



TEST REPORT

Chemical resistance of materials

ECOLAB Standard (method 40-1 / 09.2014 Rev.4)

Protocol

Protocol No.: 6075-16-GG-16-PP001

Tested by (+ signature).....: D. Leonhardt



Date of issue.....: 15.11.2016

Contents: 12 pages

.....:

Testing laboratory

Name: SLG Prüf- und Zertifizierungs GmbH

Address.....: Burgstädter Straße 20, 09232 Hartmannsdorf, Germany

Test location: as above

Client

Name: wenglor sensoric GmbH

Address.....: wenglor Straße 3

.....: 88069 Tett nang, Deutschland

Test specification

Standard: Client specified test program in accordance with ECOLAB Standard
(method 40-1 / 09.2014 Rev.4)

Test order from: 30.09.2016 / 4500123294

Protocol update: 07.2016

Test result.....: **P A S S / see next pages**
after visuell inspection in accordance with ECOLAB standard
(A complete evaluation is made by the client.)

Test item

Description.....: Fork sensor with optical disc made of glass or PMMA

Trademark(s):  **wenglor**
the innovative family

Model and/or typ reference.....: P1HJxxx / with optical disc made of glass and PMMA
(see page 3)

Manufacturer.....: wenglor sensoric GmbH
wenglor Straße 3
88069 Tett nang, Deutschland

Test case verdicts

Test case does not apply to the test object : N(.A.)

Test item does meet the requirement..... : P(ass)

Test item does not meet the requirement..... : F(ail)

Testing

Date of receipt of test item : 04.10.2106 G/001..007

Date(s) of performance of test..... : 10/2016 - 11/2016

General remarks

The test results presented in this report relate only to the object tested.

This report shall not be reproduced, except in full, without the written approval of the issuing testing laboratory.

"(see Enclosure #)" refers to additional information appended to the report.

"(see appended table)" refers to a table appended to the report.

Throughout this report a comma is used as the decimal separator.

Yellow marks are abnormalities that may negatively affect the test results.

Test results:

The inspection results of the visual check are represented as photos in tables 3 - 9 on pages 6 - 12.
A complete evaluation is made by the client.

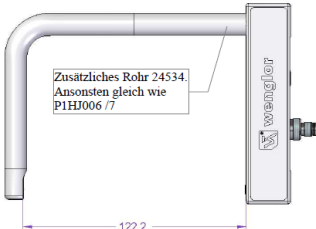
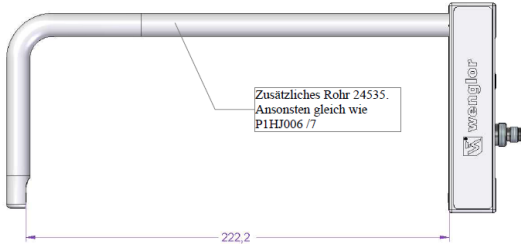
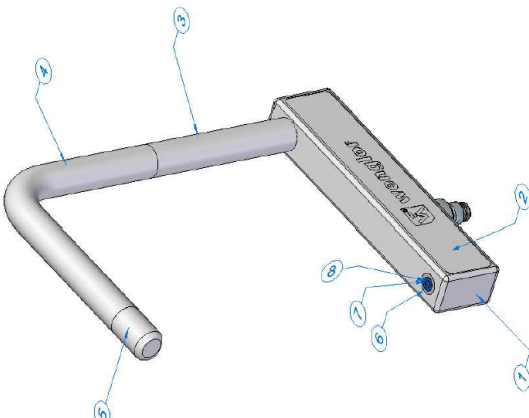
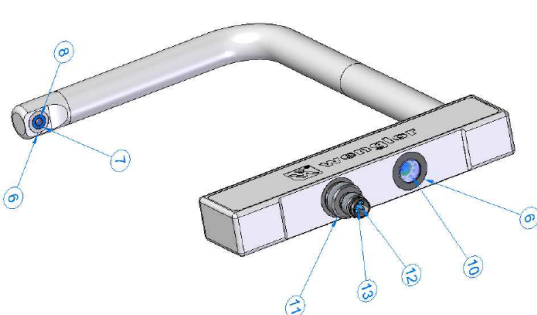
Fork sensor P1HJxxx with optical disc made of glass or PMMA is resistant against P3-topactive 500, P3-topax 990, P3-topax 66, P3-topactive OKTO, P3-topactive 200 and demin. water.

General type information

7 complete test samples were made available by the client. 1 sample was placed as reserve and documentation sample.

An overview on the used test samples is to be seen in table 1.

