

Safety Data Sheet

Version 2.0
Revision Date 12/30/2014

SDS Number 300000021256
Print Date 01/03/2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : TOMADOL[®] 600 SURFACTANT

Product Use Description : Surfactant

Manufacturer/Importer/Distributor : Air Products and Chemicals, Inc
7201 Hamilton Blvd.
Allentown, PA 18195-1501
GST No. 123600835 RT0001
QST No. 102753981 TQ0001

Telephone : 1-610-481-4911 Corporate
1-800-345-3148 Chemicals Cust Serv
1-800-752-1597 Gases/Electronics Cust Serv

Emergency telephone number (24h) : 800-523-9374 USA
+1 610 481 7711 International

2. HAZARDS IDENTIFICATION

GHS classification

Acute toxicity - Oral Category 4
Skin irritation - Category 2
Serious Eye Damage - Category 1

GHS label elements

Hazard pictograms/symbols



Signal Word: Danger

Hazard Statements:

H302:Harmful if swallowed.
H315:Causes skin irritation.
H318:Causes serious eye damage.

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Precautionary Statements:

- Prevention : P264:Wash hands thoroughly after handling.
P270:Do not eat, drink or smoke when using this product.
P280:Wear eye protection/face protection.
P280c:Wear protective gloves/clothing.
- Response : P301+P312 :IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302+P352 :IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 :IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 :Immediately call a POISON CENTRE or doctor/physician.
P330 :Rinse mouth.
- Disposal : P501:Disposal of contents/container to be specified in accordance with regulations.

Hazards not otherwise classified

Harmful if swallowed.
Irritating to skin.
Risk of serious damage to eyes.
Harmful in contact with skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Concentration (Weight)
Alcohols, C10-16, ethoxylated	68002-97-1	100 %

The composition is trade secret. CHEMICAL FAMILY: Ethoxylated Alcohol

4. FIRST AID MEASURES

- General advice : Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.
- Eye contact : Remove contact lenses. Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes Rinse immediately with plenty of water also under the eyelids for at least 20 minutes. Hold eyelids apart, initiate and maintain gentle and continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour.
- Skin contact : Wash off with soap and plenty of water. Wash off immediately with plenty of water for at least 20 minutes. Immediately remove contaminated clothing, and

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any extraneous chemical, if possible to do so without delay.

- Ingestion : Never give anything by mouth to an unconscious person. Prevent aspiration of vomit. Turn victim's head to the side.
- Inhalation : Move to fresh air.
- Most important symptoms/effects - acute and delayed : Eye disease. Skin disorders and Allergies.

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Alcohol-resistant foam.
Carbon dioxide (CO₂).
Dry chemical.
Dry sand.
Limestone powder.
- Specific hazards : Incomplete combustion may form carbon monoxide. Burning produces noxious and toxic fumes. Downwind personnel must be evacuated.
- Special protective equipment for fire-fighters : Avoid contact with the skin. Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.
- Further information : Do not allow run-off from fire fighting to enter drains or water courses.

6. ACCIDENTAL RELEASE MEASURES

- Personal Precautions, Protective Equipment, and Emergency Procedures : Wear suitable protective clothing, gloves and eye/face protection. Evacuate personnel to safe areas.
- Environmental precautions : Do not allow spill to enter into sewers or waterways. Use appropriate containment to avoid environmental contamination. Construct a dike to prevent spreading.
- Methods for cleaning up : Approach suspected leak areas with caution. Contact Air Products' Emergency Response Center for advice. Place in appropriate chemical waste container.
- Additional advice : If possible, stop flow of product.

7. HANDLING AND STORAGE

Handling

Avoid contact with eyes. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. Use personal protective equipment. When using, do not eat, drink or smoke.

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Storage

Keep away from direct sunlight. Overheating of an ethoxylate stored under air should be avoided. When an ethoxylate is vigorously mixed in the presence of air or oxygen at temperatures >125 F (50 C), it can degrade product quality. Storage under an inert atmosphere is recommended.

Keep containers tightly closed in a dry, cool and well-ventilated place.

Storage Temperature : 55 - 125 F (12.77 - 51.67 °C)

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures

Provide readily accessible eye wash stations and safety showers.

Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits.

Personal protective equipment

Respiratory protection : Not required for properly ventilated areas.

Hand protection : Neoprene gloves.
Nitrile rubber.
Impervious gloves.
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye protection : Full face shield with goggles underneath.
Chemical resistant goggles must be worn.

Skin and body protection : Impervious clothing.
Long sleeve shirts and trousers without cuffs.

Environmental exposure controls : Do not allow spill to enter into sewers or waterways. Use appropriate containment to avoid environmental contamination.

Special instructions for protection and hygiene : Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Wash hands at the end of each workshift and before eating, smoking or using the toilet. Launder or discard contaminated clothing. Provide readily accessible eye wash stations and safety showers.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid. Colorless.

Odor : Mild.

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Odor threshold	: No data available.
pH	: No data available.
Melting point/range	: No data available.
Boiling point/range	: > 500 °F (> 260 °C)
Flash point	: 315 °F (157.2 °C)
Evaporation rate	: No data available.
Flammability (solid, gas)	: Not applicable.
Upper/lower explosion/flammability limit	: Not applicable.
Vapor pressure	: 0.10 mmHg at 100 °F (37.78 °C)
Water solubility	: Slightly soluble.
Relative vapor density	: Not applicable.
Relative density	: 0.965
Partition coefficient (n-octanol/water)	: No data available.
Auto-ignition temperature	: No data available.
Decomposition temperature	: No data available.
Viscosity	: No data available.
Molecular Weight	: No data available.

