

Safety Data Sheet

Version 2.1
Revision Date 01/26/2015

SDS Number 300000021442
Print Date 05/17/2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : TOMADOL[®] 23-5 SURFACTANT

Product Use Description : Detergent

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.

Safety Data Sheet

Version 2.1

Revision Date 01/26/2015

SDS Number 300000021442

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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.
P280e:Wear protective gloves.
- 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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Concentration (Weight)
Alcohols, C12-13, ethoxylated	66455-14-9	100 %

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 : Rinse immediately with plenty of water for at least 15 minutes.
- Skin contact : Wash with water and soap as a precaution.
- Ingestion : Prevent aspiration of vomit. Turn victim's head to the side.
- Inhalation : Move to fresh air.
- Inhalation : No data available.

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Carbon dioxide (CO2).

Safety Data Sheet

Version 2.1

Revision Date 01/26/2015

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Dry chemical.
Dry sand.
Limestone powder.

Specific hazards : Incomplete combustion may form carbon monoxide.

Special protective equipment for fire-fighters : Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures : Evacuate personnel to safe areas.

Environmental precautions : Construct a dike to prevent spreading.

Methods for cleaning up : Place in appropriate chemical waste container.

Additional advice : If possible, stop flow of product.

7. HANDLING AND STORAGE

Handling

Use personal protective equipment. When using, do not eat, drink or smoke.

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.

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.
Chemical-resistant, impervious gloves complying with an approved standard

Safety Data Sheet

Version 2.1

Revision Date 01/26/2015

SDS Number 300000021442

Print Date 05/17/2015

should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

- Eye protection : Chemical safety glasses.
- Skin and body protection : No specific recommendation.
- Special instructions for protection and hygiene : Provide readily accessible eye wash stations and safety showers.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : Liquid.
- Odor : No data available.
- Odor threshold : No data available.
- pH : No data available.
- Melting point/range : 27 - 73 °F (-2.78 - 22.78 °C)
- 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
- 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.

Safety Data Sheet

Version 2.1

Revision Date 01/26/2015

SDS Number 300000021442

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Viscosity : 23 mPa.s at 100 F (37.77 °C)
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.

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

Acute toxicity

Acute Oral Toxicity : No data is available on the product itself.

Inhalation : No data is available on the product itself.

Acute Dermal Toxicity : No data is available on the product itself.

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.

Safety Data Sheet

Version 2.1

Revision Date 01/26/2015

SDS Number 300000021442

Print Date 05/17/2015

Germ cell mutagenicity : No data is available on the product itself.

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

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.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Aquatic toxicity : No data is available on the product itself.

Toxicity to fish - Components
Alcohols, C12-13, ethoxylated LC50 (96 h) : 1 mg/l Species : Fathead minnow (Pimephales promelas).

Toxicity to daphnia - Components
Alcohols, C12-13, ethoxylated LC50 (48 h) : < 1 mg/l Species : Daphnia magna.

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 : Contact supplier if guidance is required.

Safety Data Sheet

Version 2.1

Revision Date 01/26/2015

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products

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

14. TRANSPORT INFORMATION

DOT

Not dangerous goods

IATA

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

** 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., (Alcohols C12-13 ethoxylated)
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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Revision Date 01/26/2015

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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

Safety Data Sheet

Version 2.1

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Physical hazard : 0

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