

**Klaasplastist (GRP) allmaamahutid.
Horisontaalsed silindrilised rõhuvabad
mahutid vedelate naftabaasiliste
kütuste säilitamiseks. Osa 2:
Ühekihilise seinaga mahutite vedu,
käsitsemine, ladustamine ja
paigaldamine**

Underground tanks of glass-reinforced plastics (GRP) - Horizontal cylindrical tanks for the non-pressure storage of liquid petroleum based fuels - Part 2: Transport, handling, storage and installation of single wall tanks

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 976-2:2000 sisaldab Euroopa standardi EN 976-2:1997 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 11.01.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 976-2:2000 consists of the English text of the European standard EN 976-2:1997.</p> <p>This document is endorsed on 11.01.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: Käesolev Euroopa standardi EN 976 osa 2 määrab kindlaks ühekihilise seinaga horisontaalsete silindriliste kuumuses kõvenevast klaasplastist valmistatud maa-aluste rõhuvabade naftabaasilise vedelkütuse mahutite transportimise, paiknevuskoha, ladustamise ja paigaldamise nõuded kooskõlas EN 976 osa 1 nõuetega. Samuti on kirjeldatud seadmestiku rahuldavaks toimimiseks vajalikud ohutuse abiseadmed, kaasa arvatud juurdepääsukambri kate ja karkass.</p>	<p>Scope: Käesolev Euroopa standardi EN 976 osa 2 määrab kindlaks ühekihilise seinaga horisontaalsete silindriliste kuumuses kõvenevast klaasplastist valmistatud maa-aluste rõhuvabade naftabaasilise vedelkütuse mahutite transportimise, paiknevuskoha, ladustamise ja paigaldamise nõuded kooskõlas EN 976 osa 1 nõuetega. Samuti on kirjeldatud seadmestiku rahuldavaks toimimiseks vajalikud ohutuse abiseadmed, kaasa arvatud juurdepääsukambri kate ja karkass.</p>
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Võtmesõnad: allmaamahutid, armeeritud plast, klaasplast, naftasaaduste ladustamine, paigaldus, sertifitseerimine, säilitusmahuti, tehnilised andmed, termokõvenevad polümeerid, vedu

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Descriptors: Tanks, fuel storage.

English version

Underground tanks of glass-reinforced plastics (GRP)
**Horizontal cylindrical tanks for the non-pressure
storage of liquid petroleum based fuels**

Part 2: Transport, handling, storage and installation of single wall tanks

Réservoirs enterrés en plastiques renforcés de verre (PRV) – Réservoirs cylindriques horizontaux pour le stockage sans pression de carburants ou combustibles pétroliers liquides – Partie 2: Transport, manutention, stockage et installation de réservoirs à simple paroi

Unterirdische Tanks aus textilglasverstärkten Kunststoffen (GFK) – Liegende zylindrische Tanks für die drucklose Lagerung von flüssigen Kraftstoffen auf Erdölbasis – Teil 2: Transport, Handhabung, Zwischenlagerung und Einbau einwandiger Tanks

This European Standard was approved by CEN on 1997-06-21.

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 210 "GRP tanks and vessels", the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 1998, and conflicting national standards shall be withdrawn at the latest by January 1998.

The 4 parts of this European Standard cover the construction and installation requirements of horizontal, cylindrical GRP tanks used for the underground non-pressure storage of petroleum based fuels, e.g. petrol and diesel fuel storage in service stations, heating oil storage for buildings.

The 4 parts are :

Part 1 : Requirements and test methods for single wall tanks

Part 2 : Transport, handling, storage and installation of single wall tanks

Part 3 : Requirements and test methods for double wall tanks

Part 4 : Transport, handling, storage and installation of double wall tanks

The Standard is written in different parts in order to clearly define the involvement and responsibilities of different parties in the construction of the tank, its installation and the assurance of a good, safe performance during use.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This Part 2 of European Standard EN 976 specifies the requirements for the transportation, site handling, storage and installation of horizontal, cylindrical single wall tanks made of glass reinforced thermosetting resins used for the underground non-pressure storage of liquid petroleum based fuels, complying with the requirements of EN 976-1.

Ancillary equipment vital to the satisfactory operation of the installation comprising access chamber, cover and frame are also described.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

prEN 976-1 Underground tanks of glass-reinforced plastics (GRP) - Horizontal cylindrical tanks for the non-pressure storage of liquid petroleum based fuels - Part 1 : Requirements and test methods for single wall tanks.

3 Definitions

For the purposes of this standard the following definitions apply :

3.1 cylinder : Part of the tank that forms the cylindrical portion of the body.

3.2 end : Curved portions of the tank located at the ends of the cylindrical portion.

3.3 cylinder reinforcing ribs : Circumferential external ribs fully bonded to the cylinder or integrally formed with it.

3.4 compartment : Portion of the tank created by an internal partition.

3.5 manway : Hole in the uppermost portion of the cylinder or tank allowing access.

3.6 manway lid : Plate bolted to the manway.

3.7 access chamber : Chamber to provide access to the manway lid.

3.8 anchorage positions : Clearly marked positions on the tank which can be used as the location of the holding down straps used to anchor the tank.

3.9 anchorage points : Positions to which the holding down straps can be secured.

3.10 holding down straps : Straps used to hold down the tank.

3.11 backfill : Non-cohesive, granular material used to surround the tank and provide support and restraint.

3.12 excavation : Pit into which one or more tanks may be installed.

3.13 tank installer : Company responsible for the tank installation.

3.14 manufacturer : Company creating and selling the tank complying with EN 976-1.

3.15 sleepers; deadmen : Concrete beams laid parallel to the tank axis which allow the soil weight above the beams to be utilized in tank anchoring (See figure B.4).