

# Material Safety Data Sheet

MSDS# J00530700\_052805

## Section 1. Chemical Product and Company Identification

<b>Product name</b>	<b>JACAAB-DUOMEEN TDO</b>		
<b>Material Uses</b>	: Surfactant.	<b>In Case of Emergency</b>	
<b>Supplier/ Repackager</b>	JACAAB LLC 4155 Manchester Avenue St. Louis, MO 63110	CHEMTREC:	800-424-9300
		Product/Technical:	314-533-4662

Do not ship to Canada.

## Section 2. Composition, Information on Ingredients

Name	CAS #	% by Weight
Amines, N-tallow alkyltrimethylenedi-, tallates	61790-55-4	98-100
Amines, n-tallow alkyl trimethylenedi-	61791-55-7	0.001-2
Fatty acids, tall-oil	61790-12-3	0.001-2

## Section 3. Hazards Identification

<b>Physical State</b>	Solid.
<b>Color</b>	Amber.
<b>Odor</b>	Ammoniacal.
<b>Emergency Overview</b>	DANGER! CAUSES EYE AND SKIN BURNS. MAY BE HARMFUL IF SWALLOWED.  Do not get in eyes, on skin or on clothing. Do not ingest. Avoid breathing dust/vapor. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.
<b>Possible Carcinogenic Effects</b>	<b>Amines, N-tallow alkyltrimethylenedi-, tallates:</b> IARC, NTP, OSHA, ACGIH: Not listed. <b>Amines, n-tallow alkyl trimethylenedi-:</b> IARC, NTP, OSHA, ACGIH: Not listed. <b>Fatty acids, tall-oil:</b> IARC, NTP, OSHA, ACGIH: Not listed.
<b>Routes of Entry</b>	Absorbed through skin. Dermal contact. Eye contact. Inhalation.

See Toxicological Information (section 11)

## Section 4. First Aid Measures

<b>Eye Contact</b>	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.
<b>Skin Contact</b>	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.
<b>Inhalation</b>	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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<b>Ingestion</b>	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.
<b>Medical Conditions Aggravated by Overexposure</b>	Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage.

## Section 5. Fire Fighting Measures

<b>Flammability of the Product</b>	May be combustible at high temperature.
<b>Flash Points</b>	Closed cup: 235°C (455°F).
<b>Products of Combustion</b>	These products are carbon oxides (CO, CO <sub>2</sub> ), nitrogen oxides (NO, NO <sub>2</sub> ...).
<b>Fire Fighting Media and Instructions</b>	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
<b>Protective Clothing (Fire)</b>	Be sure to use an approved/certified respirator or equivalent.

## Section 6. Accidental Release Measures

<b>Small Spill and Leak</b>	Use appropriate tools to put the spilled solid in a convenient waste disposal container.
<b>Large Spill and Leak</b>	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: 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 to reduce vapors. 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

<b>Handling</b>	Do not ingest. Avoid breathing dust/vapor. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.
<b>Storage</b>	Keep container tightly closed. Keep container in a cool, well-ventilated area.

## Section 8. Exposure Controls, Personal Protection

<b>Engineering Controls</b>	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
<b>Personal Protection</b>	
<b>Eyes</b>	Splash goggles.
<b>Body</b>	Synthetic apron.
<b>Respiratory</b>	Respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
<b>Hands</b>	Gloves.
<b>Feet</b>	Not applicable.

### Protective Clothing (Pictograms)



**Personal Protection in Case of a Large Spill** Splash goggles. Full suit. Respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Ingredient Name	Exposure Limits United States
Amines, N-tallow alkyltrimethylenedi-, tallates	Not available.
Amines, n-tallow alkyl trimethylenedi-	Not available.
Fatty acids, tall-oil	Not available.

## Section 9. Physical and Chemical Properties

<b>Physical State</b>	Solid.
<b>Color</b>	Amber.
<b>Odor</b>	Ammoniacal.
<b>Molecular Weight</b>	Not applicable.
<b>Molecular Formula</b>	Not applicable.
<b>Melting/Freezing Point</b>	30 to 40°C (86 to 104°F)
<b>Pour Point</b>	35°C
<b>Density</b>	0.865 g/cm <sup>3</sup> (65°C / 149°F)
<b>Vapor Pressure</b>	<0.01 kPa (<0.1 mmHg) (at 20°C)
<b>Evaporation Rate</b>	The highest known value is 1 (Amines, N-tallow alkyltrimethylenedi-, tallates) Weighted average: 1 compared to Butyl acetate.
<b>Solubility</b>	Very slightly soluble in cold water.
<b>Dispersion Properties</b>	Not available. Viscosity = 670 mPas @ 30C; 370 mPas @ 40C; 230 mPas @ 50C. (Amines, N-tallow alkyltrimethylenedi-, tallates)

