

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product Identifier****Product Name** ARMOSLIP® CP**Other means of identification****Biogenix Product Code** 600011**SDS Code** 600011**Synonyms** ARMOSLIP® CP BEADS (600011), ARMOSLIP® CP PELLETS (617101), ARMOSLIP® CP POWDER (600081), ARMOSLIP® CPH POWDER, ARMOSLIP® CPH BEADS**Recommended use of the chemical and restrictions on use****Recommended Use** Lubricant.**Uses advised against** Consumer use**Details of the supplier of the safety data sheet****Supplier Address**PMC Biogenix Korea Ltd  
101-908 The # Island Park, 38  
Uisadang-Daero  
Yeondeunpo-Gu Seoul 150-874  
Korea**Manufacturer Address**PMC Biogenix Korea Ltd  
64, 13bean-gil, Yurim-ro. Gyeongju-si,  
Gyeongsangbuk-do  
Korea**Emergency telephone number****Company Phone Number** PMC Biogenix Customer Service: 1-800-641-2152**24 Hour Emergency Phone Number** Chemtrec 1-800-424-9300**Emergency Telephone** Chemtrec [INT]: +1-703-527-3887**2. HAZARDS IDENTIFICATION****Classification****OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

**Combustible dust****Label elements****Emergency Overview****Hazard statements**Handle in accordance with good industrial hygiene and safety practice  
May form combustible dust concentrations in air

The product contains no substances which at their given concentration, are considered to be hazardous to health

**Appearance** pellets, powder**Physical state** Solid**Odor** Slight characteristic**Hazards not otherwise classified (HNOC)**

Dust can form an explosive mixture with air

**Other Information**

Unknown Acute Toxicity

0 % of the mixture consists of ingredient(s) of unknown toxicity

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Synonyms**

ARMOSLIP® CP BEADS (600011), ARMOSLIP® CP PELLETS (617101), ARMOSLIP® CP POWDER (600081), ARMOSLIP® CPH POWDER, ARMOSLIP® CPH BEADS, C18H35NO

**Formula**

Chemical Name	CAS No	Weight-%	Trade Secret
9-Octadecenamide, (Z)	301-02-0	100	*

**4. FIRST AID MEASURES****First aid measures****Eye contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists; Get medical advice/attention. Molten product can cause thermal burns. (Call a physician if irritation persists).

**Skin Contact**

Wash skin with soap and water. Get medical attention if irritation develops and persists. Molten product can cause thermal burns. In case of burns, immediately cool affected skin for as long as possible with cold water. Wash off immediately with plenty of water for at least 15 minutes. (Get medical attention immediately if symptoms occur).

**Inhalation**

Remove to fresh air. (Get medical attention immediately if symptoms occur).

**Ingestion**

Clean mouth with water and drink afterwards plenty of water. (Get medical attention immediately if symptoms occur). Molten product can cause thermal burns.

**Most important symptoms and effects, both acute and delayed****Symptoms**

No information available.

**Indication of any immediate medical attention and special treatment needed****Note to physicians**

Treat symptomatically.

**5. FIRE-FIGHTING MEASURES****Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

**Unsuitable extinguishing media** Do not use a solid water stream as it may scatter and spread fire.

**Specific hazards arising from the chemical**

Avoid creating dust. Thermal decomposition can lead to release of irritating and toxic gases and vapors. Do not allow run-off from fire-fighting to enter drains or water courses.

**Hazardous combustion products** Carbon monoxide. Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>).

**Explosion data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

**Personal precautions**

Ensure adequate ventilation, especially in confined areas. Avoid creating dust. Dust can form an explosive mixture with air.

**Environmental precautions****Environmental precautions**

The product is Insoluble and floats on water. Prevent further leakage or spillage if safe to do so. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains. See section 12 for additional ecological information.

**Methods and material for containment and cleaning up****Methods for cleaning up**

Clean contaminated surface thoroughly. Use personal protective equipment as required. Take up mechanically, placing in appropriate containers for disposal. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Avoid creating dust. Pick up and transfer to properly labeled containers. Where possible allow molten material to solidify naturally.

## 7. HANDLING AND STORAGE

**Precautions for safe handling****Advice on safe handling**

Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities****Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place.

**Incompatible materials**

Incompatible with strong acids and bases, Incompatible with oxidizing agents.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters****Exposure Guidelines**

Exposure limits are listed below, if they exist.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH	PMC OEL
Dust DUST	TWA: 10 mg/m <sup>3</sup> Inhl TWA: 3 mg/m <sup>3</sup> Resp	TWA: 5 mg/m <sup>3</sup> Resp TWA: 15 mg/m <sup>3</sup> Total 29CFR1910.1000	-	-

**Appropriate engineering controls****Engineering Controls**

Showers, Eyewash stations, Ventilation systems.

**Individual protection measures, such as personal protective equipment****Eyeface protection**

Wear safety glasses with side shields (or goggles).

