

1. Identification

Product identifier **BIO-TERGE 804**

Other means of identification

Product code 0055

Recommended use Surfactant

Recommended restrictions For industrial use only.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Stepan Company
Address 22 West Frontage Road
 Northfield, IL 60093
 USA

Telephone General 1-847-446-7500

E-mail Not available.

Emergency phone number Medical 1-800-228-5635
 Chemtrec 1-800-424-9300
 Chemtrec Int'l +1 703-527-3887

2. Hazard(s) identification

Physical hazards Flammable liquids Category 3

Health hazards Acute toxicity, oral Category 4
 Skin corrosion/irritation Category 2
 Serious eye damage/eye irritation Category 1
 Carcinogenicity Category 2

Environmental hazards Hazardous to the aquatic environment, acute hazard Category 2
 Hazardous to the aquatic environment, long-term hazard Category 3

OSHA defined hazards Not classified.

Label elements



Signal word

Danger

Hazard statement

Flammable liquid and vapor. Harmful if swallowed. Causes skin irritation. Causes serious eye damage. Suspected of causing cancer. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep container tightly closed. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Response

If swallowed: Call a poison center/doctor if you feel unwell. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Specific treatment (see this label). Rinse mouth. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

Storage	Store in a well-ventilated place. Keep cool. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Anionic/nonionic detergent blend*		Proprietary*	40 - 60
Water		7732-18-5	40 - < 50
Ethanol		64-17-5	3 - < 5
Diethanolamine		111-42-2	< 1
Formaldehyde		50-00-0	< 0.2

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Rinse mouth. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
Most important symptoms/effects, acute and delayed	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent product from entering drains. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not get this material in contact with eyes. Do not taste or swallow. Avoid contact with skin. Avoid prolonged exposure. Avoid contact with clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Avoid release to the environment. Do not empty into drains.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep in an area equipped with sprinklers.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Formaldehyde (CAS 50-00-0)	STEL	2 ppm
	TWA	0.75 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Ethanol (CAS 64-17-5)	PEL	1900 mg/m3
		1000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Diethanolamine (CAS 111-42-2)	TWA	1 mg/m3	Inhalable fraction and vapor.
Ethanol (CAS 64-17-5)	STEL	1000 ppm	
Formaldehyde (CAS 50-00-0)	Ceiling	0.3 ppm	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Diethanolamine (CAS 111-42-2)	TWA	15 mg/m3
		3 ppm
Ethanol (CAS 64-17-5)	TWA	1900 mg/m3
		1000 ppm
Formaldehyde (CAS 50-00-0)	Ceiling	0.1 ppm
	TWA	0.016 ppm

Biological limit values	No biological exposure limits noted for the ingredient(s).
Exposure guidelines	
US - California OELs: Skin designation	
Diethanolamine (CAS 111-42-2)	Can be absorbed through the skin.
US ACGIH Threshold Limit Values: Skin designation	
Diethanolamine (CAS 111-42-2)	Can be absorbed through the skin.
Appropriate engineering controls	Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles) and a face shield.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Clear. Viscous.
Physical state	Liquid.
Form	Liquid.
Color	Yellow.
Odor	Not available.
Odor threshold	Not available.
pH	6 - 7.5 (as is)
Melting point/freezing point	5 °F (-15 °C)
Initial boiling point and boiling range	194 °F (90 °C)
Flash point	124.0 °F (51.1 °C) Setflash
Evaporation rate	Estimated slower than ethyl ether.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not Determined or Unknown
Vapor density	Estimated heavier than air.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.

Viscosity	797 cP @ 25C
Other information	
Density	8.80 lb/gal
Percent volatile	47 - 53 %
Pour point	10.4 °F (-12 °C)
VOC (Weight %)	1 - 5 % (Ethanol)

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye damage.
Ingestion	Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics
Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity
Harmful if swallowed. Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

Product	Species	Test Results
BIO-TERGE 804		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Oral		
LD50	Rat	1300 - 2400 mg/kg

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye damage.

Respiratory or skin sensitization

ACGIH sensitization	
Formaldehyde (CAS 50-00-0)	Sensitizer.

Respiratory sensitization	Not available.
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Skin sensitization	This product is not expected to cause skin sensitization.
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Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
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Carcinogenicity	Suspected of causing cancer.
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IARC Monographs. Overall Evaluation of Carcinogenicity

Diethanolamine (CAS 111-42-2)	2B Possibly carcinogenic to humans.
Formaldehyde (CAS 50-00-0)	1 Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

Formaldehyde (CAS 50-00-0)	Known To Be Human Carcinogen.
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US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Formaldehyde (CAS 50-00-0)

Cancer

Reproductive toxicity	Possible reproductive hazard.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not applicable.
Chronic effects	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity Toxic to aquatic life. Harmful to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

Product	Species	Test Results
BIO-TERGE 804		
Aquatic		
<i>Acute</i>		
Algae	EC50	Algae 42.3 mg/l, 72 hours
Crustacea	EC50	Daphnia 4.48 mg/l, 48 hours
Fish	LC50	Fish 2.6 mg/l, 96 hours
Components	Species	Test Results
Anionic/nonionic detergent blend		
Aquatic		
Crustacea	EC50	Water flea (Ceriodaphnia dubia) 4.14 - 4.95 mg/l, 48 hours

Persistence and degradability Readily biodegradable.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

Diethanolamine	-1.43
Ethanol	-0.31
Formaldehyde	0.35

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

General The provided transportation classifications are for bulk shipments only and may not be representative of all package/shipment sizes.

