



**BOTSWANA
ENERGY REGULATORY
AUTHORITY**

Regulating Energy with Integrity

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APPROVED PETROLEUM AND LPG STANDARDS

The following standards have been adopted and approved by the Authority and shall be used in setting compliance standards for licensees as well as for monitoring compliance.

STANDARD	TITLE	DESCRIPTION	PRODUCT
BOS 576: 2014	Automotive Diesel fuel – specification	Specifies the requirements for two grades of automotive diesel fuel (low sulphur and standard grade)	Diesel
BOS 578: 2014	Kerosene for domestic heating and illuminating - specifications	Specifies the requirements for a hydrocarbon fuel for use in wick-fed pressure vaporising and for space heating, cooking and illuminating.	Kerosene/Paraffin
BOS 629: 2015	High performance oil for petrol engine (for API service category SL)	Covers one type of engine lubricating oil suitable for crack case lubrication of spare-ignition engines of passenger cars (naturally aspirated or turbo charged) Light duty trucks and heavy-duty trucks that operated under API service category SL.	Lubricating oil
BOS 628: 2015	High performance oil for petrol engine (for API service category SL)	Covers one type of engine lubricating oil suitable for crack case lubrication of spare-ignition engines of passenger cars (naturally aspirated or turbo charged) Light duty trucks and heavy-duty trucks that operated under API service category SL.	Lubricating oil



BOS 705: 2016	Steel tanks for flammable and combustible liquids - specification	Specifies requirements for design and construction of steel tanks for the storage of flammable and combustible liquids. It sets out requirements for tank joints and accessories and specifies testing requirements.	Storage tanks
BOS ISO 11014 – 1: 1994	SDS for chemical products - Part 1: Content and order of sections.	Presents information for the compilation and completion of - safety data sheet. Defines specifically the general layout of the SDS, the 16 standard headings, the numbering and the sequence of these 16 standard headings, the items necessary to fill in an SDS and the conditions of their applicability or utilization.	All
BOS 255: 2007	Metallic hose assemblies for liquified natural gases - specification	Specifies requirements and test methods for metallic hose assemblies used for the loading and unloading of liquefied petroleum gases under pressure. The metallic hose assemblies are suitable for use at a pressure of 25 bar and temperatures from –200 °C to 70 °C.	Gases
BOS 256: 2007	Appliances operating on liquified petroleum gas- safety aspects	Covers the safety aspects of appliances that operate on liquefied petroleum gas at a consumption rate not exceeding 10 kg/h and used in conjunction with refillable petroleum gas (LPG) cylinders. It also covers the safety aspects where applicable of appliances that operate on natural gas.	LPG
BOS ISO 2928: 2003	Rubber hoses and hose assemblies for liquified petroleum gas in liquid or gaseous phase and natural gas up to 25 bar- specification	specifies requirements for rubber hoses and rubber hose assemblies used for the transfer of liquefied petroleum gas (LPG) in the liquid or gaseous phase and natural gas and designed for use at working pressures ranging from vacuum to a maximum of 25 bar (2,5 MPa)	Gases

		within the temperature range -30 °C to +70 °C or, for low-temperature hoses (designated -LT), within the temperature range -50 °C to +70 °C.	
BOS 580 – 3: 2015	Petroleum Industry – part 3 The installation, modification and decommissioning of underground storage tanks, pumps/dispensers and pipework at service stations and consumer installations – code of practice	This part of BOS 580 covers provisions for the installation of underground storage tanks of individual capacity not exceeding 85 000 m ³ , pumps/dispensers and pipework at service stations and consumer installations. 1.2 This part of BOS 580 does not cover the installation of pressurized underground storage tanks such as liquefied petroleum gas (LPG) and compressed natural gas (CNG) storage vessels.	Petroleum Products
BOS 580 -2: 2015	Petroleum Industry – part 2 electrical and other installations in the distribution and marketing sector – code of practice	1.1 This part of BOS 580 covers the recommended safe practices in the design, construction, installation and maintenance of electrical, earthing and bonding systems intended to be used in flammable and combustible liquid storage, pumping, distribution and marketing facilities. 1.2 This part of BOS 580 does not cover the requirements for flammable dust. This standard also does not apply to refineries or exploration facilities, unless if any of these installations are similar to facilities listed in clause 1.1 above.	Petroleum Products
BOS 580 -1: 2015	Petroleum Industry - Part 1. Storage and Distribution of Petroleum products in above ground bulk installations – code of practice	This standard covers the layout and design of petroleum bulk depots, and the installation of equipment of the types normally used for the handling, storage and distribution of petroleum products and their derivatives, other than equipment that is used for storage and dispensing on consumer premises	Petroleum Products

