

# SAFETY DATA SHEET

## ARMEEN 18D FLAKE (FX)

Version 1

Revision Date 06/09/2014

Print Date 04/22/2015

US / Z8

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : ARMEEN 18D FLAKE (FX)

Product Use Description : Corrosion inhibitor  
Surfactant

Company : Akzo Nobel Surface Chemistry LLC  
525 West Van Buren  
Chicago IL 60607  
USA

Telephone : +18009069977

Fax : +13125447188

E-mail address :

Emergency telephone : Chemtec: 800-424-9300 Canutec: 613-996-6666 Medical/Handling:  
914-693-6946

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

Appearance	solid
Color	white
Odor	slight, ammoniacal

#### GHS Classification

Skin irritation : Category 2

Serious eye damage : Category 1

Specific target organ systemic toxicity - repeated exposure (Oral) : Category 2 (Gastrointestinal tract)

Aspiration hazard : Category 1

Acute aquatic toxicity : Category 1

Chronic aquatic toxicity : Category 1

#### GHS Label element

Hazard pictograms :   

Signal Word : Danger

Hazard Statements : H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.

# ARMEEN 18D FLAKE (FX)

Version: 1.0

Revision Date: 06/09/2014

Print Date: 04/22/2015

US / Z8

H318 Causes serious eye damage.  
H373 May cause damage to organs (Gastrointestinal tract) through prolonged or repeated exposure if swallowed.  
H410 Very toxic to aquatic life with long lasting effects.

## Precautionary Statements

### : **Prevention:**

P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.  
P280 Wear eye protection/ face protection.

### **Response:**

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER or doctor/ physician.  
P331 Do NOT induce vomiting.

## Potential Health Effects

### Inhalation

: Inhalation of aerosols may cause irritation to mucous membranes.  
Thermal decomposition can lead to release of irritating gases and vapors.  
May be fatal if swallowed and enters airways.  
Inhalation may cause central nervous system effects.

### Skin

: Causes skin irritation.  
The product may be absorbed through the skin.

### Eyes

: Vapor in the eyes may cause irritation and pain.  
Causes serious eye damage.

### Ingestion

: May be harmful if swallowed.  
May be fatal if swallowed and enters airways.

### Aggravated Medical Condition

: None known.

### Symptoms of Overexposure

: No information available.

## Carcinogenicity:

### IARC

: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### OSHA

: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### NTP

: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

### ACGIH

: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

# ARMEEN 18D FLAKE (FX)

Version: 1.0

Revision Date: 06/09/2014

Print Date: 04/22/2015

US / Z8

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Hazardous ingredients

Chemical Name	CAS-No.	Classification	Concentration [%]
Octadecylamine	124-30-1	Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT RE 2; H373 Asp. Tox. 1; H304 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute): 10	90 - 100

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 4. FIRST AID MEASURES

- General advice : Immediate medical attention is required.  
Move out of dangerous area.  
Show this material safety data sheet to the doctor in attendance.
- Inhalation : Obtain medical attention immediately.
- Skin contact : Take off contaminated clothing and shoes immediately.  
Carefully remove paste or solidified product.  
Wash skin immediately with 0,5 % acetic acid in water, and then with soap and water.  
If skin irritation persists, call a physician.  
Skin irritation, if untreated, may be prolonged and serious (e.g., necrosis). This may be prevented by early treatment with medium strength corticosteroids.
- Eye contact : In case of contact with eyes, rinse immediately with 0.5% acetic acid in water for a few minutes, followed by rinsing with plenty of water.  
Get medical attention immediately. Continue to rinse during transport of patient.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.
- Ingestion : Clean mouth with water and drink afterwards plenty of water.  
Do NOT induce vomiting.  
Never give anything by mouth to an unconscious person.  
Take victim immediately to hospital.

### Notes to physician

- Symptoms : No information available.
- Risks : No information available.
- Treatment : No information available.

