



Material Safety Data Sheet

MSDS# 15-058

Section 1. Chemical Product and Company Identification

Product name	ARMEEN® DM18D	
Material Uses	: Surfactant.	In Case of Emergency
Supplier/ Manufacturer	AKZO NOBEL SURFACE CHEMISTRY LLC 525 West Van Buren Chicago, IL 60607-3823 www.surfactants.akzonobel.com AKZO NOBEL CHEMICALS LTD. 1 City Centre Drive, Suite 318 Mississauga, Ontario L5B 1M2 Canada	CHEMTREC: 800-424-9300 CANUTEC: 613-996-6666 Medical/Handling: 914-693-6946 Product/Technical: 800-906-9977

Section 2. Hazards Identification

Physical State	Liquid.
Color	Yellow.
Odor	Ammoniacal.
Emergency Overview	DANGER! CAUSES EYE AND SKIN BURNS. VERY TOXIC TO AQUATIC ORGANISMS. MAY BE HARMFUL IF SWALLOWED. Do not get in eyes, on skin or on clothing. Do not ingest. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Avoid contact of spilled material and runoff with soil and surface waterways.
Possible Carcinogenic Effects	1-octadecanamine, n,n-dimethyl- : IARC, NTP, OSHA, ACGIH: Not listed. amines, di-c14-18-alkylmethyl : IARC, NTP, OSHA, ACGIH: Not listed. n-octadecylamine : IARC, NTP, OSHA, ACGIH: Not listed.
Routes of Entry	Absorbed through skin. Dermal contact. Eye contact.

See Toxicological Information (section 11)

Section 3. Composition/ Information on Ingredients

Name	CAS #	% by Weight
1-octadecanamine, n,n-dimethyl-	124-28-7	95-99
amines, di-c14-18-alkylmethyl	67700-99-6	0.001-3
n-octadecylamine	124-30-1	0.001-1

Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 30 minutes. Cold water may be used. Get medical attention immediately.
Skin Contact	In case of contact, immediately flush skin with plenty of water for at least 30 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

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Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
Medical Conditions Aggravated by Overexposure	Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

Section 5. Fire Fighting Measures

Flammability of the Product	May be combustible at high temperature.
Flash Points	Closed cup: >150°C (302°F).
Products of Combustion	These products are carbon oxides (CO, CO ₂), nitrogen oxides (NO, NO ₂ ...).
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
Protective Clothing (Fire)	Be sure to use an approved/certified respirator or equivalent.

Section 6. Accidental Release Measures

Small Spill and Leak	Absorb with an inert material and put the spilled material in an appropriate waste disposal. If necessary: Use suitable protective equipment (Section 8).
Large Spill and Leak	Stop leak if without risk. If the product is in its solid form: Use a shovel to put the material into a convenient waste disposal container. If the product is in its liquid form: Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Absorb with an inert material and put the spilled material in an appropriate waste disposal. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Use suitable protective equipment (Section 8).

Section 7. Handling and Storage

Handling	Do not ingest. Avoid breathing vapors or spray mists. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Avoid contact of spilled material and runoff with soil and surface waterways.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.

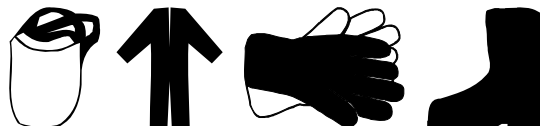
Section 8. Exposure Controls/ Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.
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Personal Protection

Eyes	Face shield.
Body	Full suit.
Respiratory	Wear appropriate respirator when ventilation is inadequate.
Hands	Gloves.
Feet	Boots.

Protective Clothing (Pictograms)



Personal Protection in Case of a Large Spill Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Ingredient Name	Exposure Limits United States
1-octadecanamine, n,n-dimethyl- amines, di-c14-18-alkylmethyl	Not available.
n-octadecylamine	Not available.

Section 9. Physical and Chemical Properties

Physical State	Liquid.
Color	Yellow.
Odor	Ammoniacal.
pH	Basic.
Boiling/Condensation Point	160°C (320°F)
Melting/Freezing Point	22°C (71.6°F)
Pour Point	24°C
Density	0.791 g/cm ³ (60°C / 140°F)
Vapor Pressure	<0.01 kPa (<0.1 mmHg) (at 20°C)
Vapor Density	The highest known value is 10.26 (Air = 1) (1-octadecanamine, n,n-dimethyl-).
Evaporation Rate	<1 (1-octadecanamine, n,n-dimethyl-) compared to Butyl acetate.
Solubility	Very slightly soluble in cold water.
Dispersion Properties	Not available.
Physical Chemical Comments	Viscosity = 63.1SSU @ 25°C; 52.5SSU @ 35°C; 46.6SSU @ 45°C; 42.2SSU @ 55°C.

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Incompatibility with Various Substances	Reactive with OXIDIZING AGENTS, acids.
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

Toxicity to Animals

Ingredient Name or Product name	Test	Result	Route	Species
1-octadecanamine, n,n-dimethyl-	LD50	1230 mg/kg	Oral	Rat
	LD50	8000 mg/kg	Dermal	Rabbit
n-octadecylamine	LD50	2395 mg/kg	Oral	Rat

Special Remarks on Toxicity to Animals **n-octadecylamine:** NOEL = 500 ppm (two-year dietary) in rats.
NOEL = 3 mg/kg/day (two-year dietary) in dogs.

