



# MOLYKOTE® 111 Compound provides food- and water-contact-approved O-ring lubrication and sealing in SWRO desalination

Lubricant application story: Joints

## MOLYKOTE® product

MOLYKOTE® 111 Compound

## Market segment

Desalination

## Component/application

Joints

## Major market

Maintenance, repair & overhaul (MRO)

## Customer's area of concern

### Customer's description of component

Desalination typically is accomplished through one of two processes: osmosis or reverse osmosis. The application detailed here was found in the process of seawater reverse osmosis (SWRO). SWRO is a filtration method that removes many types of large ions by applying pressure when it is on one side of a selective membrane. The process of applying an external pressure to reverse the natural flow of pure solvent is called reverse osmosis. During assembling of the membranes, a grease is needed to lubricate the O-ring that connects between the series of membranes and to seal the O-ring and the countersurface from high-pressure water (about 1,200 psi/82 Atm).

### Previous solution/product previously used

Lithium-based grease with EP additives

## Operational parameters (LETS)

### Load

1,200 psi (82 Atm)

### Environment

Seawater

### Temperature

Ambient

### Process description

Grease applied to O-rings using a swab

**MOLYKOTE®**

## Customer's critical requirements

### Problem details

The previously approved material did not have the appropriate certifications and approvals for food and water contact. The customer was looking for a product that was approved to FDA 21 CFR 175.300, NSF-51, NSF-61 and WRAS.

### Root-cause analysis

The previously used material was not certified appropriately for food and water contact.

## MOLYKOTE® *Smart Lubrication*™ solution selected

### Our product/differentiators

MOLYKOTE® 111 Compound *does* have a food approval and is certified by WRAS.

### Result: Our solution

MOLYKOTE® 111 Compound is a good, reliable product available in a variety of packaging sizes.

## Learn more: Contact us

To learn more about the advantages of using MOLYKOTE® 111 Compound for O-ring lubrication and sealing in SWRO desalination – or for other tough lubrication challenges – contact your MOLYKOTE® technical representative or visit [molykote.com](http://molykote.com).



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