

Material Safety Data Sheet

MSDS# J00530210_05272005

Section 1. Chemical Product and Company Identification

| | | | |
|---------------------------------|---|-----------------------------|--------------|
| Product name | JACAAB-ARQUAD 12-37W | | |
| 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-Dodecanaminium, N,N,N-trimethyl-, chloride | 112-00-5 | 35-39 |
| Water | 7732-18-5 | 58-63 |
| N,N-Dimethyl-1-dodecanamine hydrochloride | Not Assigned | 0.001-1 |
| 1-Dodecanamine,N,N-dimethyl | 112-18-5 | 0.001-1 |

Section 3. Hazards Identification

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|--------------------------------------|--|
| Physical State | Liquid. |
| Color | Colorless to light yellow. |
| Odor | Faint Odor |
| Emergency Overview | <p>DANGER! VERY TOXIC TO AQUATIC ORGANISMS. CAUSES SEVERE EYE IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. MAY CAUSE SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION.</p> <p>Avoid prolonged contact with eyes, skin, and clothing. Avoid contact with eyes. Do not ingest. Avoid prolonged or repeated contact with skin. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Avoid contact of spilled material and runoff with soil and surface waterways.</p> |
| Possible Carcinogenic Effects | <p>1-Dodecanaminium, N,N,N-trimethyl-, chloride: IARC, NTP, OSHA, ACGIH: Not listed. Water: IARC, NTP, OSHA, ACGIH: Not listed. N,N-Dimethyl-1-dodecanamine hydrochloride: IARC, NTP, OSHA, ACGIH: Not listed. 1-Dodecanamine,N,N-dimethyl: IARC, NTP, OSHA, ACGIH: Not listed.</p> |
| Routes of Entry | Absorbed through skin. Dermal contact. Eye contact. |

[See Toxicological Information \(section 11\)](#)

Continued on Next Page

Section 4. First Aid Measures

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| 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. 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 15 minutes while removing contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention. |
| Inhalation | If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. |
| 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

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| Flammability of the Product | May be combustible at high temperature. |
| Flash Points | Closed cup: >100°C (212°F). |
| Products of Combustion | These products are carbon oxides (CO, CO ₂), nitrogen oxides (NO, NO ₂ ...), halogenated compounds, hydrogen chloride. |
| 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

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| Small Spill and Leak | Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements. |
| Large Spill and Leak | Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. 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. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. |

Section 7. Handling and Storage

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| Handling | Avoid prolonged contact with eyes, skin, and clothing. Avoid contact with eyes. Do not ingest. Avoid prolonged or repeated contact with skin. 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. |

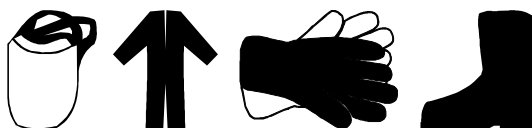
Section 8. Exposure Controls, Personal Protection

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

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| 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-Dodecanaminium, N,N,N-trimethyl-, chloride | Not available. |
| Water | Not available. |
| N,N-Dimethyl-1-dodecanamine hydrochloride | Not available. |
| 1-Dodecanamine,N,N-dimethyl | Not available. |

Section 9. Physical and Chemical Properties

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|-----------------------------------|--|
| Physical State | Liquid. |
| Color | Colorless to light yellow. |
| Odor | Faint Odor |
| Molecular Weight | Not applicable. |
| Molecular Formula | Not applicable. |
| Boiling/Condensation Point | 100°C (212°F) |
| Melting/Freezing Point | -3°C (26.6°F) |
| Density | 0.969 g/cm ³ (25°C / 77°F) |
| Vapor Pressure | 2.3 kPa (17 mmHg) (at 20°C) |
| Evaporation Rate | 0.36 (Water) compared to Butyl acetate. |
| Solubility | Easily soluble in cold water, hot water, methanol, acetone. |
| Dispersion Properties | See solubility in water, methanol, acetone. Viscosity = 5.2cp @ 0C, 1.8cp @ 100C, 0.8cp @ 200C. (1-Dodecanamine,N,N-dimethyl) |

Section 10. Stability and Reactivity

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| Stability and Reactivity | The product is stable. |
| Incompatibility with Various Substances | Reactive with OXIDIZING AGENTS. |
| Hazardous Decomposition Products | These products are halogenated compounds, hydrogen chloride. |

**Hazardous
Polymerization**

Will not occur.

Section 11. Toxicological Information**Toxicity to Animals**

| Ingredient Name or Product name | Test | Result | Route | Species |
|--|-------------|---------------|--------------|--|
| 1-Dodecanaminium, N,N,N-trimethyl-, chloride | LD50 | 684 mg/kg | Oral | Rat based on data for: (similar material) |
| | LD50 | 1600 mg/kg | Dermal | Rabbit based on data for: (similar material) |
| 1-Dodecanamine,N,N-dimethyl | LD50 | 1220 mg/kg | Oral | Rat based on data for: (similar material) |

Special Remarks on Toxicity to Animals

1-Dodecanaminium, N,N,N-trimethyl-, chloride: Similar Material: Acute Oral LD50 (Bobwhite quail) = 565 mg/kg
 Similar Material: 8-day dietary LC50 (Bobwhite quail) >5000 ppm
 Similar Material: 8-day dietary LC50 (Mallard ducks) >5000 ppm
 Similar Material: Hydrolytically stable for 33 days at pH 5, 7 or 9.

Chronic Effects on Humans

CARCINOGENIC EFFECTS: Classified None. by NIOSH [1-Dodecanamine,N,N-dimethyl].

Special Remarks on Chronic Effects on Humans

1-Dodecanaminium, N,N,N-trimethyl-, chloride: Negative in Cell Transformation study.
 EC50 (neutral uptake) = 1.0 ug/ml. based on data for: (similar material)
 EC50 (LOH leakage) = 4.2 ug/ml. based on data for: (similar material)
 EC50 (SRB protein) = 1.3 ug/ml. based on data for: (similar material)

Acute Effects Skin

Harmful in contact with skin. May cause sensitization by skin contact. Moderately irritating to the skin.

Acute Effects Eyes

Severely irritating to the eyes.

Special Remarks on Other Toxic Effects on Humans

:
 Skin and Eyes based on data for: (similar material)

Section 12. Ecological Information**Ecotoxicity**

| Ingredient Name or Product name | Species | Period | Result |
|--|--|---------------|---------------|
| 1-Dodecanaminium, N,N,N-trimethyl-, chloride | Bluegill. based on data for: (similar material) (LC50) | 96 hour(s) | 1.94 mg/l |
| | daphnia based on data for: (similar material) (EC50) | 48 hour(s) | 0.28 mg/l |
| 1-Dodecanamine,N,N-dimethyl | Rotofier based on data for: (similar material) (EC50) | 48 hour(s) | 0.1 mg/l |

Biodegradability and Ecotoxicity Remarks

1-Dodecanaminium, N,N,N-trimethyl-, chloride: 76% @ 28 day(s) CBT based on data for: (similar material)
1-Dodecanamine,N,N-dimethyl: 67% @ 28 day(s) CBT

Biodegradable/OECD

Readily biodegradable.

Products of Degradation

These products are carbon oxides (CO, CO₂) and water, nitrogen oxides (NO, NO₂...), halogenated compounds.

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 | Not regulated. | - | - | - | | - |
| TDG Classification | Not regulated. | - | - | - | | - |
| IMDG Class | Not regulated. | - | - | - | | - |
| IATA-DGR Class | Not regulated. | - | - | - | | - |

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.: 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: No products were found.
 SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.
 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 D-2B: Material causing other toxic effects (TOXIC).
 CEPA DSL: 1-Dodecanaminium, N,N,N-trimethyl-, chloride; Water; 1-Dodecanamine,N,N-dimethyl

Component

EC Number

EC Status

EC Annex

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| | | | | |
|-----------------------|--|----------------|----------------|----------------|
| European Union | 1-Dodecanaminium, N,N,N-trimethyl-, chloride | 203-927-0 | Not available. | Not available. |
| | Water | 231-791-2 | Not available. | Not available. |
| | N,N-Dimethyl-1-dodecanamine hydrochloride | Not available. | Not available. | Not available. |
| | 1-Dodecanamine,N,N-dimethyl | 203-943-8 | Not available. | Not available. |

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|----------------------------------|--|--|--|--|
| Other International Lists | Australia (NICNAS): 1-Dodecanaminium, N,N,N-trimethyl-, chloride; Water; 1-Dodecanamine,N,N-dimethyl | | | |
| | Japan (MITI): 1-Dodecanaminium, N,N,N-trimethyl-, chloride; 1-Dodecanamine,N,N-dimethyl | | | |
| | Japan (MOL): 1-Dodecanamine,N,N-dimethyl | | | |
| | Korea (TCCL): 1-Dodecanaminium, N,N,N-trimethyl-, chloride; Water; 1-Dodecanamine,N,N-dimethyl | | | |
| | Philippines (RA6969): Water; 1-Dodecanamine,N,N-dimethyl | | | |

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.)



Validation Date
Phone Number

5/27/2005
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.