



JCH: JCL: TGG: RF

XF: 0100

Interoffice Communication

To Chuck Glover
From Tom Grumbles
Date April 27, 1984
Subject PRINTING OF MSDSs

Please print 100 copies each of the attached MSDSs for ALFONIC 610-60, ALFONIC 810-40, and ALFONIC 1216-30.



Thomas G. Grumbles

ajo

Attachment

VVV 000012295



Conoco Chemicals Company
P.O. Box 19029
Houston, TX 77224

MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

MANUFACTURER'S NAME	Conoco Chemicals Company		
ADDRESS	P.O. Box 727, Westlake, LA 70669		
TRADE NAME	ALFONIC 810-40 Ethoxylate		
SYNONYMS			
REGULAR TELEPHONE NO.	(318) 491-5403	EMERGENCY TELEPHONE NO.	(318) 491-5142

2. HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA

3. PHYSICAL DATA

BOILING POINT (°F)	IBP 412°	SPECIFIC GRAVITY (H ₂ O = 1)	0.930
VAPOR PRESSURE (mm Hg.)	<1 @ 70°F	PERCENT VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR = 1)		EVAPORATION RATE (_____ = 1)	
SOLUBILITY IN WATER	Approx. 2%	MELTING POINT	5-7 °F
APPEARANCE AND ODOR	Clear colorless liquid. Sweet pungent odor.		

4. FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	240°F (PM)	AUTOIGNITION TEMPERATURE	
FLAMMABLE LIMITS IN AIR. % BY VOL.	LOWER		UPPER
EXTINGUISHING MEDIA	Water spray; carbon dioxide, dry chemical .		
SPECIAL FIRE FIGHTING PROCEDURES	Cool exposed equipment with water spray. Self-contained breathing apparatus should be worn if fighting fires in confined spaces.		
UNUSUAL FIRE AND EXPLOSION HAZARD			

VVV 000012296

5. HEALTH HAZARD INFORMATION

FIRST AID

EYES:	Flush eyes with large amounts of water for at least 15 minutes. If irritation persists, seek medical aid.
SKIN:	Flush with water, then wash affected area with mild soap and water.
INHALATION:	Remove to fresh air. If breathing has stopped, administer artificial respiration or oxygen. Seek medical aid.
INGESTION:	Do Not Induce Vomiting. If large amounts are ingested, gastric lavage with large amounts of water or 5 percent sodium bicarbonate by qualified persons. Seek medical aid.

NATURE OF HAZARD

EYES:	Irritation may occur with exposure to concentrated vapors. Liquid is contact irritant. May cause corneal inflammation.
SKIN:	Repeated or prolonged contact can cause reddening of the skin, scaling, and dermatitis.
INHALATION:	This material is a negligible hazard due to its low volatility. If vapor is present in high concentrations, irritation to upper respiratory tract may occur.
INGESTION:	Low order of toxicity. No hazard by this route in normal use.

EFFECTS OF OVEREXPOSURE:

ACUTE OVEREXPOSURE: Irritation of contacted areas.

CHRONIC OVEREXPOSURE: Unknown.

THRESHOLD LIMIT VALUE (TLV)

None established.

TOXICITY DATA

SKIN CONTACT:	Acute Dermal LD ₅₀ , Rabbits: 1.5-5.0 g/kg Skin Irritation Index, Rabbits: 1.5 to 3.2 (Max. possible score is 8.0).
EYE CONTACT:	Eye Irritation Index: 32-58 (72 hrs. after exposure) (max. possible score is 110)
INHALATION:	
INGESTION:	Acute Oral LD ₅₀ , Rat: 3-5 g/kg.

VVV 000012297

SPECIAL PRECAUTIONS: Avoid Eye Contact.

6. REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY

High temperatures.

INCOMPATIBILITY

Can react with strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

Should not occur.

7. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Eliminate open flames. Contain the spill. Keep out of sewage systems. Excessive foaming may occur.

NEUTRALIZING CHEMICALS

WASTE DISPOSAL METHOD

May be picked up mechanically or with a solid sorbent and sent to an approved landfill or incinerated in accordance with federal, state, and local regulations.

8. SPECIAL PROTECTION INFORMATION

VENTILATION REQUIREMENTS

Mechanical ventilation may be necessary if working with this product in enclosed areas. Trace amounts of ethylene oxide may be present in the product and could accumulate in vapor spaces of storage or transport vessels. The ACGIH TLV for ethylene oxide is 10 ppm.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL):

If needed, NIOSH approved organic vapor respirators should be worn.