## Section 10. Stability and Reactivity

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

## Section 11. Toxicological Information

### Toxicity to Animals

Ingredient Name or Product name	Test	Result	Route	Species
Amines, N-tallow alkyltrimethylenedi-, tallates	LD50	945 mg/kg	Oral	Rat (based on similar product data)
Amines, n-tallow alkyl trimethylenedi-	LD50	945 mg/kg	Oral	Rat
Fatty acids, tall-oil	LD50	>10000 mg/kg	Oral	Rat
	LD50	>2000 mg/kg	Dermal	Rabbit

**Special Remarks on Toxicity to Animals** Amines, n-tallow alkyl trimethylenedi-: Sub-chronic, NOEL (rat) = 670 ppm.

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

**Acute Effects Eyes** Corrosive to the eyes.

**Special Remarks on Other Toxic Effects on Humans** : Amines, N-tallow alkyltrimethylenedi-, tallates: Skin and Eyes based on data for: similar product.

## Section 12. Ecological Information

### Ecotoxicity

Ingredient Name or Product name	Species	Period	Result
Amines, n-tallow alkyl trimethylenedi-	Fish (LC50)	96 hour(s)	0.1 to 0.15 mg/l
Fatty acids, tall-oil	Fish (LC50)	24 hour(s)	50 to 100 mg/l
	Fish (LC50)	96 hour(s)	10 to 20 mg/l
	Fish (LC50)	96 hour(s)	10 mg/l
	Daphnia (EC50)	48 hour(s)	55.7 mg/l

**Biodegradability and Ecotoxicity Remarks** Amines, n-tallow alkyl trimethylenedi-: 62% @ 28 day(s) CBT based on data for: (similar material)





**Products of Degradation** These products are carbon oxides (CO, CO<sub>2</sub>) and water, nitrogen oxides (NO, NO<sub>2</sub>...).

## 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
<b>DOT Classification</b>	UN1759	Corrosive solids, n.o.s. (Fatty acid salts of polyamines)	8 -	III		-
<b>TDG Classification</b>	UN 1759	CORROSIVE SOLID, N.O.S. (Fatty acid salts of polyamines)	8 -	III		-
<b>IMDG Class</b>	UN 1759	CORROSIVE SOLID, N.O.S. (Fatty acid salts of polyamines)	8 -	III		-
<b>IATA-DGR Class</b>	UN 1759	Corrosive solid, n.o.s. (Fatty acid salts of polyamines)	8 -	III		-

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## Section 15. Regulatory Information

<b>HCS Classification</b>	Corrosive Material			
<b>U.S. Federal Regulations</b>	<p>TSCA: All intentionally present components are listed on the TSCA inventory.</p> <p>DSL: One or more of the intentionally present components in this material is not on the DSL.</p> <p>CERCLA: Hazardous substances.: No products were found.</p> <p>SARA 302/304/311/312 extremely hazardous substances: No products were found.</p> <p>SARA 302/304 emergency planning and notification: No products were found.</p> <p>SARA 302/304/311/312 hazardous chemicals: DUOMEEN® TDO</p> <p>SARA 311/312 MSDS distribution - chemical inventory - hazard identification: DUOMEEN® TDO: Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard</p> <p>SARA 313 Form R Reporting Requirements No products were found.</p> <p>SARA 313 Supplier Notification No products were found.</p>			
<b>State Regulations</b>	<p>No products were found.</p> <p>California prop. 65: No products were found.</p>			
<b>WHMIS (Canada)</b>	<p>Class E: Corrosive solid.</p> <p>CEPA DSL: Amines, n-tallow alkyl trimethylenedi-; Fatty acids, tall-oil</p> <p>CEPA NDSL: Amines, N-tallow alkyltrimethylenedi-, tallates</p>			
<b>European Union</b>	<b>Component</b>	<b>EC Number</b>	<b>EC Status</b>	<b>EC Annex</b>
	Amines, N-tallow alkyltrimethylenedi-, tallates	263-146-6	Not available.	Not available.
	Amines, n-tallow alkyl trimethylenedi- Fatty acids, tall-oil	263-189-0 263-107-3	Not available. Not available.	Not available. Not available.
<b>Other International Lists</b>	<p>Australia (NICNAS): Amines, N-tallow alkyltrimethylenedi-, tallates; Amines, n-tallow alkyl trimethylenedi-; Fatty acids, tall-oil</p> <p>Japan (MITI): Fatty acids, tall-oil</p> <p>Korea (TCCL): Amines, N-tallow alkyltrimethylenedi-, tallates; Amines, n-tallow alkyl trimethylenedi-; Fatty acids, tall-oil</p> <p>Philippines (RA6969): Amines, n-tallow alkyl trimethylenedi-; Fatty acids, tall-oil</p>			

## Section 16. Other Information

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

Health	<b>3</b>
Fire Hazard	<b>1</b>
Reactivity	<b>0</b>
Personal Protection	

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



**Validation Date**

5/28/2005

**Phone Number**

314-533-4662

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***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.