Table 1: test samples

SLG-sample no.	Type reference	Photo																																																																																					
6075-16-G/001..007	P1HJ004; P1HJ006 (for tests modified with glass and PMMA optical disc)																																																																																						
P1HJ006 (Glasscheiben) P1HJ007 (PMMA-Scheiben)  P1HJ004 (Glasscheiben) P1HJ001 (PMMA-Scheiben) Zusätzliches Rohr 24534. Ansonsten gleich wie P1HJ006 / 7  P1HJ005 (Glasscheiben) P1HJ002 (PMMA-Scheiben) Zusätzliches Rohr 24535. Ansonsten gleich wie P1HJ006 / 7   <table><thead><tr><th>ID</th><th>SAP-Nr.</th><th>Benennung</th><th>Material</th><th>Bem.</th></tr></thead><tbody><tr><td>1</td><td>24260</td><td>Gehäuse P1HJ00x</td><td>1.4404</td><td></td></tr><tr><td>2</td><td>87784</td><td>Deckel P1HJ00x</td><td>1.4404</td><td></td></tr><tr><td>3</td><td>24534</td><td>Rohr P1HJ001 / P1HJ004</td><td>1.4404</td><td>L = 70</td></tr><tr><td>4</td><td>24535</td><td>Rohr P1HJ002 / P1HJ005</td><td>1.4404</td><td>L = 170</td></tr><tr><td>5</td><td>88032</td><td>Rohr gekrümmt P1HJ00x</td><td>1.4404</td><td></td></tr><tr><td>6</td><td>24252</td><td>Kappe P1HJ00x</td><td>1.4404</td><td></td></tr><tr><td>7</td><td>24539</td><td>Ring Fenster P1HJ00x</td><td>1.4404</td><td></td></tr><tr><td>8</td><td>87759</td><td>Formdichtung Silikon blau</td><td>Silikon 70 Shore A</td><td></td></tr><tr><td>9</td><td>87760</td><td>Optische Scheibe P1HJ00x</td><td>PMMA</td><td></td></tr><tr><td>10</td><td>87761</td><td>Optische Scheibe P1HJ00x</td><td>Glas</td><td></td></tr><tr><td>11</td><td>24255</td><td>Ring P1HJ00x</td><td>1.4404</td><td></td></tr><tr><td>12</td><td>87758</td><td>Formdichtung Silikon clear P1HJ00x</td><td>Silikon 70 Shore A</td><td></td></tr><tr><td>13</td><td>24256</td><td>Steckerhülse</td><td>1.4404</td><td></td></tr><tr><td></td><td>81923</td><td>Steckereinsatz M8-4 pol.</td><td></td><td></td></tr><tr><td></td><td></td><td>Kontaktstift</td><td>CuZn untemnickelt und 0,8µm vergoldet</td><td></td></tr><tr><td></td><td></td><td>Kontaktträger</td><td>PA</td><td></td></tr></tbody></table>			ID	SAP-Nr.	Benennung	Material	Bem.	1	24260	Gehäuse P1HJ00x	1.4404		2	87784	Deckel P1HJ00x	1.4404		3	24534	Rohr P1HJ001 / P1HJ004	1.4404	L = 70	4	24535	Rohr P1HJ002 / P1HJ005	1.4404	L = 170	5	88032	Rohr gekrümmt P1HJ00x	1.4404		6	24252	Kappe P1HJ00x	1.4404		7	24539	Ring Fenster P1HJ00x	1.4404		8	87759	Formdichtung Silikon blau	Silikon 70 Shore A		9	87760	Optische Scheibe P1HJ00x	PMMA		10	87761	Optische Scheibe P1HJ00x	Glas		11	24255	Ring P1HJ00x	1.4404		12	87758	Formdichtung Silikon clear P1HJ00x	Silikon 70 Shore A		13	24256	Steckerhülse	1.4404			81923	Steckereinsatz M8-4 pol.					Kontaktstift	CuZn untemnickelt und 0,8µm vergoldet				Kontaktträger	PA	
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General test remarks

One sample tested each test medium. Demineralized water is used as reference. The other test media are:

P3-topactive 500, P3-topax 990, P3-topax 66, P3-topactive OKTO and P3-topactive 200.

The chemical solution has been provided by ECOLAB.

