



INSTITUTE FOR TESTING AND CERTIFICATION
T. BATI 299, 764 21 ZLÍN, CZECH REPUBLIC

TEST REPORT

Ref. No: 463500006 / 2012

Applicant: Fortis Sp. Z o.o Sp.k.
ul. Skladowa 5
62-081 Przemierowo, POLAND

Products: Fortis Tank
type: 125I, 200I, 450I, 750I, 950I, 2000I, 3000I, 5000I,
7500I, 10000I
Thermoplastics static tanks for above ground storage of
domestic heating oils, kerosene and diesel fuels

Assessed by: Ing. Michal ZYTKA

Issued on: 2012-05-11



A handwritten signature in blue ink, appearing to read 'R. Cevelik'.

Dr Radomir CEVELIK
General Manager



1. Introduction

Thermoplastics static tanks for above ground storage of domestic heating oils, kerosene and diesel fuels as construction products have to be assessed on the basis of relevant clauses of the Construction Products Directive (CPD) - Council Directive 89/106/EEC of 21 December 1989 on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products as amended by Council Directive 93/68/EC. This Directive has been implemented into the Czech legislative as the Government Order No. 190/2002 Collection of Law. In this Final Report, the references to the CPD are valid also for the above-mentioned Government Order.

2. Assessment of conformity with the essential requirements

2.1. Harmonized technical specification and the attestation of conformity system

For the attestation of conformity of thermoplastics static tanks with the essential requirements of the CPD the harmonized standard

EN 13341:2005+A1:2011 Thermoplastics static tanks for above ground storage of domestic heating oils, kerosene and diesel fuels - Blow moulded polyethylene, rotationally moulded polyethylene and polyamide 6 by anionic polymerization tanks - Requirements and test methods

have been adopted.

3. Product specification

Fortis Tank

type: 125l, 200l, 450l, 750l, 950l, 2000l, 3000l, 5000l, 7500l, 10000l

Thermoplastics static tanks for above ground storage of domestic heating oils, kerosene and diesel fuels.

They are manufactured of rotationally moulded polyethylene.

Tanks are manufactured in the factory:

Fortis Sp. Z o.o Sp.k.

ul. Składowa 5

62-081 Przemierowo, POLAND.

4. Applicant's request

Subject of this report is the evaluation of the following test on the basis of the applicant's request:

Resistance to AdBlue (35% solution of urea) according to testing method EN 13341: 2005+A1:2011, cl. A 2.4



5. Place, time and method of sampling

The sample were taken in the manufacturer's site by his representatives, subsequently sent to ITC Zlin by post and passed to the Accredited Testing Laboratory No 1004 (ITC Zlin).

6. Samples description and identifications

Thermoplastic static tanks from rotationally moulded polyethylene for storage of domestic heating oils, kerosene and diesel fuel - Fortis Tank type: 5000l. Registration numbers of the samples: 463500005/1 and 463500005/2

7. Place and done of the tests

The tests were performed in the Accredited Testing Laboratory No 1004 (ITC Zlin) during the period March 2012.

8. Testing methods used

EN 13341:2005+A1:2011 Thermoplastics static tanks for above ground storage of domestic heating oils, kerosene and diesel fuels - Blow moulded polyethylene, rotationally moulded polyethylene and polyamide 6 by anionic polymerization tanks - Requirements and test methods, Testing method A 2.4

EN ISO 527-2 Plastics-determination of tensile properties
EN ISO 175 Plastics-determination of effects of chemicals

9. Test equipment used:

Universal Ripper Instron 3365, video-extensometer, Mitutoyo Digital Caliper
Hot air oven, Sartorius Analytical Balances

10. Conditioning:

The test samples were conditioned for a time period of 48 hours in standard laboratory conditions.

11. Test conditions:

Exposure: 40°C, 336 h, AdBlue, the equilibrium state - 336 h
Change in tensile strength after exposure: 40°C, 336 h, AdBlue
Change in elongation at break after exposure: 40°C, 336 h, AdBlue
Mass change after exposure: 40°C, 336 h, AdBlue

12. Test result:

The test results are summed up in Table 1:

Table 1: Resistance to diesel fuel ČSN EN 13341:2005+A1:2011, cl. A 2.4

Characteristics measured	Unit	Test result ¹⁾	Required value
Tensile strength	MPa	18,5	min. 15
Elongation at yield	%	11,0	max. 25
Mass change exposure: 40°C, 336 h, AdBlue	%	0,1	max. 10
Change in tensile strength after exposure: 40°C, 336 h, AdBlue	%	- 5,4	max. - 20
Change in elongation at break after exposure: 40°C, 336 h, AdBlue	%	4,5	less than 150 % of the initial

1) Arithmetic mean

13. Conclusion

Conformity of properties of the product samples with essential requirements specified in EN 13341:2005+A1:2011, tab. 1, Testing method A 2.4, was confirmed.

AdBlue may be stored in the Fortis tanks.

14. List of the documents used for the Test Report elaborating

- Application for testing No. 463500006
- Test report No. 463500006/01 issued by the Accredited Testing Laboratory No 1004 (ITC Zlin)
- EN 13341:2005+A1:2011 Thermoplastics static tanks for above ground storage of domestic heating oils, kerosene and diesel fuels - Blow moulded polyethylene, rotationally moulded polyethylene and polyamide 6 by anionic polymerization tanks - Requirements and test methods