

Material Safety Data Sheet

MSDS# J00530400_05262005

Section 1. Chemical Product and Company Identification

Product name	JACAAB-ARMEEN 12D		
Material Uses	: Surfactant.	In Case of Emergency	
Supplier/ Repackager	Jacaab LLC 4155 Manchester Avenue St. Louis, MO 63110	CHEMTREC:	800-424-9300
		Information:	314-533-4662

Section 2. Composition, Information on Ingredients

Name	CAS #	% by Weight
1-Dodecanamine	124-22-1	95-100
N-Dodecyl-1-dodecanamine	3007-31-6	0.001-2

Section 3. Hazards Identification

Physical State	Liquid.
Color	Yellow. (Light.)
Odor	Ammoniacal. (Slight.)
Emergency Overview	DANGER! CAUSES SKIN BURNS. VERY TOXIC TO AQUATIC ORGANISMS. CAUSES SEVERE EYE IRRITATION. Do not get on skin or clothing. Avoid contact with eyes. 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-Dodecanamine: IARC, NTP, OSHA, ACGIH: Not listed. N-Dodecyl-1-dodecanamine: IARC, NTP, OSHA, ACGIH: Not listed.
Routes of Entry	Absorbed through skin. Dermal contact. Eye contact.

See Toxicological Information (section 11)

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 15 minutes. Get medical attention immediately.
Skin Contact	In case of contact, immediately flush skin with plenty of water for at least 15 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.

Continued on Next Page

Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.
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). (Pensky-Martens.)
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.
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.

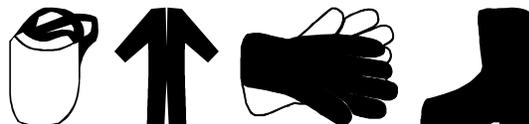
Section 7. Handling and Storage

Handling	Avoid contact with eyes. Avoid breathing vapors or spray mists. Do not get on skin or clothing. 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.
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-Dodecanamine	Not available.
N-Dodecyl-1-dodecanamine	Not available.

Section 9. Physical and Chemical Properties

Physical State	Liquid.
Color	Yellow. (Light.)
Odor	Ammoniacal. (Slight.)
Molecular Weight	Not applicable.
Molecular Formula	Not applicable.
pH	Not applicable.
Boiling/Condensation Point	259°C (498.2°F)
Melting/Freezing Point	31°C (87.8°F)
Cloud Point	32°C
Pour Point	30°C
Density	780 g/cm ³ (60°C / 140°F)
Vapor Pressure	<0.1 kPa (<1 mmHg) (at 20°C)
Vapor Density	0.211 (Air = 1)
Evaporation Rate	<1 (1-Dodecanamine) compared to Butyl acetate.
Solubility	Insoluble in cold water.
Dispersion Properties	Not available. Viscosity = 39.2 SSU @ 35°C; 36.4 SSU @ 45°C; 33.6 SSU @ 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-Dodecanamine	LD50	>2000 mg/kg	Oral	Rat
	LD50	>2000 mg/kg	Dermal	Rabbit based on data for: (similar material)

Special Remarks on Toxicity to Animals **1-Dodecanamine:** INHALATION = 0.099 mg/L, 1 hour(s) Rat based on data for: (similar material)

Chronic Effects on Humans **MUTAGENIC EFFECTS:** Non-mutagenic for bacteria and/or yeast. [1-Dodecanamine].

Special Remarks on Chronic Effects on Humans

1-Dodecanamine: Mutagenic Effects based on data for: (similar material)
Cytotoxicity, negative based on data for: (similar material)

Acute Effects Skin

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

Acute Effects Eyes

Severely irritating to the eyes.

Section 12. Ecological Information**Ecotoxicity**

Ingredient Name or Product name	Species	Period	Result
1-Dodecanamine	Daphnia (EC50)	48 hour(s)	0.032 mg/l

Biodegradability and Ecotoxicity Remarks

1-Dodecanamine: 60% @ 28 day(s) CBT

Biodegradable/OECD

Readily biodegradable.

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	 	Packaging Instruction Passenger Aircraft Quantity limitation: 5 L Packaging instructions: 818 Cargo Aircraft Quantity limitation: 60 L Packaging instructions: 820
TDG Classification	UN2735	AMINES, LIQUID, CORROSIVE, N.O.S. (Fatty acid derived amines)	8 -	III		Remarks In Accordance with UN Recommendations.
IMDG Class	UN2735	AMINES, LIQUID, CORROSIVE, N.O.S. (Fatty acid derived amines). Marine pollutant (1-Dodecylamine)	8 -	III	 	Marine pollutant Marine pollutant (P)

Continued on Next Page

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.
 CERCLA: Hazardous substances.: 1-Dodecanamine: 1 lbs. (0.4536 kg);
 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® 12D
 SARA 311/312 MSDS distribution - chemical inventory - hazard identification: ARMEEN® 12D:
 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-Dodecanamine; N-Dodecyl-1-dodecanamine

European Union	Component	EC Number	EC Status	EC Annex
	1-Dodecanamine	204-690-6	Not available.	Not available.
	N-Dodecyl-1-dodecanamine	221-114-9	Not available.	Not available.

Other International Lists Australia (NICNAS): 1-Dodecanamine; N-Dodecyl-1-dodecanamine
 Japan (MITI): 1-Dodecanamine; N-Dodecyl-1-dodecanamine
 Korea (TCCL): 1-Dodecanamine; N-Dodecyl-1-dodecanamine
 Philippines (RA6969): 1-Dodecanamine; N-Dodecyl-1-dodecanamine

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.)

Health	3	Fire Hazard	1	Reactivity	0	Specific Hazard
--------	---	-------------	---	------------	---	-----------------

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.

Continued on Next Page

Validation Date

5/26/2005.

Phone Number**314-533-4662*****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.