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Witco

Witfield Division

Witco Chemical Corporation, P. O. Box 4506, Carson, CA 90749 Telephone (213) 830-4353

February 19, 1981

(A)

8494000090

Enviro Control, Inc.  
One Central Plaza  
11300 Rockville Pike  
Rockville, MD 20852  
Attn: Dr. G. Parris



8494000090

Dear Dr. Parris:

In response to your letter from February 4, I am attaching the Technical Bulletins and M.S.D.S. in triplicate on our Dodane-S and Tridane-S. As you can see from those data, neither commodity is pure dodecyl or tridecylbenzene, but mixtures of various carbon number distribution.

Both products are intermediates for the detergent manufacture and used by such customers as Procter & Gamble, Colgate, Lever, etc.

No toxicological tests on these detergent alkylates have been performed at our location.

Dodane-S has been produced and handled at our plant since 1966 at an annual rate of approximately 45 mm lbs in a closed continuous system without having shown any adverse effect on our personnel.

All our employees (36) are given annual physicals with special emphasis on blood and urine tests in accordance with OSHA regulations pertaining to benzene exposure.

I hope this answers all your questions, but please feel free to call me at (213) 830-4353, if you should have any more.

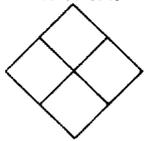
Sincerely,

John Corinth  
V.P. for Manufacturing

JC/ef  
Enclosures  
cc: E.A. Vistica

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10/13/94



(Approved by U.S. Department of Labor "Essentially Similar" to Form LSB-00S-4)

Information on this form is furnished solely for the purpose of compliance with the Occupational Safety and Health Act of 1970 and shall not be used for any other purpose. Use or dissemination of all or any part of this information for any other purpose or purposes is illegal.

PRODUCT TRIDANE-S

PRODUCT SECTION I					
MANUFACTURER'S NAME <b>WITCO CHEMICAL-WITFIELD DIVISION</b>				EMERGENCY TELEPHONE NO.	
ADDRESS (NUMBER, STREET, CITY, STATE, AND ZIP CODE) <b>2100 E. 223rd STREET, CARSON, CALIF. 90745</b>					
CHEMICAL NAME AND SYNONYMS <b>Detergent Alkylate; Alkane</b>			TRADE NAME AND SYNONYMS <b>TRIDANE</b>		
CHEMICAL FAMILY <b>Monoalkylbenzene</b>			FORMULA <b>(C<sub>11</sub> to C<sub>15</sub>) - C<sub>6</sub>H<sub>6</sub></b>		
SECTION II HAZARDOUS INGREDIENTS					
INGREDIENT	%	TLV (UNITS)	INGREDIENT	%	TLV (UNITS)
<b>Alkylbenzene</b>	<b>100</b>	<b>uk.</b>			
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (UNITS)

### SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	<b>590</b>	SPECIFIC GRAVITY (H <sub>2</sub> O = 1)	<b>.86-.87</b>
VAPOR PRESSURE (mm Hg.)	<b>1</b>	PERCENT VOLATILE BY VOLUME (%)	<b>.1</b>
VAPOR DENSITY (AIR = 1)		EVAPORATION RATE ( = 1)	
SOLUBILITY IN WATER	<b>0</b>		
APPEARANCE AND ODOR	<b>Clear, colorless, odorless</b>		

### SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED)	<b>330 F (C.O.C.)</b>	FLAMMABLE LIMITS	LEL	UEL
EXTINGUISHING MEDIA	<b>Fire-foam, CCl<sub>4</sub> - Extinguishers</b>			
SPECIAL FIRE FIGHTING PROCEDURES	<b>Like petroleum products - cool surrounding area with water. (Fog nozzle)</b>			
UNUSUAL FIRE AND EXPLOSION HAZARDS				

**SECTION V HEALTH HAZARD DATA**

THRESHOLD LIMIT VALUE	<b>Unknown</b>
EFFECTS OF OVEREXPOSURE	<b>Unknown</b>
<b>Some people may have an allergenic response</b>	
EMERGENCY AND FIRST AID PROCEDURES	
<b>SKIN: Wash with soap and water.</b>	
<b>EYES: Flush with water - if irritation persists, see a physician.</b>	

**SECTION VI REACTIVITY DATA**

STABILITY	UNSTABLE	<b>X</b>	CONDITIONS TO AVOID
	STABLE		<b>Open flame</b>
INCOMPATIBILITY (MATERIALS TO AVOID)			
HAZARDOUS DECOMPOSITION PRODUCTS			
HAZARDOUS POLYMERIZATION	MAY OCCUR	<b>X</b>	CONDITIONS TO AVOID
	WILL NOT OCCUR		

