

Nederlandse norm

NEN-EN 13575

(en)

Static thermoplastic tanks for the above ground storage of chemicals - Blow moulded or rotationally moulded polyethylene tanks - Requirements and test methods

Vervangt NEN-EN 13575:2004;
NEN-EN 13575:2010 Ontw.

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Nederlands voorwoord

Voor de in deze norm vermelde normatieve verwijzingen bestaan in Nederland de volgende equivalenten:

<u>vermelde norm</u>	<u>Nederlandse norm</u>	<u>titel</u>
EN 13616	NEN-EN 13616	Overvulbeveiligingsmiddelen voor niet-verplaatsbare tanks voor vloeibare brandstoffen
EN ISO 179-1	NEN-EN-ISO 179-1	Kunststoffen - Bepaling van de slagsterkte volgens Charpy - Deel 1: Niet-geïstrumenteerde slagbeproeving
EN ISO 293:2005	NEN-EN-ISO 293:2005	Kunststoffen - Het persen van proefstukken van thermoplastische materialen
EN ISO 527-2:1996	NEN-EN-ISO 527-2:1996	Kunststoffen - Bepaling van de trekeigenschappen - Deel 2: Beproevingomstandigheden voor pers-, spuitgiet- en extrusiekunststoffen
EN ISO 1133	NEN-EN-ISO 1133	Kunststoffen - Bepaling van de smeltindex op basis van massa (MFR) en volume (MVR) van thermoplasten
EN ISO 1183-1	NEN-EN-ISO 1183-1	Kunststoffen - Methoden voor het bepalen van de dichtheid van niet-geschuimde kunststoffen - Deel 1: Dompelmethode, vloeistof pyknometermethode en titratiemethode
EN ISO 1183-2	NEN-EN-ISO 1183-2	Kunststoffen - Methoden voor de bepaling van de dichtheid van niet-geschuimde kunststoffen - Deel 2: Dichtheidgradiëntkolommethode
EN ISO 1872-2:2007	NEN-EN-ISO 1872-2:2007	Kunststoffen - Pers- en spuitgiet- en extrusiematerialen van polyetheen (PE) - Deel 2: Bereiding van proefstukken en bepaling van eigenschappen
EN ISO 4892-1	NEN-EN-ISO 4892-1	Kunststoffen - Methoden om monsters aan laboratoriumlichtbronnen bloot te stellen - Deel 1: Algemene leidraad
EN ISO 4892-2	NEN-EN-ISO 4892-2	Kunststoffen - Blootstellings-methode aan laboratoriumlichtbronnen bloot te stellen - Deel 2: Xenon hooglampen
EN ISO 23667:2007	NEN-EN-ISO 23667:2007	Verpakking - Transportverpakking voor gevaarlijke goederen - Vormvaste kunststof en kunststofcomposiet IBCs - Compatibiliteitsbeproeving

Voorbeeld
Preview

English Version

**Static thermoplastic tanks for the above ground storage of
 chemicals - Blow moulded or rotationally moulded polyethylene
 tanks - Requirements and test methods**

Réservoirs statiques thermoplastiques destinés au
 stockage non enterré de produits chimiques - Réservoirs
 en polyéthylène moulés par soufflage ou par rotation -
 Exigences et méthodes d'essai

Ortsfeste Tanks aus Thermoplasten für die oberirdische
 Lagerung von Chemikalien - Tanks aus blas- oder
 rotationsgeformtem Polyethylen - Anforderungen und
 Prüfverfahren

This European Standard was approved by CEN on 25 February 2012.

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Foreword

This document (EN 13575:2012) has been prepared by Technical Committee CEN/TC 266 "Thermoplastic static tanks", 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 October 2012, and conflicting national standards shall be withdrawn at the latest by October 2012.

This document supersedes EN 13575:2004.

The main changes compared to the previous edition are:

- a) Clause 1, Scope: the field of application has been extended to tanks with a volume of 400 l to 10 000 l;
- b) Clause 2, Normative references has been updated;
- c) Clause 6, Evaluation of conformity has been revised and moved to Annex D in its entirety;
- d) B.3. Tensile properties has been revised;
- e) B.4, Chemical resistance has been revised with reference to EN ISO 23667;
- f) C.8: For the pressure resistance test a support framework for tanks > 3 500 l is permitted;
- g) Annex D has been deleted;
- h) Annex E has been deleted;
- i) The new Annex D "Evaluation of conformity" has been added;
- j) The new Annex E "A-deviations" has been added due to the national regulations of the Netherlands.