**Skin and body protection**

Heat resistant gloves are recommended when handling molten materials.

**Respiratory protection**

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations**

Avoid contact with skin, eyes or clothing. Avoid breathing (dust, vapor, mist, gas). Wash face, hands and any exposed skin thoroughly after handling. Use personal protective equipment as required.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

Physical state	Solid	Odor	Slight characteristic
Appearance	pellets, powder	Odor threshold	No information available
Color	white to beige		
<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>	
pH	<7		
Melting point / freezing point	72-76 °C / 162-169 °F		
Boiling point / boiling range	> 300 °C / 572 °F		
Flash point	> 300 °C / > 572 °F		
Evaporation rate	No information available		
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	<1 kPa @20C / 68F		
Vapor density	No information available		
Specific Gravity	No information available 0.85 (80°C / 176°F)		
Water solubility	Insoluble in water		
Solubility in other solvents	No information available		
Partition coefficient	5.8	log Pow @ 22 °C	
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	No information available	No information available	
Explosive properties	Dust can form an explosive mixture with air		
Oxidizing properties	No information available		
<b><u>Other Information</u></b>			
Softening point	No information available		
Molecular weight	281.4766		
VOC Content (%)	&0		
Density	850 kg/m³ (80°C / 176°F)		
Bulk density	No information available		

## 10. STABILITY AND REACTIVITY

### Reactivity

No known effects under normal use conditions.

### Chemical stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Hazardous polymerization

Hazardous polymerization does not occur.

### Conditions to avoid

Avoid creating dust. Dust can form an explosive mixture with air. Extremes of temperature and direct sunlight.

### Incompatible materials

Incompatible with strong acids and bases, Incompatible with oxidizing agents.

### Hazardous Decomposition Products

Carbon monoxide, Carbon dioxide (CO<sub>2</sub>), Nitrogen oxides (NO<sub>x</sub>).

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

<b>Product Information</b>	Product does not present an acute toxicity hazard based on known or supplied information.
<b>Inhalation</b>	Inhalation of dust in high concentration may cause irritation of respiratory system. Vapors may be irritating to eyes, nose, throat, and lungs.
<b>Eye contact</b>	Dust contact with the eyes can lead to mechanical irritation. Molten product can cause thermal burns.
<b>Skin Contact</b>	Molten product can cause thermal burns.
<b>Ingestion</b>	None known.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
9-Octadecenamide, (Z)	>10 000 mg/kg (Rats, male)		

**Information on toxicological effects**

**Symptoms** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.

**Numerical measures of toxicity - Product Information****12. ECOLOGICAL INFORMATION****Ecotoxicity**

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
9-Octadecenamide, (Z) 301-02-0		1000: 96 h Cyprinodon variegatus mg/L LC50 semi-static		1000: 96 h Mysidopsis bahia mg/L LC50

**Persistence and degradability**  
READILY BIODEGRADABLE.

**Bioaccumulation**  
No information available.

**Other adverse effects** No information available

**13. DISPOSAL CONSIDERATIONS****Waste treatment methods**

**Disposal of wastes** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging** Do not reuse container. Disposal should be in accordance with applicable regional, national and local laws and regulations.

**14. TRANSPORT INFORMATION**

**DOT** Not regulated

**TDG** Not regulated

**IATA** Not regulated.  
**Proper shipping name** Not regulated

**IMDG** Not regulated

**15. REGULATORY INFORMATION**

All of the components in the product are on the following inventory lists  
 Canada DSL.

**International Inventories**

<b>EINECS/ELINCS</b>	Complies or Exempt
<b>TSCA</b>	Complies
<b>AICS</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>ENCS</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>IECSC</b>	Complies
<b>NZIoC</b>	Complies
<b>TCSI</b>	Complies

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances  
**NZIoC** - New Zealand Inventory of Chemicals  
**TCSI** - Taiwan Chemical Substance Inventory

**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). Any Substance regulated Title 40 of the Code of Federal Regulations, Part 372 is listed below, if it exists.

**SARA 311/312 Hazard Categories**

<b>Acute health hazard</b>	No
<b>Chronic Health Hazard</b>	No
<b>Fire hazard</b>	Yes
<b>Sudden release of pressure hazard</b>	No
<b>Reactive Hazard</b>	No

**CWA (Clean Water Act)**

Any Substance regulated as a pollutant pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42) is listed below, if it

exists.

**CERCLA**

Any Substance regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) is listed below, if it exists.

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations****U.S. EPA Label Information**

EPA Pesticide Registration Number Not Applicable

**16. OTHER INFORMATION**

<b><u>NFPA</u></b>	Health hazards 1	Flammability 1	Instability 0	Physical and Chemical Properties - Personal protection X
<b><u>HMIS</u></b>	Health hazards 1	Flammability 1	Physical hazards 0	

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SDS sections updated 1

This material safety data sheet complies with the requirements of 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

**Disclaimer**

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet