

**Material Safety Data Sheet**

MSDS# 15-0412

**Section 1. Chemical Product and Company Identification**

<b>Product name</b>	<b>JACAAB-ETHODUOMEEN T/13</b>		
<b>Material Uses</b>	: Surfactant.	<b>In Case of Emergency</b>	
<b>Supplier/ Repackager</b>	JACAAB LLC 4155 Manchester Ave St. Louis, MO 63110	CHEMTREC:	800-424-9300
		Product/Technical:	314-652-5400

**Section 2. Composition, Information on Ingredients**

<b>Name</b>	<b>CAS #</b>	<b>% by Weight</b>
Amines, n-tallow alkyltrimethylenedi-, ethoxylated	61790-85-0	90-94
Ethanol, 2,2'-iminobis, n-tallow alkyl derivs.	61791-44-4	5-10
Amines, n-tallow alkyl trimethylenedi-	61791-55-7	0.001-5
Poly(oxy-1,2-ethanediyl), a-hydroxy-w-hydroxy-	25322-68-3	0.001-1

**Section 3. Hazards Identification**

<b>Physical State</b>	Liquid.
<b>Color</b>	Yellow. (Dark.)
<b>Odor</b>	Amine like.
<b>Emergency Overview</b>	DANGER! CAUSES EYE AND SKIN BURNS. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE ALLERGIC SKIN REACTION.  Do not get in eyes, on skin or on clothing. Do not ingest. Avoid breathing vapor or mist. Avoid prolonged or repeated contact with skin. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.
<b>Possible Carcinogenic Effects</b>	<b>Amines, N-tallow alkyltrimethylenedi-, ethoxylated:</b> IARC, NTP, OSHA, ACGIH: Not listed. <b>Ethanol, 2,2'-iminobis, N-tallow alkyl derivs.:</b> IARC, NTP, OSHA, ACGIH: Not listed. <b>Amines, n-tallow alkyl trimethylenedi-:</b> IARC, NTP, OSHA, ACGIH: Not listed. <b>Poly(oxy-1,2-ethanediyl), a-hydroxy-w-hydroxy-:</b> IARC, NTP, OSHA, ACGIH: Not listed.
<b>Routes of Entry</b>	Absorbed through skin. Eye contact.

See Toxicological Information (section 11)

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## Section 4. First Aid Measures

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<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.
<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 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.

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## Section 5. Fire Fighting Measures

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<b>Flammability of the Product</b>	May be combustible at high temperature.
<b>Flash Points</b>	Closed cup: >200°C (392°F). (Pensky-Martens.)
<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.

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## Section 6. Accidental Release Measures

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<b>Small Spill and Leak</b>	Absorb with an inert material and put the spilled material in an appropriate waste disposal. If necessary: <b>Use suitable protective equipment (Section 8).</b>
<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: 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. <b>Use suitable protective equipment (Section 8).</b>

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## Section 7. Handling and Storage

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<b>Handling</b>	Do not ingest. Avoid breathing vapors or spray mists. Avoid prolonged or repeated contact with skin. 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.

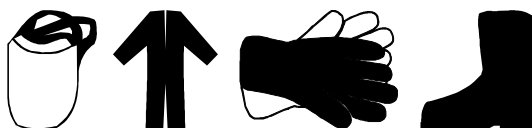
## Section 8. Exposure Controls, Personal Protection

**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

<b>Eyes</b>	Face shield.
<b>Body</b>	Full suit.
<b>Respiratory</b>	Wear appropriate respirator when ventilation is inadequate.
<b>Hands</b>	Gloves.
<b>Feet</b>	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

Amines, n-tallow alkyltrimethylenedi-, ethoxylated	Not available.
Ethanol, 2,2'-iminobis, n-tallow alkyl derivs.	Not available.
Amines, n-tallow alkyl trimethylenedi-	Not available.
Poly(oxy-1,2-ethanediyl), a-hydroxy-w-hydroxy-	Not available.

## Section 9. Physical and Chemical Properties

<b>Physical State</b>	Liquid.
<b>Color</b>	Yellow. (Dark.)
<b>Odor</b>	Amine like.
<b>Molecular Weight</b>	Not applicable.
<b>Molecular Formula</b>	Not applicable.
<b>pH</b>	Basic.
<b>Boiling/Condensation Point</b>	>300°C (572°F)
<b>Melting/Freezing Point</b>	20°C (68°F)
<b>Cloud Point</b>	22°C
<b>Pour Point</b>	21°
<b>Density</b>	0.937 g/cm <sup>3</sup> (25°C / 77°F)
<b>Vapor Pressure</b>	<0.01 kPa (<0.1 mmHg) (at 20°C)
<b>Evaporation Rate</b>	Weighted average: 0.9 compared to Butyl acetate.
<b>Solubility</b>	Very slightly soluble in cold water.
<b>Dispersion Properties</b>	
<b>Physical Chemical Comments</b>	Viscosity = 105(SSU) @ 38°C; 12.8(SSU) @ 99°C.

