa this means the Pressure Equipment Regulations of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).

Reference is made in 5.6.2 to "relevant national legislation". In South Africa this means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and the National Road Traffic Act, 1996 (Act No. 93 of 1996).

SANS 10087 consists of the following parts, under the general title, *The handling, storage distribution and maintenance of liquefied petroleum gas in domestic, commercial and industrial installations*:

Part 1: *Liquefied petroleum gas installations involving gas storage containers of individual water capacity not exceeding 500 L and a combined water capacity not exceeding 3 000 L per installation.*

Part 2: *Installations in mobile units and small non-permanent buildings.*

Foreword *(concluded)*

Part 3: *Liquefied petroleum gas installations involving storage vessels of individual water capacity exceeding 500 L.*

Part 4: *The transportation of LP gas including the design, construction, inspection, fittings, filling, maintenance and repair of LP gas bulk vehicles and rail tank cars.*

Part 6: *The application of liquefied petroleum and compressed natural gases as engine fuels for internal combustion engines.*

Part 7: *Storage and filling premises for refillable liquefied petroleum gas (LPG) containers of gas capacity not exceeding 9 kg and the storage of individual gas containers not exceeding 48 kg.*

Part 8: *Filling containers for LP gas operated fork lift vehicles in-situ.*

Part 10: *Mobile filling stations for refillable liquefied petroleum gas (LPG) containers of capacity not exceeding 9 kg.*

Annexes A to F are for information only.

Introduction

This document has been revised under a new title and, apart from the substitution of metric values for non-metric units, it has been amplified and updated to bring it into line with current practice (particularly by the inclusion for the transport of LP gas in container and bulk including road and rail).

This document represents a minimum standard. Compliance with it does not confer immunity from relevant legal requirements, and the authority having jurisdiction, i.e. the approving authority (see 3.2) should be approached in circumstances where mandatory requirements are applicable.

This document is called up in the Pressure Equipment Regulations of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) (as amended from time to time) making the requirements of this document mandatory.

SANS 10087-4:2011

Edition 3

Contents

	Page
Acknowledgement	
Foreword	
Introduction	1
1 Scope	3
2 Normative references	3
3 Definitions	4
4 Design and construction requirements for road vehicles	5
5 Design, construction and testing of the pressure vessels for road and rail transport	7
6 Filling by volume	11
7 Vehicles	12
8 Ancillary equipment	14
9 Driver instructions and training	16
10 Loading and decanting of LPG bulk delivery vehicles	16
11 Parking and garaging of vehicles used to carry LPG	17
12 Decanting of LPG from rail tank cars	17
Annex A (informative) Typical rail tank car discharge procedure	18
Annex B (informative) Check sheet for the road transport of containers from 0,5 L to 113 L (water capacity) by truck or light delivery vehicle of gross vehicle mass less than 3 501 kg	22
Annex C (informative) Check sheet for the road transport of containers from 0,5 L to 113 L by truck of gross vehicle mass exceeding 3 500 kg	25
Annex D (informative) Check sheet for the transport of LPG bulk delivery by road vehicles	28
Annex E (informative) Check sheet for the transport of LPG bulk delivery by rail	31
Annex F (informative) Rate of discharge of pressure relief devices	33
Bibliography	35

The handling, storage, distribution and maintenance of liquefied petroleum gas in domestic, commercial and industrial installations

Part 4:

The transportation of LP gas including the design, construction, inspection, fittings, filling, maintenance and repair of LP gas bulk vehicles and rail tank cars

1 Scope

1.1 This part of the SANS 10087 gives requirements for the design, construction, inspection, fittings and the filling ratio of pressure vessels (mounted onto vehicles or rail wagons), including ISO containers and skid tanks, used in the transportation of liquefied petroleum gas (LPG), the design of vehicles and ancillary equipment, and operating practice.

1.2 It also gives the requirements for the transfer of the contents of supply vehicles to or from storage tank(s).

1.3 It also gives requirements for the transfer of the contents to and from rail tank cars to storage tank(s).

1.4 It also gives requirements for the transport of containers with a water capacity not exceeding 500 L.

NOTE 1 The transport of gas containers should comply with the requirements of relevant local legislation as listed under the relevant national legislation (see foreword).

NOTE 2 Cognisance should be taken of the 100 kg exempt quantity given in SANS 10231.

NOTE 3 Drivers of vehicles transporting LPG need to comply with the training and licensing requirements of local legislation as listed under the relevant national legislation (see foreword).

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies. Information on currently valid national and international standards can be obtained from the SABS Standards Division.

EN 1762, *Rubber hoses and hose assemblies for liquefied petroleum gas, LPG (liquid or gaseous phase), and natural gas up to 25 bar (2,5 MPa) – Specification.*

EN 10216-2, *Seamless steel tubes for pressure purposes – Technical delivery conditions – Part 2: Non-alloy and alloy steel tubes with specified elevated temperature properties.*