

## TECHNICAL DATA SHEET

### CHEMICAL DESCRIPTION

<b>Product Name</b>	<b>INNOSLIP – O Series</b>
<b>Chemical Name</b>	(Z)-9-Octadecenamide ( <i>IUPAC Nomenclature</i> ), Oleamide
<b>Molecular Formula</b>	C <sub>18</sub> H <sub>35</sub> NO
<b>CAS Number</b>	301-02-0
<b>EC Number</b>	931-801-1

### PRODUCT DESCRIPTION & APPLICATIONS

INNOSLIP – O Series offers multiple grades of oleamide, an unsaturated fatty amide, used as a high performing slip and medium anti-block agent. Unlike traditional oleamides, INNOSLIP products are entirely derived from a vegetable source. It can be applied to a wide range of polymer resins and applications, but it is most often used in LDPE, LLDPE and PP films. Given its limited anti-blocking characteristic, INNOSLIP – S Series or INNOSLIP – B can be used together for improved the anti-blocking property.

#### Polyolefin Films

INNOSLIP – O is commonly added to LDPE, LLDPE and PP films as a good slip agent. It migrates to the surface and forms a layer that reduces the coefficient of friction (CoF). In comparison to the INNOSLIP – E Series, it has lower thermal stability but it is a faster migrating or “blooming” slip agent due to its shorter carbon chain. It is recommended for applications requiring a fast slip development after product extrusion.

#### Mold Release

INNOSLIP – O can be used as a mold release agent in injection molding applications. It forms a lubricating layer on the product surface to facilitate mold release. It is suitable for most polymers, including synthetic rubber.

### SPECIFICATION

<u>Parameter</u>	<u>Unit</u>	<u>Lower Limit</u>	<u>Upper Limit</u>
<b>Amide Purity</b>	%	98.5	-
<b>Acid Value</b>	mg KOH/g	0.0	0.5
<b>Iodine Value</b>	mg KOH/g	80.0	95.0
<b>Moisture</b>	%	0.00	0.50
<b>Melting Point</b>	°C	70.0	78.0
<b>Color</b>	Gardner	0.0	2.0

**Product Form** *Bead, Microbead*

**Raw Material Origin** *Vegetable. The product does not contain any animal based products.*

### USAGE

For polymer applications, INNOSLIP – O Series can be added to the resin directly or via a masterbatch. Although this substance has a migrative property, thoroughly disperse for best performance. A dosage of 500 – 3,000 ppm is recommended but the actual usage should depend on the polymer type, the application and the required outcome of the final product by the user. A higher dosage may be required for formulas containing large amounts of pigments and fillers with absorptive properties.

### CHEMICAL INVENTORY

<b>Australia (AICS)</b>	<i>Listed</i>	<b>Korea (KECL)</b>	<i>Listed</i>
<b>Canada (DSL)</b>	<i>Listed</i>	<b>New Zealand (NZIoC)</b>	<i>Listed</i>
<b>China (IECS)</b>	<i>Listed</i>	<b>Philippines (PICCS)</b>	<i>Listed</i>
<b>European Union (EINECS)</b>	<i>Listed</i>	<b>Taiwan (TSCI)</b>	<i>Listed</i>
<b>Japan (ENCS)</b>	<i>Listed</i>	<b>United States (TSCA)</b>	<i>Listed</i>

### FOOD CONTACT APPROVAL

United States

This substance is in compliance with the *FDA Code of Federal Regulations (Title 21 Food and Drugs, Chapter 1)*. It is approved for various uses as an indirect additive used in food contact materials.

## European Union

This substance is not listed as a hazardous substance that requires harmonized classification and labelling according to *EC Regulation 1272/2008 (on classification, labelling and packaging of substances and mixtures)*. It is also authorized to be used as additive or polymer production aid without a Specific Migration Limit (SML) according to *EU Commission Regulation 10/2011 (on plastic materials and articles intended to come into contact with food)* under *Reference Number 68960* and *FCM Substance Number 335*.

## China

This substance is a permitted food contact additive in compliance with *GB 9685-2016 Hygienic Standard for Use of Additives in Food Containers and Packaging Materials*. It is on the positive list under *FCA Number 0017* without Specific Migration Limit (SML) and/or allowed Maximum Quantity (QM) of residual monomer.

*Please contact us for additional food contact approvals and regulatory information.*

## **PACKAGING**

Standard packing unit is 25kg for the product in bead form and 20kg for the product in microbead form. Standard packaging is a PE bag but customized packaging are also available. Please contact us at [info@pathwelglobal.com](mailto:info@pathwelglobal.com) for more information.

## **STORAGE**

Store in a cool, dry, and well-ventilated indoor location at a temperature below 30°C. Keep the product in its original packaging and away from moisture. Avoid exposure to direct sunlight and do not store with incompatible substances including oxidizing agents.

## **SHELF LIFE**

When stored under the recommended conditions, the product has a shelf life of twelve months from manufacturing.

## **SAFETY AND HANDLING**

INNOSLIP – O Series products are non-corrosive, non-toxic and non-hazardous. However, we recommend that handlers follow all standard procedures required for the safe handling of chemical products, including the use of appropriate personal protective gears. These products are not dangerous goods according to all international transport regulations and therefore, can be transported in a standard dry container without any restriction. For detailed safety and handling information, please refer to the safety data sheet or contact us at [stewardship@pathwelglobal.com](mailto:stewardship@pathwelglobal.com).

Information, advice and statement in this document is provided in good faith based on our present knowledge and current regulations. However, no warranty, express or implied, is given. The use of this product for non-recommended purpose without our written confirmation does so at the user's own risk. It is the user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Therefore, we cannot accept any liability whatsoever for any loss or damage arising out of the use of this product. It is the responsibility of the user to take all measures to comply with the local rules and regulations. INNOSLIP is a registered trademark of Pathwel Co., Ltd.