

SAFETY DATA SHEET

Classified in accordance 29 CFR 1910.1200

1. Identification

Product identifier: TOMAMINE Q 14-2

Other means of identification

Recommended restrictions

Recommended use: Surfactant

Restrictions on use: Not determined.

Manufacturer/Importer/Distributor Information

Company Name : Evonik Corporation
Nutrition & Care
PO Box 34628
Richmond, VA 23234
USA

Telephone : +1 804 727 0700

Fax : +1 804 727 0845

E-mail : us-productsafety-cs@evonik.com

Emergency telephone number:

24-Hour Health : +1 800 424 9300 (CHEMTREC - US & CANADA)

Emergency : +1 800 681 9531 (CHEMTREC MEXICO)

+1 703 527 3887 (CHEMTREC WORLD)

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable liquids Category 3

Health Hazards

Skin corrosion Category 1C

Serious Eye Damage/Eye Irritation Category 1

Specific Target Organ Toxicity -
Single Exposure Category 3¹

Target Organs

1. Central nervous system.

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: Flammable liquid and vapor.
 Causes severe skin burns and eye damage.
 May cause drowsiness or dizziness.

Precautionary Statements

Prevention: Keep away from heat/sparks/open flames/hot surfaces. No smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling.

Response: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or 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. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage: Store in a well-ventilated place. Keep container tightly closed.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%) [*]
Quaternary amine	68478-94-4	≥70 - <90%
Propan-2-ol	67-63-0	≥10 - <25%

^{*} All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition Comments: Chemical family Quaternary Ammonium Compound
 The exact concentration has been withheld as a trade secret.

4. First-aid measures

Description of necessary first-aid measures

General information: Seek medical advice. If breathing is irregular or stopped, administer artificial respiration.

Inhalation: Move to fresh air. If breathing is irregular or stopped, administer artificial respiration.

Skin Contact:	Wash off immediately with soap and plenty of water. Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Flush immediately with copious amounts of water. Initiate and maintain continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour. Cover wound with sterile dressing.
Eye contact:	Rinse immediately with plenty of water for at least 15 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.
Ingestion:	Prevent aspiration of vomit. Turn victim's head to the side. If a person vomits when lying on his back, place him in the recovery position. Never give anything by mouth to an unconscious person.
Personal Protection for First-aid Responders:	Use personal protective equipment., Wear self-contained breathing apparatus for firefighting if necessary. Avoid contact with skin., A face shield should be worn.

Most important symptoms/effects, acute and delayed

Symptoms:	Up to now no symptoms are known.
Hazards:	No data available.

Indication of immediate medical attention and special treatment needed

Treatment:	Treat symptomatically.
-------------------	------------------------

5. Fire-fighting measures

General Fire Hazards:	Do not allow run-off from fire fighting to enter drains or water courses. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
------------------------------	---

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Carbon Dioxide. Dry chemical. Dry sand. Limestone powder Alcohol resistant foam.
Unsuitable extinguishing media:	No data available.

Specific hazards arising from the chemical:	Incomplete combustion may form carbon monoxide. May generate ammonia gas. May generate toxic nitrogen oxide gases. Burning produces noxious and toxic fumes. In the event of fire, cool tanks with water spray. Downwind personnel must be evacuated. Fire or intense heat may cause violent rupture of packages. May form explosive mixtures in air.
--	---

Special protective equipment and precautions for firefighters

Special fire fighting procedures:	No data available.
Special protective equipment for fire-fighters:	Use personal protective equipment. Wear self-contained breathing apparatus for firefighting if necessary. Avoid contact with skin. A face shield should be worn.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and eye/face protection. Use self-contained breathing apparatus and chemically protective clothing. Remove sources of ignition.

Accidental release measures:

If possible, stop flow of product. Open enclosed spaces to outside atmosphere. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

Methods and material for containment and cleaning up:

Place in appropriate chemical waste container. Call Emergency Response number for advice. Approach suspected leak areas with caution. Absorb with inert absorbent materials such as: Dry sand. Vermiculite. Activated charcoal.

Environmental Precautions:

Construct a dike to prevent spreading. Shut off or remove all ignition sources.

7. Handling and storage

Handling

Technical measures (e.g. Local and general ventilation):

Provide readily accessible eye wash stations and safety showers. Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits. Use explosion-proof equipment. Apply process controls to ensure safe operating conditions. Assess potential flammability hazards based on flashpoint and potential ignition sources.