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EN 13575:2012 (E)**1 Scope**

This European Standard specifies requirements for materials, physical properties and performance for blow moulded and rotationally moulded polyethylene single tanks, with or without reinforcement, for the above ground storage of chemical liquids having a maximum specific gravity of 1 400 kg/m³ except water and those liquids dealt with by EN 13341.

It is only applicable to static blow moulded or rotationally moulded polyethylene tanks, which are subjected to atmospheric pressures but not subject to any external loading and having a volume of 400 l to 10 000 l. Except for periodic temperature fluctuation their normal operating temperature does not exceed 25 °C.

Tanks according to this European Standard are expected to have a period of intended use of 10 years.

This European Standard specifies test methods and factory production control tests as well.

NOTE National and/or international regulations above and beyond the requirements of this standard may apply to the storage of liquids and the installation of tanks.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 13616, *Overfill protection devices for static tanks for liquid petroleum fuels*

EN ISO 179-1, *Plastics — Determination of Charpy impact properties — Part 1: Non-instrumented impact test (ISO 179-1:2000)*

EN ISO 293:2005, *Plastics — Compression moulding of test specimens of thermoplastic materials (ISO 293:2004)*

EN ISO 527-2:1996, *Plastics — Determination of tensile properties — Part 2: Test conditions for moulding and extrusion plastics (ISO 527-2:1993 including Corr 1:1994)*

EN ISO 1133, *Plastics — Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics (ISO 1133:2005)*

EN ISO 1183-1, *Plastics — Methods for determining the density of non-cellular plastics — Part 1: Immersion method, liquid pycnometer method and titration method (ISO 1183-1:2004)*

EN ISO 1183-2, *Plastics — Methods for determining the density of non-cellular plastics — Part 2 Density gradient column method (ISO 1183-2:2004)*

EN ISO 1872-2:2007, *Plastics — Polyethylene (PE) moulding and extrusion materials — Part 2: Preparation of test specimens and determination of properties (ISO 1872-2:2007)*

EN ISO 4892-1, *Plastics — Methods of exposure to laboratory light sources — Part 1: General guidance (ISO 4892-1:1999)*

EN ISO 4892-2, *Plastics — Methods of exposure to laboratory light sources — Part 2: Xenon-arc lamps (ISO 4892-2:2006)*

EN ISO 23667:2007, *Packaging — Transport packaging for dangerous goods — Rigid plastics and plastics composite IBCs — Compatibility testing (ISO 23667:2007)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

tank

container for the storage of liquids at atmospheric pressure which retains its designed shape without any support when empty

3.2

brimful capacity (of a tank)

volume of water held by the tank filled through the filling orifice to the point of overflowing

3.3

maximum filling capacity (of a tank)

value of 95 % of the brimful capacity

3.4

reinforcement

constitutive element of a tank, which contributes to its mechanical stability

3.5

regrind

material prepared from clean, rejected, unused tanks, including trimmings from the production of tanks that will be reprocessed in a manufacturer's plant after having been previously processed by the same manufacturer in the production of tanks

4 Requirements for materials

4.1 Tank

Flammable liquids with a flash point $> 55^{\circ}\text{C}$ may be stored in these tanks without further requirements.

Flammable liquids with a flash point $\leq 55^{\circ}\text{C}$ may be only stored in these tanks if the requirements concerning electrostatic behaviour according to CLC/TR 50404 are considered.

4.2 Material

The raw materials and samples taken from the tanks shall be tested and fulfil the requirements according to Table 1.

The proportion of the regrind from the same material shall not exceed 50 % for blow-moulded tanks. Regrind shall not be used for rotationally moulded tanks.

If required by national authorities, creep curves similar to those given in Annex A shall be used to determine the long-term behaviour of the material.

If required by national authorities, the impact strength at low temperature shall be determined. When tested in accordance with C.6, the impact strength of a sample, cut from the tank, measured at -18°C shall be at least 75 % of the impact strength measured at $(23 \pm 2)^{\circ}\text{C}$.

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