**SECTION VII SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
<b>Handle like lube-oil spills. Keep away from open fire.</b>
WASTE DISPOSAL METHOD
<b>Check with local authorities for normal waste disposal.</b>

**SECTION VIII SPECIAL PROTECTION INFORMATION**

RESPIRATORY PROTECTION (SPECIFY TYPE)			
PROTECTIVE GLOVES		EYE PROTECTION	
VENTILATION	LOCAL EXHAUST	<b>Recommended</b>	<b>Recommended</b>
	MECHANICAL	<b>Recommended</b>	OTHER
OTHER PROTECTIVE EQUIPMENT <b>If necessary</b>			

**SECTION IX SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
<b>None</b>
OTHER PRECAUTIONS

Date Issued 1-5-81 Supplier's Signature \_\_\_\_\_

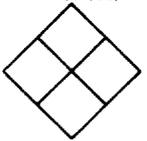
Title V.P. of Manufacturing Company J. Corinth  
Witco Chemical Corp.-Witfield Division

**RETURN TO**  
 Name \_\_\_\_\_  
 Company \_\_\_\_\_  
 Address \_\_\_\_\_

# Witco Chemical MATERIAL SAFETY DATA SHEET

File No. \_\_\_\_\_

N.F.P.A.



(Approved by U.S. Department of Labor "Essentially Similar" to Form LSB-00S-4)

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PRODUCT DODANE-S

PRODUCT SECTION I					
MANUFACTURER'S NAME <b>WITCO CHEMICAL - Witfield Division</b>				EMERGENCY TELEPHONE NO. <b>830-4353</b>	
ADDRESS (NUMBER, STREET, CITY, STATE, AND ZIP CODE) <b>2100 E. 223rd St., Carson California 90745</b>					
CHEMICAL NAME AND SYNONYMS <b>Detergent Alkylate; Alcane</b>			TRADE NAME AND SYNONYMS <b>DODANE-S and DODANE-12</b>		
CHEMICAL FAMILY <b>Monoalkylbenzene</b>			FORMULA <b>(C<sub>10</sub> to C<sub>14</sub>) - C<sub>6</sub>H<sub>6</sub></b>		
SECTION II HAZARDOUS INGREDIENTS					
INGREDIENT	%	TLV (UNITS)	INGREDIENT	%	TLV (UNITS)
<b>Alkylbenzene</b>	<b>100</b>	<b>uk.</b>			
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (UNITS)

SECTION III - PHYSICAL DATA			
BOILING POINT (°F.)	<b>540</b>	SPECIFIC GRAVITY (H <sub>2</sub> O = 1)	<b>.85 - .87</b>
VAPOR PRESSURE (mm Hg.)	<b>&lt; 1</b>	PERCENT VOLATILE BY VOLUME (%)	<b>&lt; .1</b>
VAPOR DENSITY (AIR = 1)		EVAPORATION RATE ( = 1)	
SOLUBILITY IN WATER	<b>0</b>		
APPEARANCE AND ODOR	<b>clear, colorless, odorless</b>		

SECTION IV FIRE AND EXPLOSION HAZARD DATA			
FLASH POINT (METHOD USED)	<b>320°F (C.O.C.)</b>	FLAMMABLE LIMITS	LEL
EXTINGUISHING MEDIA	<b>Fire-Foam, CCl<sub>4</sub> - Extinguishers</b>		
SPECIAL FIRE FIGHTING PROCEDURES	<b>Like petroleum products - cool surrounding area with water. (Fog nozzle)</b>		
UNUSUAL FIRE AND EXPLOSION HAZARDS			

SECTION V HEALTH HAZARD DATA	
THRESHOLD LIMIT VALUE	Unknown
EFFECTS OF OVEREXPOSURE	Unknown
Some people may have an allergenic response	
EMERGENCY AND FIRST AID PROCEDURES	
SKIN: Wash with soap and water.	
EYES: Flush with water - if irritation persists, see a physician.	

SECTION VI REACTIVITY DATA			
STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	Open flame
INCOMPATIBILITY (MATERIALS TO AVOID)			
HAZARDOUS DECOMPOSITION PRODUCTS			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII SPILL OR LEAK PROCEDURES	
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	
Handle like lube-oil spills. Keep away from open fire.	
WASTE DISPOSAL METHOD	
Check with local authorities for normal waste disposal.	