EYE:

Chemical goggles or full-face shield to protect from splash.

GLOVES:

Rubber or other impervious material to avoid repeated or prolonged skin contact.

OTHER CLOTHING AND EQUIPMENT:

Other impervious clothing as needed to avoid repeated or prolonged skin contact.

VVV 000012298

9. SPECIAL PRECAUTIONS

HAZARD CLASSIFICATION INFORMATION

IMCO HAZARD CLASS AND NUMBER	US DOT CLASSIFICATION No hazard classification.
UN NUMBER	EEC DANGEROUS SUBSTANCE CLASSIFICATION
ADR CLASS NUMBER	EEC SPECIAL RISKS AND SAFETY ADVICE
CAS NUMBER 68439-45-2	

TRANSPORTATION AND STORAGE

USUAL SHIPPING CONTAINERS Tank cars Tank trucks Drums	ELECTROSTATIC ACCUMULATION HAZARD
	STORAGE/TRANSPORT PRESSURE Ambient
STORAGE TRANSPORT TEMPERATURE Ambient	LOADING/UNLOADING TEMPERATURE Ambient
	VISCOSITY AT LOADING/ UNLOADING TEMPERATURE

HANDLING AND STORAGE MATERIALS AND COATINGS

SUITABLE	UNSUITABLE
Carbon steel—if moisture control is suitable. Recommend baked phenolic coating. Stainless Steel Aluminum	Zinc Galvanized

THE ABOVE DATA IS BASED ON TESTS AND EXPERIENCE WHICH CONOCO BELIEVES RELIABLE AND ARE SUPPLIED FOR INFORMATIONAL PURPOSES ONLY. CONOCO DISCLAIMS ANY LIABILITY FOR DAMAGE OR INJURY WHICH RESULTS FROM THE USE OF THE ABOVE DATA AND NOTHING CONTAINED THEREIN SHALL CONSTITUTE A GUARANTEE, WARRANTY (INCLUDING WARRANTY OF MERCHANTABILITY) OR REPRESENTATION (INCLUDING FREEDOM FROM PATENT LIABILITY) BY CONOCO WITH RESPECT TO THE DATA, THE PRODUCT DESCRIBED, OR THEIR USE FOR ANY SPECIFIC PURPOSE, EVEN IF THAT PURPOSE IS KNOWN TO CONOCO.

VVV 000012299



Conoco Chemicals Company
P.O. Box 19029
Houston, TX 77224

MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

MANUFACTURER'S NAME	Conoco Chemicals Company
ADDRESS	P.O. Box 727, Westlake, LA 70669
TRADE NAME	ALFONIC 610- 60
SYNONYMS	
REGULAR TELEPHONE NO.	(318) 491-5403
EMERGENCY TELEPHONE NO.	(318) 491-5142

2. HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA

3. PHYSICAL DATA

BOILING POINT (°F)	IBP 377	SPECIFIC GRAVITY (H ₂ O = 1)	0.98
VAPOR PRESSURE (mm Hg.)	<1 @ 70°F	PERCENT VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR = 1)		EVAPORATION RATE (_____ = 1)	
SOLUBILITY IN WATER	Approx. 2%	MELTING POINT	25-28 °F
APPEARANCE AND ODOR	Clear colorless liquid. Sweet pungent odor.		

4. FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	248 °F (PM)	AUTOIGNITION TEMPERATURE	
FLAMMABLE LIMITS IN AIR. % BY VOL.	LOWER	UPPER	
EXTINGUISHING MEDIA	Water spray; carbon dioxide, dry chemical .		
SPECIAL FIRE FIGHTING PROCEDURES	Cool exposed equipment with water spray. Self-contained breathing apparatus should be worn if fighting fires in confined spaces.		
UNUSUAL FIRE AND EXPLOSION HAZARD			

VVV 000012300

15. HEALTH HAZARD INFORMATION

FIRST AID

EYES:	Flush eyes with large amounts of water for at least 15 minutes. If irritation persists, seek medical aid.
SKIN:	Flush with water, then wash affected area with mild soap and water.
INHALATION:	Remove to fresh air. If breathing has stopped, administer artificial respiration or oxygen. Seek medical aid.
INGESTION:	Do Not Induce Vomiting. If large amounts are ingested, gastric lavage with large amounts of water or 5 percent sodium bicarbonate by qualified persons. Seek medical aid.