Safe handling advice:

Use personal protective equipment. Discard contaminated leather articles. Wash hands at the end of each workshift and before eating, smoking or using the toilet. See "Flammable and Combustible Liquid Code" NFPA No. 30, National Fire Protection Association, Boston, MA. Overheating of a quaternary amine for prolonged periods above 180 F (82.22 C) can cause product to degrade. Use only in well-ventilated areas. Avoid breathing vapors and/or aerosols. Avoid contact with skin and eyes. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations.

Contact avoidance measures:

No data available.

Hygiene measures:

Provide readily accessible eye wash stations and safety showers.

Storage

Safe storage conditions:

Keep away from open flames, hot surfaces and sources of ignition. Recommended storage temperature: < 50 °C. Do not store near acids. Keep containers tightly closed in a dry, cool and well-ventilated place. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from heat and sources of ignition. Keep in a dry, cool place. Keep away from oxidizers.

Safe packaging materials:

No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Propan-2-ol	TWA	200 ppm	US. ACGIH Threshold Limit Values (03 2016)
	STEL	400 ppm	US. ACGIH Threshold Limit Values (03 2016)
	REL	400 ppm 980 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)

	STEL	500 ppm 1,225 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	400 ppm 980 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (03 2016)

Appropriate Engineering Controls

Provide readily accessible eye wash stations and safety showers. Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits. Use explosion-proof equipment. Apply process controls to ensure safe operating conditions. Assess potential flammability hazards based on flashpoint and potential ignition sources.

Individual protection measures, such as personal protective equipment

Eyeface protection: Full face shield with goggles underneath.

Skin Protection
Hand Protection:

Additional Information: 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. Additional Information: Butyl rubber., Nitrile rubber., Neoprene gloves, Polyvinyl Alcohol Gloves (PVA)., Impervious gloves

Skin and Body Protection:

No specific recommendations. Slicker Suit. Impervious clothing Full rubber suit (rain gear). Rubber or plastic boots

Respiratory Protection:

Not required for properly ventilated areas. Wear appropriate respirator when ventilation is inadequate.

Hygiene measures:

Provide readily accessible eye wash stations and safety showers.

9. Physical and chemical properties
Appearance
Physical state:

liquid

Form:

liquid

Color:

colourless

Odor:

Irritating.

Odor Threshold:

No data available.

pH:

No data available.

Freezing point:

-16.7 °C

Boiling Point:

No data available.

Flash Point:

23.9 °C

Evaporation Rate:

No data available.

Flammability (solid, gas):

No data available.

Explosive limit - upper (%):

No data available.

Explosive limit - lower (%):

No data available.

Vapor pressure:

119.9898 hPa (20 °C)

Vapor density (air=1):

No data available.

Density:

No data available.

Relative density:

0.95

Solubility(ies)
Solubility in Water:

No data available.

Solubility (other):

No data available.

Partition coefficient (n-octanol/water):

No data available.

Self Ignition Temperature:

No data available.

Decomposition Temperature:	No data available.
Kinematic viscosity:	No data available.
Dynamic viscosity:	160 mPa.s (20 °C)

Other information

Explosive properties:	No data available.
Oxidizing properties:	No data available.
Minimum ignition temperature:	No data available.
Metal Corrosion:	No data available.

10. Stability and reactivity

Reactivity:	see section "Possibility of hazardous reactions"
Chemical Stability:	Stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Heat, flames and sparks.
Incompatible Materials:	Reactive metals (e.g. sodium, calcium, zinc etc.). Materials reactive with hydroxyl compounds. Organic acids (i.e. acetic acid, citric acid etc.). Mineral Acid Sodium hypochlorite. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. Oxidizing agents. acids Alkalies. Alkali and alkaline earth metals - powdered aluminum, zinc, etc. Reacts with water to form corrosive acids.
Hazardous Decomposition Products:	Nitric acid. Ammonia Nitrogen Oxides Nitrogen oxide can react with water vapors to form corrosive nitric acid. Carbon Monoxide. Carbon Dioxide. Aldehydes. Flammable hydrocarbon fragments. Under lean oxygen conditions and temperatures above 180F, hydrochloric acid, amides, and low molecular weight hydrocarbons can be produced.

11. Toxicological information
Information on likely routes of exposure

Inhalation:	If handled correctly, not a relevant route of exposure. Information on effects are given below.
Skin Contact:	Relevant route of exposure. Information on effects are given below.
Eye contact:	Relevant route of exposure. Information on effects are given below.
Ingestion:	If handled correctly, not a relevant route of exposure. Information on effects are given below.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Information on toxicological effects**Acute toxicity (list all possible routes of exposure)****Oral**

Product: The product or a component is a CNS depressant.

Dermal

Product: No data is available on the product itself.

Inhalation

Product: No data is available on the product itself.

Repeated dose toxicity

Product: No data available.