		(including service stations) and for which relevant standards exist.	
BOS 6 – 1: 2016	Symbolic Safety Signs – Part 1 Standard Signs and general requirements	This part of BOS 6 specifies requirements for standard ordinary (non- reflective) symbolic safety signs, including signs applied on mirrors or on vinyl sheets (decals).	All
BOS 3 – 1: 2002	The handling, storage, distribution and maintenance of liquefied petroleum gas in domestic, commercial and industrial installations - Part 1: LPG Installations involving storage cylinders of individual capacity not exceeding 500l and combined capacity not exceeding 3000L	This part of Botswana Standard gives recommendations of the materials, the methods of construction and installation of equipment used in the handling, storage or distribution of liquefied petroleum gas in domestic, commercial and industrial installations that involve gas storage containers of individual water capacity not exceeding 500 l and of a combined water capacity not exceeding 3 000 l. It also gives recommendations regarding the installation of appliances, piping, fittings and other components. It covers the maintenance, inspection and testing of the various components of equipment. It does not cover any installation to caravans or mobile homes.	LPG
BOS 3 – 7: 2011	The handling, storage, distribution and maintenance of liquefied petroleum gas in domestic, commercial and industrial installations - Part 7: Storage and filling sites for refillable liquefied petroleum gas (LPG) containers of capacity not exceeding 9kg and the storage of individual gas containers not exceeding 48kg – Code of practice	"This part of BOS 3 specifies the minimum requirements for the location and installation of and operations at the storage and filling sites for refillable liquefied petroleum gas (LPG) containers of capacity not exceeding 9kg and the storage of individual gas containers of capacity not exceeding 48kg. It identifies safe methods of filling and storing refillable containers and makes recommendations towards safe working procedures that cover all aspects of the storage and filling of refillable containers. This	LPG

		standard also covers the storage of non-refillable containers."	
BOS 3 – 4: 2005	The handling, storage & distribution of liquefied petroleum gas in domestic, commercial & industrial installations - Part 4: Transportation of LPG in bulk by road – Code of practice	This part of the code of practice contains recommendations for the design, construction, inspection, fittings and filling ratio of tanks used in transportation of LPG in bulk by road, the design of vehicles and ancillary equipment, and operating practice.	LPG
BOS 3 – 3: 2011	The handling, storage and distribution and maintenance of liquefied petroleum gas in domestic, commercial and industrial	This part of Botswana Standard specifies requirements for the layout, design and installation of liquefied petroleum gas equipment and of storage vessels of individual water capacity exceeding 500 l and associated vaporizers, pipe work and fittings up the outlet of the first pressure reduction stage in the line. Recommendations are also given in regard to the fitting of automatic and other devices (operative in the event of physical damage to the installation) for the purpose of ensuring maximum security, for the storage of the gas from a design point of view, and for limiting the escape of liquid through normal pressure-relief fittings. It also covers provisions for underground and above ground liquefied petroleum gas (LPG) storage tanks and associated equipment such as pumps, dispensers and pipework at service stations, container filling sites and consumer installations. It also covers dedicated LPG dispensing stations. It does not cover refrigerated LPG storage.	LPG
BOS 118: 2005	Single stage low pressure regulators for liquefied petroleum gas (LPG) – Specification	This standard specifies performance, safety and constructional requirements for low-pressure regulators of the	LPG

		single stage type intended for use with liquefied petroleum gas mixtures in the vapour phase and designed for a set outlet pressure of 2.8 kPa and a flow not exceeding 10kg/h. Unless otherwise stated, all pressures given in the standard are gauge pressures.	
BOS ISO 4706: 1989	Refillable welded steel gas cylinders	This International Standard gives minimum requirements for certain aspects concerning material, design, construction and workmanship, procedure and test at manufacture of refillable welded steel gas cylinders at a test pressure not greater than 75 bar 1), and of water capacities from 1 L up to and including 150L for compressed, liquefied or dissolved gases, exposed to ambient temperatures.	LPG
BOS 577:2014	Unleaded petrol - Specification	This standard specifies requirements and tests methods for marketed and delivered metal-free unleaded petrol grades suitable for use in spark-ignition internal combustion engines excluding aviation piston engines	Petrol