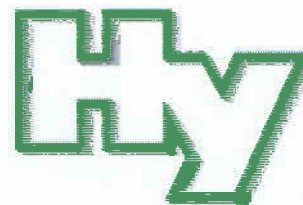


# Hygiene-Institut des Ruhrgebiets

Institut für Umwelthygiene und Toxikologie  
Direktor: Prof. Dr.rer.nat. Lothar Dunemann



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Unser Zeichen: H-222775-12-Bg  
Ansprechpartner: Dr. Jutta Begerow

Gelsenkirchen, den 30.10.2012

## Test report (short form)

- Translation of test report H-217589-12-Bg as of March 22, 2012 -

Client: NORRES Schlauchtechnik GmbH, Am Stadthafen 12 – 18  
D-45881 Gelsenkirchen

Date of order: 20.09.2011, 10.10.2011, 22.05.2012, and 04.06.2012

Receipt of test items: 21.09.2011 and 15.02.2012

Formulation: as of September 06, 2011

Tests items: Natural-colored polyurethane tubes called called Norflex 401 9090  
0000 (inner diameter = 9 mm, wall thickness = 1.5 mm) and Norflex  
401 (inner diameter = 9 mm, wall thickness = 3 mm)

Order: Testing of the suitability for food contact

Period of testing: 26.09.2011 – 29.09.2011, 17.10.2011 – 04.11.2011, 27.02.2012 –  
19.03.2012 and 29.05. – 08.06.2012

According to our experimental testing the submitted natural-colored polyurethane tube „Norflex 401 9090 0000 311.7“ (inner diameter = 9 mm, wall thickness = 3mm) meets the requirements of Regulation (EU) No. 1935/2004 and the German Food and Feed Code (Lebensmittel- und Futtermittelgesetzbuch:) with the following restrictions:

1. The aforementioned tube may be used for repeated-use contact aqueous and acidic foodstuffs and with all dry foodstuffs without fatty substances at its surface listed in Enclosure 1, provided that a contact time of 24 h and a contact temperature of 40 °C are not exceeded.
2. The aforementioned tube may be used in contact with alcoholic foodstuffs up to an alcohol content of 20 % by volume, provided that a contact time of 24 h and a contact temperature of 40 °C are not exceeded.
3. Further it may be used for short-term contact with fatty foodstuffs, alcoholic foodstuffs (alcohol content > 20 % by volume), milk products and fatty foodstuffs with fatty substances at its surface, provided that a contact time of 5 min and a contact temperature of 40 °C are not exceeded.

The conditions of use given under 1. to 3. have to be specified definitely on the labelling or in the directions of use to preclude an unintentional improper use.

This test report consists of 4 pages. It shall not be reproduced, except in full, without written approval of the Institute.



This test report (short form) is based on our detailed test reports H-210081-11-Bg as of 09.11.2011 H-214845-12-Bg as of 22.03.2012, H-217233-12-Bg as of 31.05.2012 and H-217586-12-Bg as of 11.06.2012.

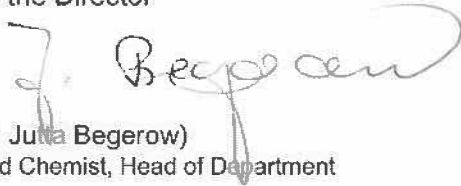
This expertise is also valid for all natural-colored polyurethane tubes of the same series, provided that they have a minimum inner diameter of 9 mm and a wall thickness not exceeding 3.0 mm. The list of the respective tubes as compiled by the client is given in Enclosure 2.

The validity of our test report assumes a coexisting quality of the test material and product composition and processing. Our expert assessment is made on the premise that all base materials used in production have been declared in their entirety and that no further materials have been added to the product.

However, validity becomes void should the formula or production process of the test sample be changed. Under current statutory regulations, our assessment for the test sample is valid until December 31, 2015.

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For the Director



(Dr. Julia Begerow)  
Food Chemist, Head of Department

**Enclosure 1:**

Dry foodstuffs or groups of dry foodstuffs listed in Regulation (EC) No. 10/2011 and in method B 80-30.2 of the Official Collection of Study Methods pursuant to § 64 LFGB, which may come into contact with the natural-colored polyurethane tube tube „Norflex 401 9090 0000 311.7“ (inner diameter = 9 mm, wall thickness = 3mm) and the tube types listed in Enclosure 2 for up to 24 h at 40 °C

- starches
- cereals, unprocessed, puffed, in flakes, (Including popcorn, corn flakes and the like)
- cereal flour and meal
- macaroni, spaghetti and similar products
- pastry, biscuits, cakes and other bakers products, dry, without fatty substances on the surface
- confectionery products in solid form without fatty substances on the surface
- sugar and sugar products in solid form
- whole fruit, fresh or chilled
- dried or dehydrated fruit, whole or in form of flour or powder
- whole vegetables, fresh or chilled
- dried or dehydrated vegetables, whole or in form of flour or powder
- nuts, shelled and dried (peanuts, chestnuts, almonds, hazelnuts, walnuts, pine kernels, and other)
- eggs not in shell, powdered or dried
- egg yolks, powdered or frozen
- dried white egg
- dried milk
- cheeses, whole, with rind
- preparations for soups, broths, in solid or powder form (extracts, concentrates); homogenized composite food preparations, prepared dishes, without fatty substances on the surface
- yeasts and raising agents, dried
- salt
- sandwiches, toasted bread and the like containing any kind of foodstuff, without fatty substances on the surface
- dried foods without fatty substances on the surface
- frozen or deep-frozen foods
- coffee, whether or not roasted, decaffeinated or soluble, coffee substitutes, granulated or powdered
- aromatic herbs and other herbs such as camomile, mallow, mint, tea lime blossom and others
- spices and seasonings in the natural state such as cinnamon, cloves, powdered mustard, pepper, vanilla, saffron and other