NATURE OF HAZARD

EYES:	Irritation may occur with exposure to concentrated vapors. Liquid is contact irritant. May cause corneal inflammation.
SKIN:	Repeated or prolonged contact can cause reddening of the skin, scaling, and dermatitis.
INHALATION:	This material is a negligible hazard due to its low volatility. If vapor is present in high concentrations, irritation to upper respiratory tract may occur.
INGESTION:	Low order of toxicity. No hazard by this route in normal use.

EFFECTS OF OVEREXPOSURE:

ACUTE OVEREXPOSURE: Irritation of contacted areas.

CHRONIC OVEREXPOSURE: Unknown.

THRESHOLD LIMIT VALUE (TLV)

None established.

TOXICITY DATA

This specific product has not been tested. Data from a very similar material is below.

SKIN CONTACT:	Acute Dermal LD ₅₀ , Rabbits: 1.5-1.7 g/kg Skin Irritation Index, Rabbits: 3.2 (Max. possible score is 8.0).
EYE CONTACT:	Eye Irritation Index: 58 (72 hrs. after exposure) (max. possible score is 110)
INHALATION:	All rats survived a 4-hour exposure to 8 mg/l.
INGESTION:	Acute Oral LD ₅₀ , Rat: 5.1 g/kg.

VVV 000012301

SPECIAL PRECAUTIONS: Avoid Eye Contact.

6. REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY

High temperatures.

INCOMPATIBILITY

Can react with strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

Should not occur.

7. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Eliminate open flames. Contain the spill. Keep out of sewage systems. Excessive foaming may occur.

NEUTRALIZING CHEMICALS

WASTE DISPOSAL METHOD

May be picked up mechanically or with a solid sorbent and sent to an approved landfill or incinerated in accordance with federal, state, and local regulations.

8. SPECIAL PROTECTION INFORMATION

VENTILATION REQUIREMENTS

Mechanical ventilation may be necessary if working with this product in enclosed areas. Trace amounts of ethylene oxide may be present in the product and could accumulate in vapor spaces of storage or transport vessels. The ACGIH TLV for ethylene oxide is 10 ppm.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL):

If needed, NIOSH approved organic vapor respirators should be worn.

EYE:

Chemical goggles or full-face shield to protect from splash.

GLOVES:

Rubber or other impervious material to avoid repeated or prolonged skin contact.

OTHER CLOTHING AND EQUIPMENT:

Other impervious clothing as needed to avoid repeated or prolonged skin contact.

VVV 000012302

9. SPECIAL PRECAUTIONS

HAZARD CLASSIFICATION INFORMATION

IMCO HAZARD CLASS AND NUMBER	US DOT CLASSIFICATION No hazard classification.
UN NUMBER	EEC DANGEROUS SUBSTANCE CLASSIFICATION
ADR CLASS NUMBER	EEC SPECIAL RISKS AND SAFETY ADVICE
CAS NUMBER 68439-45-2	

TRANSPORTATION AND STORAGE

USUAL SHIPPING CONTAINERS Tank cars Tank trucks Drums	ELECTROSTATIC ACCUMULATION HAZARD Ambient
	STORAGE/TRANSPORT PRESSURE Ambient
STORAGE TRANSPORT TEMPERATURE Ambient	LOADING/UNLOADING TEMPERATURE
	VISCOSITY AT LOADING/ UNLOADING TEMPERATURE

HANDLING AND STORAGE MATERIALS AND COATINGS

SUITABLE	UNSUITABLE
Carbon steel—if moisture control is suitable. Recommend baked phenolic coating. Stainless Steel Aluminum	Zinc Galvanized

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VVV 000012303



Conoco Chemicals Company
P.O. Box 19029
Houston, TX 77224

MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

MANUFACTURER'S NAME Conoco Chemicals Company

ADDRESS P.O. Box 727, Westlake, LA 70669

TRADE NAME "Alfonic" 1216-30

SYNONYMS

REGULAR TELEPHONE NO. (318) 491-5403

EMERGENCY TELEPHONE NO. (318) 491-5142

2. HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA

3. PHYSICAL DATA

BOILING POINT (°F)	432 ° IBP	SPECIFIC GRAVITY (H ₂ O = 1)	0.909
VAPOR PRESSURE (mm Hg.)	<1 @ 70°F	PERCENT VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR = 1)		EVAPORATION RATE (_____ = 1)	
SOLUBILITY IN WATER	Nil	MELTING POINT	43-47°F
APPEARANCE AND ODOR	Clear, colorless liquid. Sweet, pungent odor.		

4. FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	297°F (PM)	AUTOIGNITION TEMPERATURE	
FLAMMABLE LIMITS IN AIR. % BY VOL.	LOWER		UPPER
EXTINGUISHING MEDIA	Water spray; carbon dioxide, dry chemical, alcohol-approved foam.		
SPECIAL FIRE FIGHTING PROCEDURES	Cool exposed equipment with water spray. Self-contained breathing apparatus should be worn if fighting fires in confined spaces.		
UNUSUAL FIRE AND EXPLOSION HAZARD			

VVV 000012304

5. HEALTH HAZARD INFORMATION

FIRST AID

- EYES:** Flush eyes with large amounts of water for at least 15 minutes. If irritation persists, seek medical aid.
- SKIN:** Flush with water, then wash affected area with mild soap and water.
- INHALATION:** Remove to fresh air. If breathing has stopped, administer artificial respiration or oxygen. Seek medical aid.
- INGESTION:** **Do Not Induce Vomiting.** If large amounts are ingested, gastric lavage with large amounts of water or 5 percent sodium bicarbonate by qualified persons. **Seek medical aid.**

NATURE OF HAZARD

- EYES:** Irritation may occur with exposure to concentrated vapors. Liquid is contact irritant. May cause corneal inflammation.
- SKIN:** Repeated or prolonged contact can cause reddening of the skin, scaling, and dermatitis.
- INHALATION:** This material is a negligible hazard due to its low volatility. If vapor is present in high concentrations, irritation to upper respiratory tract may occur.
- INGESTION:** Low order of toxicity. No hazard by this route in normal use.

EFFECTS OF OVEREXPOSURE:

- ACUTE OVEREXPOSURE:** Irritation of contacted areas.
- CHRONIC OVEREXPOSURE:** Unknown.

THRESHOLD LIMIT VALUE (TLV)

None established.

TOXICITY DATA

- This specific product has not been tested. Data from a very similar product is below.
- SKIN CONTACT:** Acute Dermal LD₅₀, Rabbits: ca 4 g/kg
Skin Irritation Index, Rabbits: 4.3
(Maximum possible score is 8.0)
- EYE CONTACT:** Eye Irritation Index in Rabbits: 6.5
(Maximum possible score is 110)
- INHALATION:** All rats survived one-hour exposure of 6.3 mg/l.
- INGESTION:** Acute Oral LD₅₀, Rat: >5 g/kg

VVV 000012305

SPECIAL PRECAUTIONS: Avoid Eye Contact

6. REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY

High temperatures.

INCOMPATIBILITY

Can react with strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

Should not occur.

7. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Keep out of sewers. Excessive foaming may occur.

NEUTRALIZING CHEMICALS

WASTE DISPOSAL METHOD

May be picked up mechanically or with a solid sorbent and sent to an approved landfill or incinerated in accordance with federal, state, and local regulations.

8. SPECIAL PROTECTION INFORMATION

VENTILATION REQUIREMENTS

Mechanical ventilation may be necessary if working with this product in enclosed areas. Trace amounts of ethylene oxide may be present in the product and could accumulate in vapor spaces of storage or transport vessels. The ACGIH TLV for ethylene oxide is 10 ppm.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL):

If needed, NIOSH approved organic vapor respirators should be worn.

EYE:

Chemical goggles or full-face shield to protect from splash.

GLOVES:

Rubber or other impervious material to avoid repeated or prolonged skin contact.

OTHER CLOTHING AND EQUIPMENT:

Other impervious clothing as needed to avoid repeated or prolonged skin contact.

VVV 000012306

9. SPECIAL PRECAUTIONS

HAZARD CLASSIFICATION INFORMATION

IMCO HAZARD CLASS AND NUMBER	US DOT CLASSIFICATION No hazard classification.
UN NUMBER	EEC DANGEROUS SUBSTANCE CLASSIFICATION
ADR CLASS NUMBER	EEC SPECIAL RISKS AND SAFETY ADVICE
CAS NUMBER 68551-12-2	

TRANSPORTATION AND STORAGE

USUAL SHIPPING CONTAINERS Tank cars Tank trucks Drums	ELECTROSTATIC ACCUMULATION HAZARD
	STORAGE/TRANSPORT PRESSURE Ambient
STORAGE TRANSPORT TEMPERATURE Ambient	LOADING/UNLOADING TEMPERATURE Ambient
	VISCOSITY AT LOADING/ UNLOADING TEMPERATURE

HANDLING AND STORAGE MATERIALS AND COATINGS

SUITABLE	UNSUITABLE
Carbon steel—if moisture control is suitable Recommend baked phenolic coating Stainless steel Aluminum	Zinc Galvanized

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VVV 000012307