## 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-, ethoxylated	LD50	>500 mg/kg	Oral	Rat based on data for: (similar material)
Ethanol, 2,2'-iminobis, n-tallow alkyl derivs.	LD50	1200 to 1500 mg/kg	Oral	Rat
Amines, n-tallow alkyl trimethylenedi-	LD50	945 mg/kg	Oral	Rat
Poly(oxy-1,2-ethanediyl), a-hydroxy-w-hydroxy-	LD50	28000 mg/kg	Oral	Rat
	LD50	31000 mg/kg	Oral	Mouse
	LD50	14000 mg/kg	Oral	Rabbit
	LD50	>20000 mg/kg	Dermal	Rabbit

### Special Remarks on Toxicity to Animals

**Amines, N-tallow alkyltrimethylenedi-, ethoxylated:** Slight to moderate dermal irritation @ 7.72 mg/kg/day for 28 days. based on data for: (similar material)  
**Ethanol, 2,2'-iminobis, N-tallow alkyl derivs.:** INHALATION LC50 = 220 ppm @1 hour, rat based on data for: (similar material)  
**Amines, n-tallow alkyl trimethylenedi-:** Sub-chronic, NOEL (rat) = 670 ppm.

### Special Remarks on Chronic Effects on Humans

**Amines, N-tallow alkyltrimethylenedi-, ethoxylated:** Embryotoxic at maternally toxic doses but not teratogenic @ >45 mg/kg (based on a similar substance).

### Acute Effects Skin

Corrosive to the skin. May cause sensitization by skin contact.

### Acute Effects Eyes

Corrosive to the eyes.

## Section 12. Ecological Information

### Ecotoxicity

Ingredient Name or Product name	Species	Period	Result
Amines, n-tallow alkyl trimethylenedi-	Fish (LC50)	96 hours	0.1 to 0.15 mg/l
Poly(oxy-1,2-ethanediyl), a-hydroxy-w-hydroxy-	Daphnia (EC50)	48 hours	>10000 mg/l
	Fish (LC50)	24 hours	>5000 mg/l

### Biodegradability and Ecotoxicity Remarks

**Amines, N-tallow alkyltrimethylenedi-, ethoxylated:** 14% @ 28 day(s) CBT; 40% @ 241 day(s) CBT based on data for: (similar material)  
**Ethanol, 2,2'-iminobis, N-tallow alkyl derivs.:** 52% @ 28 day(s) CBT; 62% @ 35 day(s) CBT based on data for: (similar material)  
**Amines, n-tallow alkyl trimethylenedi-:** 62% @ 28 day(s) CBT based on data for: (similar material)  
**Poly(oxy-1,2-ethanediyl), a-hydroxy-w-hydroxy-:** 5% @ 5 day(s) CBT 38% @ 10 day(s) CBT 70% @ 20 day(s) CBT

### 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>	UN2735	Amines, liquid, corrosive, n.o.s. (Alkoxylated fatty amines)	8 -	III		-
<b>TDG Classification</b>	UN2735	AMINES, LIQUID, CORROSIVE, N.O.S. (Alkoxylated fatty amines)	8 -	III		<b>Special Provisions Classified in Accordance with UN Recommendations</b>
<b>IMDG Class</b>	UN2735	AMINES, LIQUID, CORROSIVE, N.O.S. (Alkoxylated fatty amines)	8 -	III		-
<b>IATA-DGR Class</b>	UN2735	Amines, liquid, corrosive, n.o.s. (Alkoxylated fatty 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.: 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: ETHODUOMEEN® T/13

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

T/13: 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.

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CEPA DSL: Amines, N-tallow alkyltrimethylenedi-, ethoxylated; Ethanol, 2,2'-iminobis, N-tallow alkyl derivs.; Amines, n-tallow alkyl trimethylenedi-; Poly(oxy-1,2-ethanediyl), a-hydroxy-w-hydroxy-

	Component	EC Number	EC Status	EC Annex
European Union	Amines, n-tallow alkyltrimethylenedi-, ethoxylated	Not available.	Not available.	Not available.
	Ethanol, 2,2'-iminobis, n-tallow alkyl derivs.	263-177-5	Not available.	Not available.
	Amines, n-tallow alkyl trimethylenedi-	263-189-0	Not available.	Not available.
	Poly(oxy-1,2-ethanediyl), a-hydroxy-w-hydroxy-	Not available.	Not available.	Not available.

**Other International Lists** Australia (NICNAS): Amines, N-tallow alkyltrimethylenedi-, ethoxylated; Ethanol, 2,2'-iminobis, N-tallow alkyl derivs.; Amines, n-tallow alkyl trimethylenedi-; Poly(oxy-1,2-ethanediyl), a-hydroxy-w-hydroxy-

Japan (MITI): Amines, N-tallow alkyltrimethylenedi-, ethoxylated; Poly(oxy-1,2-ethanediyl), a-hydroxy-w-hydroxy-

Korea (TCCL): Amines, N-tallow alkyltrimethylenedi-, ethoxylated; Ethanol, 2,2'-iminobis, N-tallow alkyl derivs.; Amines, n-tallow alkyl trimethylenedi-; Poly(oxy-1,2-ethanediyl), a-hydroxy-w-hydroxy-

Philippines (RA6969): Amines, N-tallow alkyltrimethylenedi-, ethoxylated; Ethanol, 2,2'-iminobis, N-tallow alkyl derivs.; Amines, n-tallow alkyl trimethylenedi-; Poly(oxy-1,2-ethanediyl), a-hydroxy-w-hydroxy-

## 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

5/25/2005.

### 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.