



## SAFETY DATA SHEET

Creation Date 09-Apr-2010

Revision Date 07-Jul-2015

Revision Number 2

### 1. Identification

**Product Name** Tetramethylammonium hydroxide, 25% in water

**Cat No. :** AC420520000; AC420520010; AC420520250; AC420521000

**Synonyms** N,N,N-Trimethylmethanaminium hydroxide.

**Recommended Use** Laboratory chemicals.

**Uses advised against** No Information available

**Details of the supplier of the safety data sheet**

**Company**  
Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

**Entity / Business Name**  
Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

**Emergency Telephone Number**  
For information **US** call: 001-800-ACROS-01  
/ **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 /  
**Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 /  
**Europe**:001-703-527-3887

### 2. Hazard(s) identification

#### **Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute oral toxicity	Category 3
Acute dermal toxicity	Category 2
Skin Corrosion/irritation	Category 1 B
Serious Eye Damage/Eye Irritation	Category 1
Specific target organ toxicity (single exposure)	Category 1
Specific target organ toxicity - (repeated exposure)	Category 1

#### **Label Elements**

##### **Signal Word**

Danger

##### **Hazard Statements**

Toxic if swallowed  
Fatal in contact with skin  
Causes severe skin burns and eye damage  
Causes damage to organs  
Causes damage to organs through prolonged or repeated exposure

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Wear protective gloves/protective clothing/eye protection/face protection  
Do not breathe dust/fume/gas/mist/vapors/spray

**Response**

Immediately call a POISON CENTER or doctor/physician

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

**Skin**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
Wash contaminated clothing before reuse

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

**Ingestion**

Rinse mouth  
Do NOT induce vomiting

**Storage**

Store locked up

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Toxic to aquatic life with long lasting effects

### 3. Composition / information on ingredients

Component	CAS-No	Weight %
Water	7732-18-5	75
Tetramethylammonium hydroxide	75-59-2	25

### 4. First-aid measures

**General Advice**

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

**Eye Contact**

Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Do not rub affected area. Keep eye wide open while rinsing.

**Skin Contact**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

**Inhalation**

Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediate medical attention is required. Call a physician or Poison Control Center immediately.

**Ingestion**

Do not induce vomiting. Call a physician immediately. Immediate medical attention is

required. Remove from exposure, lie down. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.

**Most important symptoms/effects** Causes burns by all exposure routes. . Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

**Notes to Physician** Treat symptomatically

## 5. Fire-fighting measures

**Suitable Extinguishing Media** Carbon dioxide (CO<sub>2</sub>). Dry chemical. chemical foam.

**Unsuitable Extinguishing Media** No information available

**Flash Point** > 95 °C / > 203 °F  
**Method -** No information available

**Autoignition Temperature** No information available

### Explosion Limits

**Upper** No data available

**Lower** No data available

**Sensitivity to Mechanical Impact** No information available

**Sensitivity to Static Discharge** No information available

### Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes.

### Hazardous Combustion Products

Nitrogen oxides (NO<sub>x</sub>) Carbon monoxide (CO) Carbon dioxide (CO<sub>2</sub>) Ammonia Amines Thermal decomposition can lead to release of irritating gases and vapors Methanol

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### NFPA

**Health**  
3

**Flammability**  
1

**Instability**  
0

**Physical hazards**  
N/A

## 6. Accidental release measures

**Personal Precautions** Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment.

**Environmental Precautions** Do not flush into surface water or sanitary sewer system.

**Methods for Containment and Clean Up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Do not let this chemical enter the environment.

## 7. Handling and storage

**Handling** Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Remove and wash contaminated clothing before re-use. Use only in area provided with appropriate exhaust ventilation. Wash thoroughly after handling. Do not taste or swallow.

**Storage** Corrosives area. Store under an inert atmosphere. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

## 8. Exposure controls / personal protection

<b>Exposure Guidelines</b>	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
<b>Engineering Measures</b>	Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.
<b>Personal Protective Equipment</b>	
<b>Eye/face Protection</b>	Tightly fitting safety goggles. Face-shield.
<b>Skin and body protection</b>	Wear appropriate protective gloves and clothing to prevent skin exposure. impervious clothing. Chemical resistant apron. Boots. Impervious gloves.
<b>Respiratory Protection</b>	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
<b>Hygiene Measures</b>	Keep away from food, drink and animal feeding stuffs. When using, do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. For environmental protection remove and wash all contaminated protective equipment before re-use. Wear suitable gloves and eye/face protection.

