

TEST REPORT

TÜV-Order-No. : 423333180/01
 Date of Delivery : 09.03.2004
 Customer : Covess

Indication : Food contact
 Product : Commodity, contact with foodstuff
 § 5 (1)1, German Food and Commodities Act (LMBG)

Migration tests, Global migration

The migratory behaviour is examined in accordance with EC-Directive 2002/72/EC and the corresponding regulations. Deviating to the regulations the following tests were performed as orientating single tests. The following simulation solvents and test conditions were stipulated:

food simulant	test duration/temperature
Water	72 h / 20°C
* as simulant food with high fat content	

Lab.-No	222102
Test Sample	Thermoplastic Composite Water Pressure vessel
Global migration distilled water, first migration	mg/dm ² <2

According to §8 Part (2) of the German "Bedarfsgegenständeverordnung" (article 2 of the EG directive 2002/72/EC), synthetic material with contact to food may not transfer more than 10 mg/dm² of substances (global migration).

The examined test item meets this requirement.

Final Results

Based on the randomly sampled examinations performed, the test specimen corresponds to the requirements of § 30 and § 31 LMBG (Lebensmittel- und Bedarfsgegenstandegesetz). With regard to the parameters tested, the requirements of the German Regulations on Food and commodities, which are intended to come in contact with food, are met.

Von dem Deutschen Akkreditierungsrat (DAR)

durch das Deutsche Akkreditierungssystem Prüfwesen (DAP)



Akkreditiertes Prüflaboratorium

Seite 1 von 6

Die Akkreditierung gilt für die in der Urkunde aufgeführten Prüfverfahren (DAR-Registrier-Nr.: DAP-PA-02.544-01-97-00)

Test Report

Customer : Covess

TÜV-Ref.-No. : 423333180/01

Article : Thermoplastic Composite Water Pressure vessel

Date of Delivery : 09.03.2004

Date of Testing : 09.03.2004 - 26.03.2004

Place of Testing : Cologne/Germany

Test required by:
Applicant Selected tests for the suitability for contact with foodstuffs
compliant with the following regulations:
- EC-Directives 89/109; 02/72; 97/48; 82/711; 85/572; 76/769
- German § 30 and § 31 LMBG
(Lebensmittel-und Bedarfsgegenständegesetz)
- KTW- reaccommodation, part 1.3.12

Cologne, 13.04.2004



Dr. Ansgar Wennemer

Die Prüfergebnisse beziehen sich ausschließlich auf die untersuchten Proben.
Dieser Bericht darf ohne schriftliche Genehmigung der TÜV Produkt und Umwelt GmbH
nicht auszugsweise vervielfältigt werden.

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TEST REPORT

TÜV-Order-No. : 423333180/01
Date of Delivery : 09.03.2004
Customer : Covess

Description of test specimen :

	Lab.-No	222102
	Test Sample	Thermoplastic Composite Water Pressure vessel
Color		Black
Material		Thermoplastic Composite GF + PP

According to § 5 (1)1 of the German Food and Commodities Act (LMBG), the product is a commodity, which is intended and foreseen to come into contact with foodstuffs.

Examination Procedure:

The analysis will be carried out according to the following laws and regulations:

- Publication of the latest revision of the Food and Commodity Goods Law (LMBG) published on 09.09.1997
- Publication of the latest revision of the Commodities Ordinance (BGVO) published on 20.06.2002
- Recommendation of the Commission on Synthetic Materials in the BfR, ("Kunststoffe im Lebensmittelverkehr") "Recommendation on the evaluation of synthetic materials and other high molecular weight polymers with regard to health aspects" (synthetic materials in contact with food)
- EC-directives :

02/72: Material and objects made of plastic, which are intended to come in contact with foodstuffs.

97/48: Second revision of the EC-regulation 82/711 from the council for the determination of the migration from materials and objects made of plastic, which are intended to come in contact with foodstuffs

89/109: Adjustment of the legal regulations from the member states for materials and objects, which are intended for use in contact with foodstuffs

76/769: relating to regulations on the marketing and use of certain dangerous substances and preparations

The single components, housing material and coating, have been tested according to KWT – requirements before. These test reports and declarations of the material supplier are part of the documentation of the producer.

General manufacture and materials employed

The products submitted for testing are of clean and hygienic manufacture. No manufacturing residues or other damage could be determined which, in the sense of its foreseen and intended use, could lead to the user being endangered or the health of the user being impaired.

TEST REPORT

TÜV-Order-No. : 423333180/01
 Date of Delivery : 09.03.2004
 Customer : Covess

Indication : spotcheck according to KTW- recommendation
 Material : plastics
 Range of use : equipment, part B
 Method : KTW- recommendation, part 1.3.12.5.1,
 quality of testing water
 Test conditions : according to KTW- recommendation

Sensorial examination

Evaluation scheme for the transfer of taste and smell:

- 0 = no discernible deviation
- 1 = barely discernible deviation
- 2 = weak deviation
- 3 = clear deviation
- 4 = strong deviation

Lab.-No	222102
Test Sample	Thermoplastic Composite Water Pressure vessel
quality of the testing water	not noticeable
dulling, colouring, tendency to foam formation	no claim
quality of the testing water, changing of :	
smell	0-1
taste	1

The submitted product is inconspicuous with regard to the transfer of smell- and taste bearing substances to drinking water.

TEST REPORT

TÜV-Order-No. : 423333180/01
 Date of Delivery : 09.03.2004
 Customer : Covess

Indication : spotcheck according to KTW- reaccommodation
 Material : plastics
 Range of use : equipment, part b
 Method : KTW- reaccommodation, part 1.3.12.5.2,
 TOC, totale organic carbon

migration condition : 3 x 72 h, third sample tested
 Method : TOC
 : the totale organic carbon has been tested in the testing
 water against oxalic acid as a reference

Limit : categorie C – 10 mg/m² * day

	Lab.-No	222102
	Test Sample	Thermoplastic Composite Water Pressure vessel
TOC, totale organic carbon	mg/ m ² * day	4,6
third migration		