SECTION VIII SPECIAL PROTECTION INFORMATION			
RESPIRATORY PROTECTION (SPECIFY TYPE)			
PROTECTIVE GLOVES	Recommended	EYE PROTECTION	Recommended
VENTILATION	LOCAL EXHAUST	Recommended	SPECIAL
	MECHANICAL (GENERAL)	If necessary	OTHER
OTHER PROTECTIVE EQUIPMENT			

SECTION IX SPECIAL PRECAUTIONS	
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	
NONE	
OTHER PRECAUTIONS	

Date Issued 12-28-71 Supplier's Signature J. Corinth

Title Ass't. General Manager Company Witco Chemical - Witfield Division

**RETURN TO**

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

**DODANE® S**

**DESCRIPTION**

*Dodane S* alkylate is a linear alkylbenzene, equally suited to yield high quality sulfonate via SO<sub>3</sub> or oleum sulfonation.

**PHYSICAL PROPERTIES**

TEST	SPECIFICATION	TYPICAL
Specific Gravity at 60° F	.85 - .87	.865
Pounds per gallon	—	7.205
Appearance	Clear & Bright	Clear & Bright
Saybolt Color	30 min.	30+
Viscosity, SSU, 100° F	—	40.8
Flash Point, C.O.C. ° F	—	320
Distillation, ASTM-D86, ° F		
5%	540 min.	547
50%	550-560	557
95%	580 max.	574

**CHEMICAL ANALYSIS**

Chloride, %	.05 max.	.02
Bromine Number	.01 max.	.002
Water, ppm	100 max.	35
AWC, ASTM-D 1569-17	8 max.	5
Doctor Test	Negative	Negative

**G. C. ANALYSIS, WT. %**

Mass Distribution		
øC 9 and lighter	.5 max.	.2
øC 10	25 max.	12.8
øC 11	25-50	41.7
øC 10 + øC 11	50 min.	54.5
øC 12	25 min.	37.9
øC 13	10 max.	7.0
øC 14 & heavier	1 max.	.4
øC 10 + øC 11 + øC 12	85 min.	92.4
2-phenyl Isomer	25-35	28.6
Average Molecular Weight	236-238	237.4

## AVAILABILITY

*Dodane S* alkylbenzene is available in tank cars, tank trucks, barges or tankers from Witco's Carson, California plant and Witco's terminal in San Pedro, California.

## STORAGE AND HANDLING

*Dodane S* alkylbenzene can be handled in carbon steel equipment.

Wear chemical resistant gloves, chemical splash goggles and protective clothes. Spills may cause allergenic responses and should be washed with soap and water.

Keep away from open flame. In case of fire *Dodane S* alkylbenzene should be treated in the same manner as lube oil (dry chemicals and foam).

The above data is for information only and shall not constitute a guarantee or warranty.

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**Witco**  
**Chemical**  
**Witfield Division**

277 Park Avenue, New York, New York 10017

The information presented herein is based on the best data available and is believed to be correct. However, nothing stated in this bulletin is to be taken as a warranty, expressed or implied, either of merchantability or fitness for any particular purpose, regarding the accuracy of the information or the use of our product or products.

# Witco

## Witfield Division

Witco Chemical Corporation, P. O. Box 4506, Carson, CA 90749 Telephone (213) 830-4353

### TRIDANE-S

#### DESCRIPTION

Tridane-S alkylate is a linear alkylbenzene, equally suited to yield high quality sulfonate via  $\text{SO}_3$  or oleum sulfonation.

#### PHYSICAL PROPERTIES

TEST	SPECIFICATION	TYPICAL
Specific Gravity at 60 F	.86 - .87	.866
Pounds per Gallon	-	7.212
Appearance	Clear & Bright	Clear & Bright
Saybolt Color	30 min	30+
Viscosity, SSU, 100 F	-	42
Flash Point, C.O.C. F	-	340
Distillation, ASTM-D86, F		
5%	585 min	590
50%	595 - 605	600
95%	625 max	618

#### CHEMICAL ANALYSIS

Chloride, %	.1 max	.03
Bromine Number	.01 max	.003
Water, ppm	100 max	40
AWC, ASTM-D 1569-17	10 max	6
Doctor Test	Negative	Negative

#### G.C. ANALYSIS, WT. %

Mass Distribution		
ØC 9 and lighter	.5 max	.1
ØC 10	2 max	1.0
ØC 10 + ØC 11	6 max	4.5
ØC 12	-	10.0
ØC 13	-	52.0
ØC 14	45 max	28.0
ØC 13 + ØC 14	70 - 90	80.0
ØC 15 and heavier	6 max	4.5
2-phenyl Isomer	24 - 30	26.0
Average Molecular Weight	258 - 266	263