## 9. Physical and chemical properties

<b>Physical State</b>	Liquid
<b>Appearance</b>	Yellow
<b>Odor</b>	Ammonia-like
<b>Odor Threshold</b>	No information available
<b>pH</b>	> 13
<b>Melting Point/Range</b>	-25 °C / -13 °F
<b>Boiling Point/Range</b>	102 °C / 215.6 °F @ 760 mmHg
<b>Flash Point</b>	> 95 °C / > 203 °F
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid,gas)</b>	Not applicable
<b>Flammability or explosive limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Vapor Pressure</b>	16 mmHg (25°C)
<b>Vapor Density</b>	No information available
<b>Relative Density</b>	1.014
<b>Solubility</b>	No information available
<b>Partition coefficient; n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	No information available
<b>Decomposition Temperature</b>	No information available
<b>Viscosity</b>	3.13 cP (19°C)
<b>Molecular Formula</b>	C4 H13 N O
<b>Molecular Weight</b>	91.15

## 10. Stability and reactivity

<b>Reactive Hazard</b>	None known, based on information available
<b>Stability</b>	Air sensitive.
<b>Conditions to Avoid</b>	Temperatures above 100°C. Exposure to air. Incompatible products. Exposure to air or moisture over prolonged periods.

**Incompatible Materials** Strong oxidizing agents, Strong acids, Metals

**Hazardous Decomposition Products** Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Ammonia, Amines, Thermal decomposition can lead to release of irritating gases and vapors, Methanol

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

### Acute Toxicity

#### Product Information

**Oral LD50** Category 3. ATE = 50 - 300 mg/kg.

**Dermal LD50** Category 4. ATE = 1000 - 2000 mg/kg.

**Vapor LC50** Based on ATE data, the classification criteria are not met. ATE > 20 mg/l.

#### Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Tetramethylammonium hydroxide	34 - 50 mg/kg ( Rat )	25-50 mg/kg ( Rabbit )	Not listed

**Toxicologically Synergistic Products** No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Irritation** No information available

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Water	7732-18-5	Not listed	Not listed	Not listed	Not listed	Not listed
Tetramethylammonium hydroxide	75-59-2	Not listed	Not listed	Not listed	Not listed	Not listed

**Mutagenic Effects** Not mutagenic in AMES Test

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** None known

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** . Will likely be mobile in the environment due to its water solubility.

### 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

#### DOT

UN-No UN1835  
 Proper Shipping Name TETRAMETHYLAMMONIUM HYDROXIDE SOLUTION  
 Hazard Class 8  
 Packing Group II

#### TDG

UN-No UN1835  
 Proper Shipping Name TETRAMETHYLAMMONIUM HYDROXIDE SOLUTION  
 Hazard Class 8  
 Packing Group II

#### IATA

UN-No UN1835  
 Proper Shipping Name TETRAMETHYLAMMONIUM HYDROXIDE, SOLUTION  
 Hazard Class 8  
 Packing Group II

#### IMDG/IMO

UN-No UN1835  
 Proper Shipping Name TETRAMETHYLAMMONIUM HYDROXIDE SOLUTION  
 Hazard Class 8  
 Packing Group II

### 15. Regulatory information

#### International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Water	X	X	-	231-791-2	-		X	-	X	X	X
Tetramethylammonium hydroxide	X	X	-	200-882-9	-		X	X	X	X	X

#### Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

#### U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313 Not applicable

SARA 311/312 Hazardous Categorization

Acute Health Hazard

Yes

Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act Not applicable

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration  
Not applicable

CERCLA  
Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals

#### State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Water	-	-	X	-	-
Tetramethylammonium hydroxide	-	X	-	-	-

#### U.S. Department of Transportation

Reportable Quantity (RQ): N  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant N

#### U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

#### Other International Regulations

Mexico - Grade Slight risk, Grade 1

#### Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class D1A Very toxic materials  
E Corrosive material



## 16. Other information

Prepared By Regulatory Affairs  
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Creation Date 09-Apr-2010  
Revision Date 07-Jul-2015  
Print Date 07-Jul-2015  
Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard

replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

**Disclaimer**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of SDS**