10. STABILITY AND REACTIVITY

Chemical Stability	: Stable under normal conditions.
Conditions to avoid	: No data available.
Materials to avoid	: Reactive metals (e.g. sodium, calcium, zinc etc.). Materials reactive with hydroxyl compounds. Copper alloys Strong acids. Oxidizing agents.

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Hazardous decomposition products : Carbon monoxide.
Carbon dioxide (CO₂).
Aldehydes
Flammable hydrocarbon fragments.

Possibility of hazardous Reactions/Reactivity : No data available.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Likely routes of exposure

- Effects on Eye : Causes eye burns. May cause blindness.
- Effects on Skin : Harmful in contact with skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Causes skin irritation.
- Inhalation Effects : No data available.
- Ingestion Effects : Harmful if swallowed.
- Symptoms : No data available.

Acute toxicity

- Acute Oral Toxicity : LD50 : > 1,400 mg/kg Species : Rat.
- Inhalation : No data is available on the product itself.
- Acute Dermal Toxicity : LD50 : 2,000 mg/kg Species : Rat.
- Skin corrosion/irritation : Severe skin irritation.
- Serious eye damage/eye irritation : Severe eye irritation.
- Sensitization. : No data available.

Chronic toxicity or effects from long term exposures

- Carcinogenicity : No data available.
- Reproductive toxicity : No data is available on the product itself.
- Germ cell mutagenicity : No data is available on the product itself.
- Specific target organ systemic : No data available.

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toxicity (single exposure)

Specific target organ systemic toxicity (repeated exposure) : No data available.

Aspiration hazard : No data available.

Delayed and Immediate Effects and Chronic Effects from Short and Long Term Exposure

This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. Prolonged contact may result in chemical burns and permanent damage. Eye disease., Skin disorders and Allergies.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Aquatic toxicity : (96 h) : 1 mg/l Species : Fathead minnow (*Pimephales promelas*).
LC50 : 0.46 mg/l Species : Daphnia

Toxicity to other organisms : No data available.

Persistence and degradability

Biodegradability : Readily biodegradable, as defined by OECD, substance that degrades > 60-70% within a 10 day window over 28 days.

Mobility : No data available.

Bioaccumulation : No data is available on the product itself.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products : The product should not be allowed to enter drains, water courses or the soil; dispose of this material and its container in a safe way. Contact supplier if guidance is required.

Contaminated packaging : Dispose of container and unused contents in accordance with federal, state, and local requirements.

14. TRANSPORT INFORMATION

DOT

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UN/ID No. : UN3082
Proper shipping name : Environmentally hazardous substances, liquid, n.o.s., (Alcohol Ethoxylate)
Class or Division : 9
Packing group : III
Label(s) : 9
Marine Pollutant : Yes

** NOTE: This product contains a substance that is regulated as a Marine Pollutant when transported in bulk packages (liquid – volume exceeding 450 liters, gas – water capacity exceeding 454 kilograms).

IATA

UN/ID No. : UN3082
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s., (Alcohol Ethoxylate)
Class or Division : 9
Packing group : III
Label(s) : 9
Marine Pollutant : Yes

** NOTE: This product contains a substance that: 1) is regulated as a Marine Pollutant, or 2) meets the definition of toxic to the aquatic environment.

IMDG

UN/ID No. : UN3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (Alcohol Ethoxylate)
Class or Division : 9
Packing group : III
Label(s) : 9
Marine Pollutant : Yes

** NOTE: This product contains a substance that: 1) is regulated as a Marine Pollutant, or 2) meets the definition of toxic to the aquatic environment.

TDG

UN/ID No. : UN3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (Alcohols C12-13 ethoxylated)
Class or Division : 9
Packing group : III
Label(s) : 9
Marine Pollutant : Yes

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** NOTE: This product contains a substance that: 1) is regulated as a Marine Pollutant, or 2) meets the definition of toxic to the aquatic environment.

Further Information

The transportation information is not intended to convey all specific regulatory data relating to this material. For complete transportation information, contact an Air Products customer service representative.

15. REGULATORY INFORMATION

Toxic Substance Control Act (TSCA) 12(b) Component(s):

None.

Country	Regulatory list	Notification
USA	TSCA	Included on Inventory.
EU	EINECS	Included on EINECS inventory or polymer substance, monomers included on EINECS inventory or no longer polymer.
Canada	DSL	Included on Inventory.
Australia	AICS	Included on Inventory.
Japan	ENCS	Included on Inventory.
South Korea	ECL	Included on Inventory.
China	SEPA	Included on Inventory.
Philippines	PICCS	Included on Inventory.

EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification

Acute Health Hazard

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level

None.

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

This product meets the criteria of the US EPA Design for Environment (DfE) Surfactant screen and is listed on CleanGredients.

16. OTHER INFORMATION

HMIS Rating

Health : 2
Flammability : 1

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Physical hazard : 0

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Preparation Date : 01/03/2015

For additional information, please visit our Product Stewardship web site at
<http://www.airproducts.com/productstewardship/>
