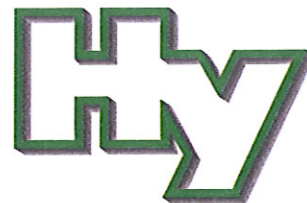


Hygiene-Institut des Ruhrgebiets

Institut für Umwelthygiene und Toxikologie

Direktor: Prof. Dr. rer. nat. L. Dunemann

Träger: Verein zur Bekämpfung der Volkskrankheiten im Ruhrkohlengebiet e.V.



HYGIENE-INSTITUT · Postfach 10 12 55 · 45812 Gelsenkirchen / GERMANY

ESBE AB
Bruksgatan 22
33021 REFTELE
SWEDEN

Visitor's/Parcel Address:

Rotthäuser Str. 21
45879 Gelsenkirchen

Telephone +49 (0) 209 9242-0
Extension +49 (0) 209 9242-351
Telefax +49 (0) 209 9242-212
E-Mail a.bernoussi@hyg.de
Internet www.hyg.de

Reference-No.: K-253098-15-Bs/st
Contact person: Anasse Bernoussi (Eng.)

Gelsenkirchen, 03.02.2015

TEST CERTIFICATE according to the KTW-Guideline

Product: Injection moulding parts made of Ryton PPS R-4-220NA and Ryton PPS R-4-220BL for Series ESBE VTA500

Test specimens: Regulating cone lower part VTA520/530/570 Art. 98082460, brown (surface: 4251 mm²)
Regulating cone top part VTA530 Art. 98082480, black (surface: 7377 mm²)

The test specimens meet the requirements according to the test report-no.: **K-253098-15-Bs/st** dated **03.02.2015** and **K-253099-15-Bs/st (Colourfastness)** dated **03.02.2015** for the following applications and temperatures, as far as technically suited:

Applications:	cold water (23°C)	warm water (60°C)	hot water (85°C)
Pipes with DN < 80 mm (domestic distribution)	---	---	---
Pipes of diameter 80 mm ≤ DN < 300 mm (supply pipes)	---	---	---
Pipes of diameter DN ≥ 300 mm (main pipes)	---	---	---
Fittings for pipes with DN < 80 mm	passed	---	passed
Fittings for pipes with 80 mm ≤ DN < 300 mm	passed	---	passed
Fittings for pipes with DN ≥ 300 mm	passed	---	passed
Sealings for pipes with DN < 80 mm	passed	---	passed
Sealings for pipes with 80 mm ≤ DN < 300 mm	passed	---	passed
Sealings for pipes with DN ≥ 300 mm	passed	---	passed
Tanks in the domestic installations including repair systems	---	---	---
Tanks other than in domestic installations including repair systems	---	---	---

If pipes, sealings or fittings and ancillaries do not differ in their material composition and process of manufacture, testing of the smallest diameter of the product range is sufficient.

This test certificate is valid beginning with the date of issue and is ending by **03.02.2020** as far as there are no changes in the formula. After this time it can be extended for further 5 years if demanded.

The Director of the Hygiene-Institute
on behalf of

Dr. rer. nat. Andreas Koch
Head of the Dept. for water
hygienic material testing



The assessment was based on the assumption that the used starting substances and monomers used to manufacture the product may completely known and no other substances are present in the product. The validity of this document expires in case of modifications in the composition of the product or the processing conditions. The results and evaluations refer to the groups of test items. This document may not be published without our written permission only complete and unchanged or duplicated.