# ARMEEN 18D FLAKE (FX)

Version: 1.0

Revision Date: 06/09/2014

Print Date: 04/22/2015

US / Z8

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## 5. FIRE-FIGHTING MEASURES

- |  |   |  |
|--|---|--|
| Suitable extinguishing media   | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  |
| Unsuitable extinguishing media   | : | High volume water jet  |
| Specific hazards during fire fighting / Specific hazards arising from the chemical | : | Treat as oil fire.<br>Do not use a solid water stream as it may scatter and spread fire.<br>Water spray may be ineffective unless used by experienced firefighters.<br>Do not allow run-off from fire fighting to enter drains or water courses. |
| Combustion products  | : | Carbon oxides<br>Nitrogen oxides (NOx)   |
| Special protective equipment for fire-fighters                                     | : | In the event of fire, wear self-contained breathing apparatus.   |
| Further information  | : | Collect contaminated fire extinguishing water separately. This must not be discharged into drains.<br>Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.                          |

See also Section 9. Physical and chemical properties: Safety data

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## 6. ACCIDENTAL RELEASE MEASURES

- |  |   |  |
|--|---|--|
| Personal precautions                                 | : | Use personal protective equipment.<br>Wear respiratory protection.<br>Ensure adequate ventilation.   |
| Environmental precautions                            | : | Do not flush into surface water or sanitary sewer system.<br>If the product contaminates rivers and lakes or drains inform respective authorities. |
| Methods for cleaning up /<br>Methods for containment | : | Pick up and arrange disposal without creating dust.<br>Keep in suitable, closed containers for disposal.   |
| Additional advice                                    | : | For personal protection see section 8.   |

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## 7. HANDLING AND STORAGE

### Handling

- |   |   |   |
|---|---|---|
| Advice on safe handling                         | : | For personal protection see section 8.<br>Avoid formation of respirable particles.<br>Do not breathe vapors/dust.<br>Smoking, eating and drinking should be prohibited in the application area.<br>Dispose of rinse water in accordance with local and national regulations.<br>Avoid contact with skin, eyes and clothing. |
| Advice on protection against fire and explosion | : | Provide appropriate exhaust ventilation at places where dust is formed.   |

# ARMEEN 18D FLAKE (FX)

Version: 1.0

Revision Date: 06/09/2014

Print Date: 04/22/2015

US / Z8

## Storage

- Requirements for storage areas and containers : Prevent unauthorized access.  
Keep container tightly closed in a dry and well-ventilated place.  
Avoid elevated temperatures.  
Reacts with copper, aluminum, zinc and their alloys
- Other data : No decomposition if stored and applied as directed.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines

Contains no substances with occupational exposure limit values.

### Engineering measures

Provide eyewash station and safety shower. Keep solutions of 0.5% acetic acid in water close at hand.

### Personal protective equipment

- Eye/face protection : Tightly fitting safety goggles
- Hand protection : Glove material: Nitrile rubber  
: Glove material: butyl-rubber
- Skin and body protection : Protective suit
- Respiratory protection : In the case of dust, vapor or aerosol formation use respirator with an approved filter.  
Wear full face mask supplied with:  
Combination filter: ABEKP.
- Hygiene measures : Avoid contact with skin, eyes and clothing.  
When using do not eat or drink.  
When using do not smoke.  
Dry-clean contaminated clothing before reuse.

### Environmental exposure controls

- General advice : Do not flush into surface water or sanitary sewer system.  
If the product contaminates rivers and lakes or drains inform respective authorities.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

- Form : solid
- Color : white
- Odor : slight  
ammoniacal

# ARMEEN 18D FLAKE (FX)

Version: 1.0

Revision Date: 06/09/2014

Print Date: 04/22/2015

US / Z8

Odor Threshold : No data available

## Safety data

pH : not applicable

Melting point/range : 50 - 60 °C

Boiling point/boiling range : > 300 °C

Flash point : 150 - 199 °C  
Method: Pensky-Martens ISO 2719

Ignition temperature : > 100 °C

Evaporation rate : not applicable

Flammability (solid, gas) : The product is not flammable.