Test conditions:

The test media were used as follows:

Table 2: Test conditions

Test media	Concentration [%]	Change schedule	Immersion time [days]	Test temperature [°C]
demineralized water (reference medium)	-	7 days	28	23±5
P3-topactive 500 (cleaner, acid solution with tenside)	5	7 days		
P3-topax 990 (neutral disinfectant; basis alkylaminacetat)	3	7 days		
P3-topax 66 (cleaner/disinfectant; alkaline with chlorine)	5	3 days		
P3-topactive OKTO (disinfectant; acid solution with peroxide)	1	3 days		
P3-topactive 200 (cleaner, alkaline with tenside)	5	7 days		

The test solution is a mixture of reagent and demineralized water in appropriate concentration.

Test performance:

One sample per test medium was tested. The samples are completely immersed in 3000 ml of test medium. After 28 days visual check of metal, plastic and elastomere parts are made.

Client specified test program in accordance with ECOLAB Standard (method 40-1 / 09.2014 Rev.4)			
Clause	Requirement + Test	Result - Remark	Verdict

	Chemical resistance of materials		
1.	TEST CONDITIONS	See page 3	P
	Test samples	6075-16-G/001..006	P
	Test.....	Client specified test program in accordance with ECOLAB Standard (method 40-1 / 09.2014 Rev.4)	P
	Temperature requirement.....	(23±5)°C	P
	Test temperature	(23±5)°C	P
	Immersion time	28 days	P
	State of the sample during the test.....	assembled condition	P

2.	TEST PERFORMANCE		
2.1	Check Before test		
2.1.1	Visual check	All test samples without visible damage and abnormalities (see table 3 on page 6)	P
2.1.2	Test performance vs. test conditions		P
2.1.3	Compliance with the conditions	was compliance	P
2.2	Check after test		
2.2.1	Visual check	See tables 4 - 9 on pages 7 -12	
2.2.2	Test result visual check	Visual check was performed: Test samples are resistant, P3-topactive 500 (5% conc.), P3-topax 990 (3% conc.), P3-topax 66 (5% conc.) P3-topactive OKTO (1% conc.), P3-topactive 200 (5% conc.) and demineralized water. The inspection results of the visual check are represented as photos in tables 4 - 9 on pages 7 -12.	P
2.2.3	Complete evaluation	Is made by the client	N

End of test report

Photo documentation

Test samples before testing

Table 3: test samples before testing

Sample no.	Type reference: P1HJ006; P1HJ004	
6075-16-G/001..007		Samples without abnormalities.

Result of visual check after the test

Table 4: Demineralized water

Test medium (test solution)	Demineralized water	Result - Remark
Sample no.	Type reference: P1HJ004	
G/006		After 28 days: - No visible abnormalities

Table 5: P3-topactive OKTO

Test medium (test solution)	P3-topactive OKTO / 1%	Result - Remark
Sample no.	Type reference: P1HJ006	
G/001		<u>After 28 days:</u> - No visible abnormalities

Table 6: P3-topax 66

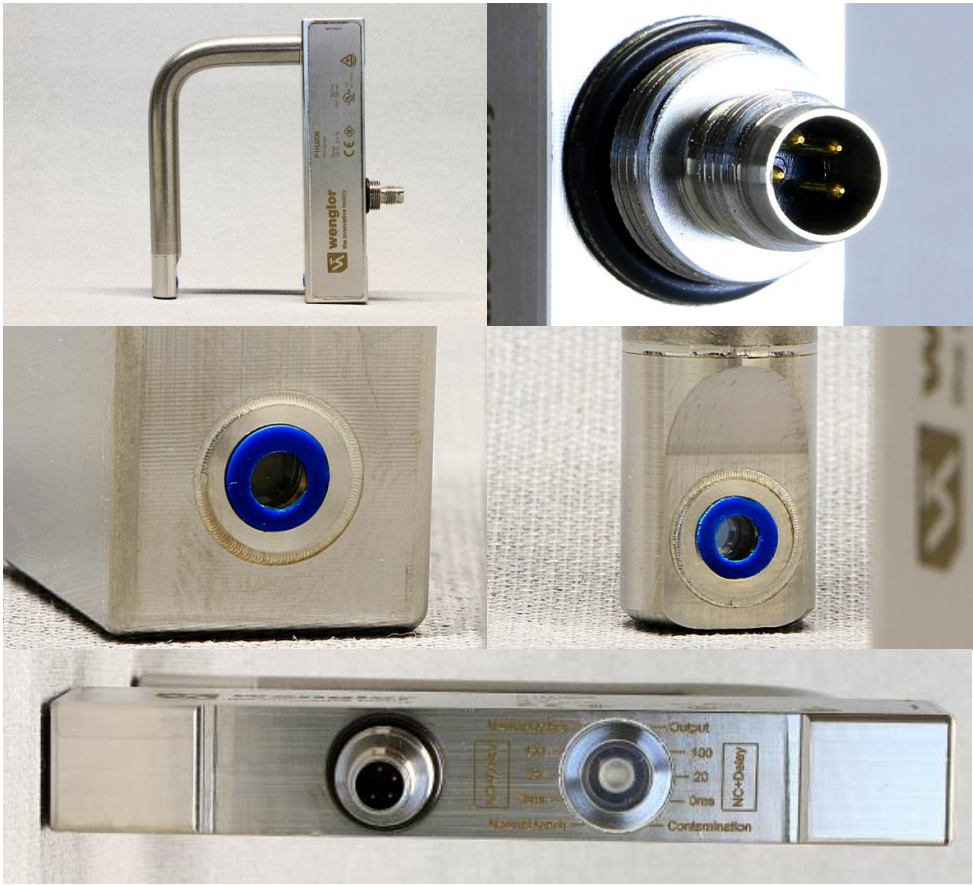
Test medium (test solution)	P3-topax 66 / 5%	Result - Remark
Sample no.	Type reference: P1HJ006	
G/002		After 28 days: - No visible abnormalities