Skin Corrosion/Irritation

Product: (Rabbit, 4 h): Corrosive to the skin of a rabbit.

Serious Eye Damage/Eye Irritation

Product: No data available.

Respiratory or Skin Sensitization

Product: No data available.

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**US. National Toxicology Program (NTP) Report on Carcinogens:****US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):****Germ Cell Mutagenicity****In vitro**

Product: No data available.

Components:

Propan-2-ol
Ames test (Mutagenicity (Salmonella typhimurium - reverse mutation assay)): no evidence of mutagenic effects literature

In vivo

Product: No data available.

Reproductive toxicity

Product: There is no evidence of teratogenic or embryotoxic effects in animals in the absence of maternal toxicity.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard
Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data is available on the product itself.

Aquatic Invertebrates
Product: No data is available on the product itself.

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data is available on the product itself.

Persistence and Degradability

Biodegradation
Product: Not biodegradable.

BOD/COD Ratio
Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)
Product: No data available.

Partition Coefficient n-octanol / water (log K_{ow})

Product: Log K_{ow}: No data available.

Mobility in soil: No data available.

Components:
 Quaternary amine No data available.
 Propan-2-ol No data available.

Other adverse effects: Do not allow to enter soil, waterways or waste water canal.

13. Disposal considerations

Disposal methods: 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

Domestic regulation

49 CFR

UN/ID/NA number : UN 2733

Proper shipping name : Amine, flammable, corrosive, n.o.s.
(Quaternary amine, Propan-2-ol)

Class : 3

Subsidiary risk : 8

Packing group : III

Labels : 3 (8)

ERG Code : 132

Marine pollutant : no

Remarks : Keep separate from foodstuffs, luxury foods, feedstuffs

International Regulations

IATA-DGR

UN/ID No. : UN 2733

Proper shipping name : Amines, flammable, corrosive, n.o.s.
(Quaternary amine, Propan-2-ol)

Class : 3

Subsidiary risk : 8

Packing group : III

Labels : 3 (8)

Packing instruction (cargo aircraft) : 365

Packing instruction (passenger aircraft) : 354

IMDG-Code

UN number : UN 2733

Proper shipping name : AMINES, FLAMMABLE, CORROSIVE, N.O.S.
(Quaternary amine, Propan-2-ol)

Class : 3

Subsidiary risk : 8
Packing group : III
Labels : 3 (8)
EmS Code : F-E, S-C
Marine pollutant : no
Remarks : Clear of living quarters., Keep separate from acids.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

15. Regulatory information**US Federal Regulations****TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

None present or none present in regulated quantities.

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)

None present or none present in regulated quantities.

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

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Propan-2-ol	100 lbs.
Chloromethane	100 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**Hazard categories**

Flammable (gases, aerosols, liquids, or solids), Serious eye damage or eye irritation, Specific target organ toxicity (single or repeated exposure)

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances

SARA 311/312 Hazardous Chemical
Chemical Identity **Threshold Planning Quantity**

SARA 313 (TRI Reporting)

<u>Chemical Identity</u>	<u>Reporting threshold for other users</u>
Propan-2-ol	Otherwise used (non-manufacturing/processing)

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

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Chloromethane	10000 lbs

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65



WARNING: This product can expose you to chemicals including, Chloromethane, which is [are] known to the State of California to cause birth defects or other reproductive harm.

For more information go to www.P65Warnings.ca.gov.

US. New Jersey Worker and Community Right-to-Know Act

<u>Chemical Identity</u>
Propan-2-ol

US. Massachusetts RTK - Substance List

<u>Chemical Identity</u>
Propan-2-ol

US. Pennsylvania RTK - Hazardous Substances

<u>Chemical Identity</u>
Propan-2-ol

US. Rhode Island RTK

<u>Chemical Identity</u>
Propan-2-ol

Inventory Status:

US TSCA Inventory:	Included on Inventory.
Canada DSL Inventory List:	Included on Inventory.

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

Health		3
Flammability		3
Physical Hazards		0
PERSONAL PROTECTION		

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

Issue Date: 03/15/2019

Version #: 1.0

Further Information: No data available.

Revision Information: Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Disclaimer: This information and any recommendations, technical or otherwise, are presented in good faith and believed to be correct as of the date prepared. Recipients of this information and recommendations must make their own determination as to its suitability for their purposes. In no event shall Evonik assume liability for damages or losses of any kind or nature that result from the use of or reliance upon this information and recommendations. EVONIK EXPRESSLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE) WITH RESPECT TO ANY INFORMATION AND RECOMMENDATIONS PROVIDED. Reference to any trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. Evonik reserves the right to make any changes to the information and/or recommendations at any time, without prior or subsequent notice.