Lower explosion limit : not applicable

Upper explosion limit : not applicable

Vapor pressure : < 0.1 hPa at 20 °C

Relative vapor density : not applicable

Density : 790 kg/m<sup>3</sup> at 60 °C

Relative density : 0.94 at 20 °C

Water solubility : insoluble

Solubility in other solvents : Soluble in hydrocarbons

Partition coefficient: n-octanol/water : No data available

Autoignition temperature : ca. 265 °C

Decomposition temperature : No data available

Viscosity, dynamic : 4.17 mPa.s at 60 °C

Viscosity, kinematic : ca. 8.9 mm<sup>2</sup>/s at 60 °C

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

This material safety datasheet only contains information relating to safety and does not replace any product information or product specification.

## 10. STABILITY AND REACTIVITY

Conditions to avoid : None known.

Materials to avoid : Reacts with copper, aluminum, zinc and their alloys

# ARMEEN 18D FLAKE (FX)

Version: 1.0

Revision Date: 06/09/2014

Print Date: 04/22/2015

US / Z8

Hazardous decomposition products	: No hazardous decomposition products are known.
Thermal decomposition	: No data available
Reactivity	: Stable under normal conditions.
Chemical stability	: Stable under recommended storage conditions.
Hazardous reactions	: No dangerous reaction known under conditions of normal use.

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## 11. TOXICOLOGICAL INFORMATION

### PRODUCT INFORMATION:

#### Toxicology Assessment

Further information : May cause damage to organs through prolonged or repeated exposure.

#### Carcinogenicity:

IARC	: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

### TOXICOLOGY DATA FOR THE INGREDIENTS:

#### Test result

##### Component: Octadecylamine

Acute oral toxicity	: LD50: > 2,000 - 5,000 mg/kg Species: rat Method: OECD Test Guideline 401
Skin irritation	: Result: Irritating to skin.
Eye irritation	: Result: Risk of serious damage to eyes.
Target Organ Systemic Toxicant - Repeated exposure	: Routes of exposure: Oral Target Organs: Gastrointestinal tract May cause damage to organs through prolonged or repeated exposure.
Aspiration toxicity	: May be fatal if swallowed and enters airways.

# ARMEEN 18D FLAKE (FX)

Version: 1.0

Revision Date: 06/09/2014

Print Date: 04/22/2015

US / Z8

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## 12. ECOLOGICAL INFORMATION

### PRODUCT INFORMATION:

#### Ecotoxicology Assessment

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Very toxic to aquatic life with long lasting effects.

#### Further information on ecology

#### Hazardous to the ozone layer

Regulation : 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances  
Remarks : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

### INGREDIENTS:

#### Test result

#### Component: Octadecylamine

#### Ecotoxicity effects

Toxicity to fish : LC50: > 0.01 - 0.1 mg/l  
Exposure time: 96 h  
Species: Pimephales promelas (fathead minnow)  
Method: OECD Test Guideline 203  
Read-across (Analogy)

Toxicity to daphnia and other aquatic invertebrates : EC50: > 0.01 - 0.1 mg/l  
Exposure time: 48 h  
Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 202  
Read-across (Analogy)

Toxicity to algae : EC50: > 0.01 - 0.1 mg/l  
Exposure time: 72 h  
Species: Scenedesmus subspicatus (algae)  
Method: OECD Test Guideline 201

M-Factor : 10

#### Elimination information (persistence and degradability)

Bioaccumulation : Bioconcentration factor (BCF): > 500

Mobility : No data available

Biodegradability : Result: Readily biodegradable.  
Biodegradation: > 60 %



# ARMEEN 18D FLAKE (FX)

Version: 1.0

Revision Date: 06/09/2014

Print Date: 04/22/2015

US / Z8

Exposure time: 28 d  
Method: OECD Test Guideline 301D  
Read-across (Analogy)

## Further information on ecology

Biochemical Oxygen : No data available  
Demand (BOD)

## 13. DISPOSAL CONSIDERATIONS

Product : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Hazardous waste  
Dispose of contents/container in accordance with local regulation.

: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.

## 14. TRANSPORT INFORMATION

### International regulation

#### IATA-DGR

UN/ID No. : UN 3077  
Proper shipping name : Environmentally hazardous substance, solid, n.o.s. (Alkylamine)  
Class : 9  
Packing group : III  
Labels : 9  
Packing instruction (cargo aircraft) : 956  
Packing instruction (passenger aircraft) : 956  
Packing instruction (LQ) : Y956  
Environmentally hazardous : yes

#### IMDG-Code

UN number : UN 3077  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Alkylamine)  
Class : 9  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
Marine pollutant : yes (Alkylamine)

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

# ARMEEN 18D FLAKE (FX)

Version: 1.0

Revision Date: 06/09/2014

Print Date: 04/22/2015

US / Z8

Not applicable for product as supplied.