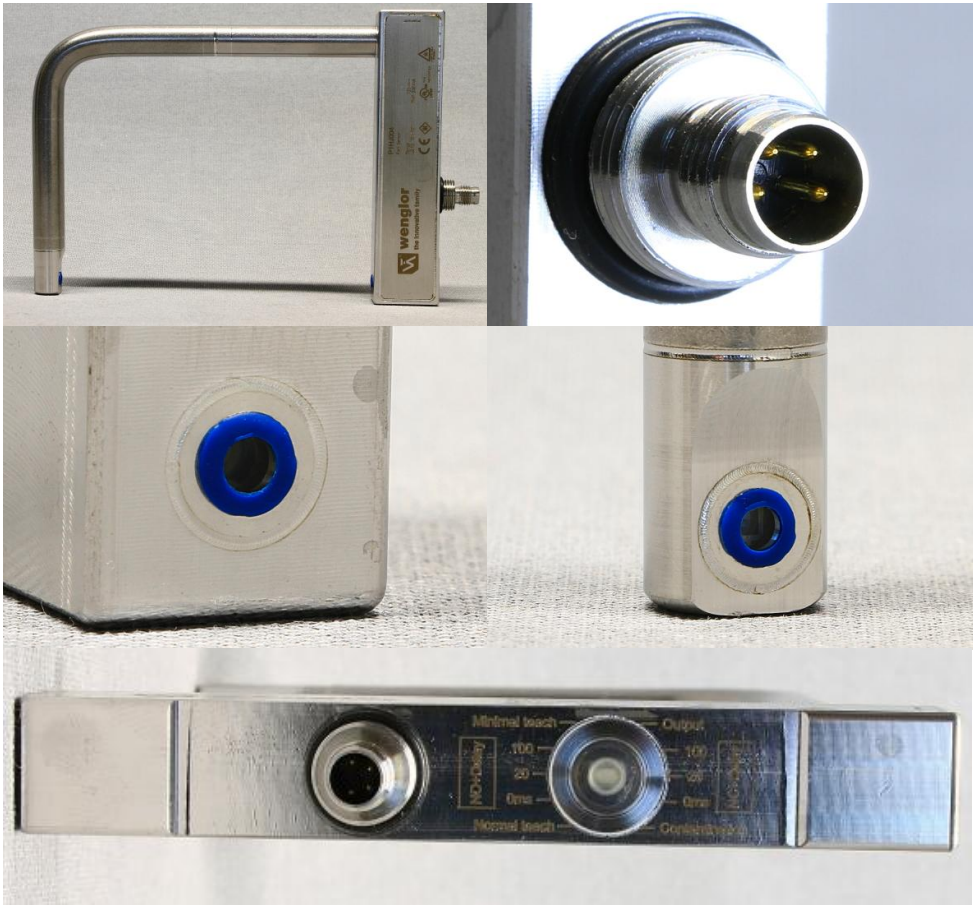
Table 7: P3-topactive 200

Test medium (test solution)	P3-topactive 200 / 5%	Result - Remark
Sample no.	Type reference: P1HJ006	
G/003		After 28 days: - No visible abnormalities

Table 8: P3-topactive 500

Test medium (test solution)	P3-topactive 500 / 5%	Result - Remark
Sample no.	Type reference: P1HJ004	
G/004		After 28 days: - No visible abnormalities

Table 9: P3-topax 990

Test medium (test solution)	P3-topax 990 / 3%	Result - Remark
Sample no.	Type reference: P1HJ004	
G/005		After 28 days: - No visible abnormalities