

Joramark Oy
Jouni Rautiainen
Satulasepänkatu 6-8
FI-70700 KUOPIO
Finland

Testing of water tightness

Test Object

2 pieces of Joramark Box300 including front plates, service plates and countersunk M4 screws.

Watertight covering kit based on flexible sheet designated LIP System 27.

The Box300 and accessories were sent by the commissioner and arrived at RISE Research Institutes of Sweden on October 14, 2020.

The watertight covering kit was brought to RISE by LIP in connection with the installation of the test samples on November 4, 2020.



Image 1 – Joramark Box300 including front plate and service plate. The service plate used in this test did not have any hole.

Commission

Testing if it is possible to make a watertight installation of Joramark Box300 in combination with a watertight covering kit based on flexible sheet from LIP.

The test is performed according to EAD 030352-00-0503 Annex F *Water tightness around penetrations and other details in wet room walls with flexible substrate.*

Summary

No leakage could be detected. The installation was found water tight.

RISE Research Institutes of Sweden AB

Postal addressBox 857
501 15 BORÅS
SWEDEN**Office location**Brinellgatan 4
504 62 Borås
SWEDEN**Phone / Fax / E-mail**+46 10-516 50 00
+46 33-13 55 02
info@ri.se

This report may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

Test preparation

The box 300 was mounted between two wall studs. The studs were covered by a 13 mm plasterboard (500 x 600 mm). The hole in the plasterboard was 304 x 304 mm making a gap of 2 mm around Box 300. The box was mounted so that the front plate of Box300 was flush with the surface of the plasterboard.



Image 2 – Mounting of Joramark Box300 in a plasterboard

The plasterboard was primed with LIP Primer 54 diluted 1:3 with water and the surface of the front plate was sanded with an emery cloth grade P120. The stainless steel was then wiped with T-Röd (denaturated alcohol).

The water tight foil **LIP Folie G3** was then glued to the stainless steel with **LIP skarvlim MSP** and to the plasterboard with **LIP 2K folielim**.



Image 3 - LIP skarvlim MSP on the front plate and LIP 2K folielim on the plasterboard



Image 4 - LIP Foile G3 applied and the edges sealed with LIP skarvlim MSP

Materials used and approximate wet consumption when installing the water tight covering kit

Component	Batch no	Wet consumption
Primer 54 (1 l bottle) diluted 1:3	14:53-13/02/2019	200 g/m ²
LIP skarvlim MSP (EU3 cartridge 290 ml)	2008057612	2 500 g/m ²
LIP 2K folielim (10 l bucket)	12:46-22/06/2020 +24mdr	750 g/m ²

Test

Two panels were prepared by LIP. The panels were stored for seven days in standard test climate (23 ±2 °C / 50 ±5 % R.H.) to harden/dry.

From the back side of the panel, a moisture indicating powder was sprinkled in the gap between the Box300 and the plasterboard. The gap was then completely sealed with tape.

The panels were then subjected to 2 x 1 500 cycles of water spray (3 ±0,5 l/min).

One cycle is four minutes long and consists of the following phases:

- One minute spray with water at 60 ±3°C
- One minute pause
- One minute spray with water at 10 ±3°C
- One minute pause

The results reported are only valid for the objects subjected to the test

Results

When the test was finished the panels were removed from the test equipment.

The tape was removed from the back and the gap was inspected for colour change of the moisture indicating powder. The foil was removed to uncover the plasterboard and the plasterboard inspected for any signs of leakage.

No indication of leakage could be detected on any of the panels.



Image 5 – LIP Foil removed for inspection of leakage

RISE Research Institutes of Sweden AB
Polymeric Materials and Composites - Polymeric Products and Service Life Tech

Performed by

Examined by

Ingvar Demker

Mia Sjöqvist