



**Ecolab Deutschland GmbH
Ecolab Allee 1
D-40789 Monheim am Rhein**

certifies that for

**Banner Engineering Corporation
9714 Tenth Ave N
MN 55441 Minneapolis, United States of America**

material resistance tests

were performed with cleaning/disinfecting substances **P3-topactive OKTO***, **P3-topax 66**, **P3-topax 990**, **Topactive 500** and **Topactive 200** and demineralized water as a zero reference factor.

The material resistance of the tested sensor with integrated cable

T18-2VPDS-2M

to the P3 products used in the test can be considered to be positive according to the cleaning procedure mentioned overleaf.

Monheim am Rhein, 03rd January 2019

Ecolab Deutschland GmbH

i.V.

Thomas Tyborski

Ecolab Deutschland GmbH
Ecolab-Allee 1
40789 Monheim am Rhein

i.V.

Stefan Riest

*A minor visual, not critical deviations at P3-topactive OKTO was found. Moulding compound at the cable entry has minor characteristics of resolution. The review by Banner Engineering Corporation showed that this has no influence on the functionality of the sensor / cable.

BANNER P/N

2084 REV. -

This certificate is based on:

- documented test procedures (test no.: F&E/P3-E Nr. 40-1) according to material resistance
- defined product descriptions
- test report for the Ecolab certification carried out at SLG Prüf- und Zertifizierungs GmbH (Protocol No. 6071-18-GG-PP001)

Test procedure

Ecolab-test F&E Nr. 40-1

Test material:

- **T18-2VPDS-2M sensor with integrated cable**

Dipping test:

- Complete immersion in solutions/liquid

Test period:

- 28 days

Temperature:

- room temperature (constant)

Analysis:

- Visual judgement like swelling, brittleness, discoloring
- compared to zero-reference factor (demineralized water)
- Photo documentation

Product specifications:

P3-topactive OKTO

Acid disinfectant based on peracetic acid/hydrogen peroxide for the food and beverage industries

P3-topax 66

Alkaline foam detergent sanitizer with available chlorine for the food and beverage industries

P3-topax 990

Mild-alkaline, chlorine-free sanitizer for the food and beverage industries

Topactive 200

Alkaline, chlorine-free foam cleaner for the food and beverage industry

Topactive 500

Acid foam cleaning substance for the food and beverage industries

Cleaning plan for food and beverage industry*



Rinsing with water 40 – 50°C

Rinsing with low pressure. Rinsing from top to bottom in the direction of the drains. Cleaning of the drains



Foaming from bottom to top

| | | |
|---------------|------------------------------|---------------|
| alkaline: | Topactive 200 or P3-topax 66 | 2 - 5 % daily |
| acid: | Topactive 500 | 2 % on demand |
| temperature: | cold up to 50°C | |
| contact time: | 15 min. recommended | |



Rinsing with water 40 – 50°C

Rinsing from top to bottom with low pressure



Foam disinfection

| | | |
|-------------|-------------------|----------------|
| | P3-topactive OKTO | 1 %, 10-30 min |
| alternative | P3-topax 990 | 1 %, 30 min |



Rinse with potable water after disinfection!

*short description The final step of a cleaning regime is always a thorough water rinse!