DOT

UN number UN1170
UN proper shipping name Ethanol Solutio (Diethanolamine RQ = 14493 LBS)
Transport hazard class(es)

Class 3

Subsidiary risk -

Packing group III

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number UN1170
UN proper shipping name Ethanol Solutio (RQ (Diethanolamine))
Transport hazard class(es)
 Class 3
 Subsidiary risk -
Packing group III
Environmental hazards No.
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number UN1170
UN proper shipping name Ethanol Solutio (RQ (Diethanolamine))
Transport hazard class(es)
 Class 3
 Subsidiary risk -
Packing group III
Environmental hazards
 Marine pollutant No.
Ems Not available.
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

DOT**IATA; IMDG****15. Regulatory information**

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA Hazardous Substance List (40 CFR 302.4)

Diethanolamine (CAS 111-42-2) Listed.
 Formaldehyde (CAS 50-00-0) Listed.

SARA 304 Emergency release notification

Formaldehyde (CAS 50-00-0) 100 LBS

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Formaldehyde (CAS 50-00-0)
 Cancer
 Skin sensitization
 Respiratory sensitization
 Eye irritation
 Skin irritation
 respiratory tract irritation
 Acute toxicity

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
 Immediate Hazard - Yes
 Delayed Hazard - Yes
 Fire Hazard - Yes
 Pressure Hazard - No
 Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
Formaldehyde	50-00-0	100	500 lbs		

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Diethanolamine	111-42-2	< 1
Formaldehyde	50-00-0	< 0.2

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Diethanolamine (CAS 111-42-2)
 Formaldehyde (CAS 50-00-0)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Formaldehyde (CAS 50-00-0)

Safe Drinking Water Act (SDWA) Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Ethanol (CAS 64-17-5) Low priority

US state regulations**US - New Jersey Community RTK (EHS Survey): Reportable threshold**

Diethanolamine (CAS 111-42-2)
 Formaldehyde (CAS 50-00-0)

US - New Jersey RTK - Substances: Listed substance

Diethanolamine (CAS 111-42-2)
 Ethanol (CAS 64-17-5)
 Formaldehyde (CAS 50-00-0)

US - Pennsylvania RTK - Hazardous Substances: Listed substance

Diethanolamine (CAS 111-42-2)
 Ethanol (CAS 64-17-5)
 Formaldehyde (CAS 50-00-0)

US - Pennsylvania RTK - Hazardous Substances: Special hazard

Formaldehyde (CAS 50-00-0)

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Diethanolamine (CAS 111-42-2)
 Formaldehyde (CAS 50-00-0)

US. Massachusetts RTK - Substance List

Diethanolamine (CAS 111-42-2)
 Ethanol (CAS 64-17-5)
 Formaldehyde (CAS 50-00-0)

US. Pennsylvania Worker and Community Right-to-Know Law

Diethanolamine (CAS 111-42-2)
 Ethanol (CAS 64-17-5)
 Formaldehyde (CAS 50-00-0)

US. Rhode Island RTK

Diethanolamine (CAS 111-42-2)
 Formaldehyde (CAS 50-00-0)

US. California Proposition 65

WARNING: This product may contain a chemical known to the State of California to cause cancer and birth defects or other reproductive harm: ethylene oxide (75-21-8).

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

1,4-dioxane (CAS 123-91-1)	Listed: January 1, 1988
Diethanolamine (CAS 111-42-2)	Listed: June 22, 2012
Formaldehyde (CAS 50-00-0)	Listed: January 1, 1988

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Methanol (CAS 67-56-1)	Listed: March 16, 2012
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International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory (NZIoC)	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Inventory (TCSI)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 11-10-2014

Revision date 05-03-2016

Version # 03

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Revision information Hazard(s) identification: Hazard statement
Hazard(s) identification: Prevention

The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes the need for transparency and accountability in financial reporting. The second part details the various methods used to collect and analyze data, including surveys, interviews, and focus groups. The third part presents the findings of the study, highlighting the key trends and insights. The final part concludes with recommendations for future research and practical applications of the findings.

The study was conducted over a period of six months, during which a total of 150 participants were interviewed. The data collected was analyzed using a combination of qualitative and quantitative methods. The results show that there is a significant correlation between the variables studied, and that the findings have important implications for the field.

In conclusion, the research has provided valuable insights into the complex issues being studied. The findings suggest that there is a need for further research in this area, and that the results can be used to inform policy and practice. The authors hope that this work will contribute to a better understanding of the subject and lead to more effective solutions.