Chronic Effects on Humans **CARCINOGENIC EFFECTS:** Classified None. by NIOSH [n-octadecylamine].
MUTAGENIC EFFECTS: Non-mutagenic for bacteria and/or yeast. [n-octadecylamine].

Acute Effects Skin Corrosive to the skin. Practically non-toxic in contact with skin.

Acute Effects Eyes Corrosive to the eyes.

Section 12. Ecological Information

Ecotoxicity

Ingredient Name or Product name	Species	Period	Result
1-octadecanamine, n,n-dimethyl-	Bluegill. (LC50)	72 hour(s)	2.1 mg/l
	daphnia (EC50)	48 hour(s)	0.35 mg/l
	Shrimp. (EC50)	96 hour(s)	0.074 mg/l
n-octadecylamine	Daphnia magna (EC50)	48 hour(s)	1.7 mg/l
	Algae (EC50)	72 hour(s)	<1 mg/l

Biodegradability and Ecotoxicity Remarks

n-octadecylamine: 55% @ 28 day(s) CBT based on data for: (similar material); 72% @ 42 day(s) CBT based on data for: (similar material)

Products of Degradation These products are carbon oxides (CO, CO₂) and water, nitrogen oxides (NO, NO₂...).





Section 13. Disposal Considerations

Waste Information

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

Consult your local or regional authorities.

Section 14. Transport Information

Regulatory Information	UN number	Proper shipping name	Class	Packing Group	Label	Additional information
DOT Classification	UN2735	Amines, liquid, corrosive, n.o.s. (Fatty acid derived amines)	8 -	III		-
TDG Classification	UN2735	AMINES, LIQUID, CORROSIVE, N.O.S. (Fatty acid derived amines)	8 -	III		Special Provisions Classified in Accordance with UN Recommendations
IMDG Class	UN2735	AMINES, LIQUID, CORROSIVE, N.O.S. (Fatty acid derived amines)	8 -	III		-
IATA-DGR Class	UN2735	Amines, liquid, corrosive, n.o.s. (Fatty acid derived amines)	8 -	III		-

Section 15. Regulatory Information

HCS Classification

Corrosive Material

U.S. Federal Regulations

TSCA: All intentionally present components are listed on the TSCA inventory.

DSL: All intentionally present components are listed on the DSL.

TSCA 5(a)2 final significant rules: No products were found.

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CERCLA: Hazardous substances.: No products were found.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: ARMEEN® DM18D

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: ARMEEN® DM18D:

Immediate (Acute) Health Hazard

SARA 313 Form R Reporting Requirements

No products were found.

SARA 313 Supplier Notification

No products were found.

State Regulations

No products were found.

California prop. 65: No products were found.

WHMIS (Canada)

Class E: Corrosive liquid.

CEPA DSL: 1-octadecanamine, n,n-dimethyl-; amines, di-c14-18-alkylmethyl; n-octadecylamine

European Union

Component	EC Number	EC Status	EC Annex
1-octadecanamine, n,n-dimethyl- amines, di-c14-18-alkylmethyl	204-694-8	Not available.	Not available.
n-octadecylamine	266-923-8	Not available.	Not available.
	204-695-3	Not available.	Not available.

Other International Lists

Australia (NICNAS): 1-octadecanamine, n,n-dimethyl-; amines, di-c14-18-alkylmethyl;
n-octadecylamine

China: 1-octadecanamine, n,n-dimethyl-; n-octadecylamine

Germany water class: n-octadecylamine

Japan (MITI): 1-octadecanamine, n,n-dimethyl-; amines, di-c14-18-alkylmethyl; n-octadecylamine

Korea (TCCL): 1-octadecanamine, n,n-dimethyl-; amines, di-c14-18-alkylmethyl; n-octadecylamine

Philippines (RA6969): 1-octadecanamine, n,n-dimethyl-; n-octadecylamine

Section 16. Other Information

Hazardous Material Information System (U.S.A.)

Health	3
Fire Hazard	1
Reactivity	0
Personal Protection	

National Fire Protection Association (U.S.A.)



Other Information Armeen® is a registered trademark of Akzo Nobel or affiliated companies and is registered in one or more countries including the United States.

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Validated by

Print Date

Phone Number

Product Safety Specialist

5/22/2007.

312-544-7038

Notice to Reader

The information in the material safety data sheet should be provided to all who will use, handle, store, transport or otherwise be exposed to this product. All information concerning this product and/or suggestions for handling and use contained herein are offered in good faith and are believed to be reliable as of the date of publication. However, no warranty is made as to the accuracy of and/or sufficiency of such information and/or suggestions or as to the product's merchantability or fitness for any particular purpose, or that any suggested use will not infringe any patent. Nothing contained herein shall be construed as granting or extending any license under any patent. Buyer must determine for himself, by preliminary tests or otherwise, the suitability of this product for his purposes, including mixing with other products. 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.