## Domestic regulation

### 49 CFR

Not regulated as a dangerous good

### TDG

Not regulated as a dangerous good

### NOM-002-SCT

Not regulated as a dangerous good

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## 15. REGULATORY INFORMATION

### Notification status

CH INV : YES. On the inventory, or in compliance with the inventory  
TSCA : YES. All chemical substances in this product are either listed on the TSCA Inventory or in compliance with a TSCA Inventory exemption.  
DSL : YES. All components of this product are on the Canadian DSL.  
AICS : YES. On the inventory, or in compliance with the inventory  
NZIoC : YES. On the inventory, or in compliance with the inventory  
ENCS : YES. On the inventory, or in compliance with the inventory  
ISHL : YES. On the inventory, or in compliance with the inventory  
KECI : YES. On the inventory, or in compliance with the inventory  
PICCS : YES. On the inventory, or in compliance with the inventory  
IECSC : YES. On the inventory, or in compliance with the inventory

For explanation of abbreviations, see section 16.

**OSHA Hazards** : Moderate skin irritant, Severe eye irritant

### EPCRA - Emergency Planning and Community Right-to-Know

#### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Acute Health Hazard

**SARA 302** : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313** : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMII Intermediate or Final VOC's (40 CFR 60.489).

### Clean Water Act

# ARMEEN 18D FLAKE (FX)

Version: 1.0

Revision Date: 06/09/2014

Print Date: 04/22/2015

US / Z8

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

## California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

## 16. OTHER INFORMATION

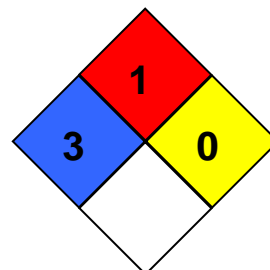
### Full text of H-Statements

H304	: May be fatal if swallowed and enters airways.
H315	: Causes skin irritation.
H318	: Causes serious eye damage.
H373	: May cause damage to organs through prolonged or repeated exposure if swallowed.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.

### Further information

<b>HMIS Classification</b>	: Health Hazard: 3 Flammability: 1 Physical hazards: 0
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<b>NFPA Classification</b>	: Health Hazard: 3 Fire Hazard: 1 Reactivity Hazard: 0
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### Notification status explanation

REACH	1907/2006 (EU)
CH INV	Switzerland. New notified substances and declared preparations
TSCA	United States TSCA Inventory
DSL	Canadian Domestic Substances List (DSL)
AICS	Australia Inventory of Chemical Substances (AICS)
NZIoC	New Zealand. Inventory of Chemical Substances
ENCS	Japan. ENCS - Existing and New Chemical Substances Inventory
ISHL	Japan. ISHL - Inventory of Chemical Substances (METI)
KECI	Korea. Korean Existing Chemicals Inventory (KECI)
PICCS	Philippines Inventory of Chemicals and Chemical Substances (PICCS)
IECSC	China. Inventory of Existing Chemical Substances in China (IECSC)

### Further information

Revision Date	06/09/2014
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# ARMEEN 18D FLAKE (FX)

Version: 1.0

Revision Date: 06/09/2014

Print Date: 04/22/2015

US / Z8

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The information in this material safety data sheet should be provided to all who will use, handle, store, transport or otherwise be exposed to this product. The user must determine the appropriate measures that need to be implemented for the use and handling of this product in the context of the user's operations and use of this product. The information contained herein supersedes all previously issued bulletins on the subject matter covered. If the date on this document is more than three years old, call to make certain that this sheet is current. No warranty is made as to the product's merchantability or fitness for any particular purpose, or that any suggested use will not infringe any patent. User must determine for himself, by preliminary tests or otherwise, the suitability of this product for his purposes, including mixing with other products. Nothing contained herein shall be construed as granting or extending any license under any patent.

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.