

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Name TISAB II with CDTA

Product Number(s) 940909

Pure substance/mixture Mixture

Contains Sodium Hydroxide , Acetic Acid

Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Use as laboratory reagent

Uses advised against No Information available

Manufacturer/Supplier

Thermo Fisher Scientific©
Water and Lab Products
22 Alpha Road
Chelmsford, MA 01824, USA
1-978-232-6000

E-mail address info.water@thermo.com

Made in USA

Emergency Telephone 24 Hour Emergency Phone Number
CHEMTREC®
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: 1-703-527-3887
(collect calls accepted)

2. HAZARDS IDENTIFICATION**Classification****OSHA Regulatory Status**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label Elements**Emergency Overview**

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance Clear**Physical State** Liquid**Odor** vinegar-like

Safety data sheet available on request

Precautionary Statements

Do not handle until all safety information has been read and understood.

Hazards not otherwise classified (HNOC)

No information available

Other Information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS-No | Weight % | Trade Secret |
|--|-------------|----------|--------------|
| Water | 7732-18-5 | 80 - 90% | * |
| Sodium Hydroxide | 1310-73-2 | 0 - 10% | * |
| Sodium Chloride | 7647-14-5 | 0 - 10% | * |
| Acetic Acid | 64-19-7 | 0 - 10% | * |
| trans-1,2-Diaminocyclohexane-Tetraacetic Acid Monohydrate (CDTA) | 125572-95-4 | 0 - 10% | * |

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES**First aid measures****General Advice**

Use first aid treatment according to the nature of the injury. Get medical attention immediately if symptoms occur. Show this safety data sheet to the doctor in attendance.

Eye Contact

Rinse thoroughly with plenty of water, also under the eyelids. Obtain medical attention.

Skin Contact

Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. If skin reactions occur, contact a physician.

| | |
|-----------------------------------|---|
| Inhalation | Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, obtain medical attention. |
| Ingestion | Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting. Call a physician or Poison Control Center immediately. |
| Protection of First-aiders | Use personal protective equipment. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. |

Most important symptoms and effects, both acute and delayed

Most important symptoms/effects No information available

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically

5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

No information available

Specific Hazards Arising from the Chemical

No information available

Explosion Data

Sensitivity to Mechanical Impact None

Sensitivity to Static Discharge None

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.

6. ACCIDENTAL RELEASE MEASURES**Personal Precautions, Protective Equipment and Emergency Procedures****Personal Precautions**

Use personal protective equipment. Refer to Section 8. Evacuate personnel to safe areas.

Environmental Precautions

Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Methods and Material for Containment and Cleaning Up**Methods for Containment**

Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up

Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE**Precautions for Safe Handling****Handling**

To avoid risks to human health and the environment, comply with the instructions for use
Wear personal protective equipment
Avoid breathing dust/fume/gas/mist/vapours/spray
Ensure adequate ventilation, especially in confined areas

Conditions for Safe Storage, Including any Incompatibilities

Storage Keep container tightly closed in a dry and well-ventilated place
Store at room temperature in the original container
Keep away from direct sunlight

Incompatible Products No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

| Component | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|-------------------------------|------------------------------|--|--|
| Sodium Hydroxide 1310-73-2 | Ceiling: 2 mg/m ³ | (Vacated) Ceiling: 2 mg/m ³ TWA: 2 mg/m ³ | IDLH: 10 mg/m ³ Ceiling: 2 mg/m ³ |
| Acetic Acid 64-19-7 | TWA: 10 ppm STEL: 15 ppm | (Vacated) TWA: 10 ppm (Vacated) TWA: 25 mg/m ³ TWA: 10 ppm TWA: 25 mg/m ³ | IDLH: 50 ppm TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm STEL: 37 mg/m ³ |

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face Protection Wear chemical splash goggles. If splashes are likely to occur, wear: Face-shield.

Skin and Body Protection Wear protective gloves/clothing.

Respiratory Protection None required under normal usage. In case of inadequate ventilation wear respiratory protection.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State Liquid
Appearance Clear
Odor vinegar-like
Odor Threshold No information available
pH Range 4.5 - 6.0

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|-------------------------------------|--------------------------|-------------------------|
| Melting point/freezing point | No information available | |
| Boiling Point/Range | ~ 100 °C / 212 °F | |
| Flash Point (High in °C) | N/A | |
| Evaporation Rate | No information available | |
| Flammability (solid, gas) | No information available | |
| Flammability Limit in Air | | |
| Upper flammability limit: | No information available | |
| Lower flammability limit: | No information available | |
| Vapor pressure | No information available | |
| Vapor Density | No information available | |
| Specific Gravity | No information available | |
| Water Solubility | Soluble in water | |
| Solubility in other solvents | No information available | |
| Partition coefficient | No information available | |
| Autoignition Temperature | | |

Decomposition Temperature No information available
Kinematic Viscosity No information available
Dynamic viscosity No information available
Explosive Properties No information available
Oxidizing Properties No information available

Other Information

Softening Point No information available
Molecular Weight No information available
VOC Content(%) No information available
Density No Information available
Bulk Density No information available

10. STABILITY AND REACTIVITY

Reactivity

No Information available

Chemical Stability

Stable under normal conditions

Possibility of Hazardous Reactions

None under normal processing

Conditions to Avoid

Extremes of temperature and direct sunlight

Incompatible Materials

No information available

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation No information available
Eye Contact No information available
Skin Contact No information available
Ingestion No information available

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|-------------------------------|----------------------|-------------------------|-----------------------------------|
| Water 7732-18-5 | > 90 mL/kg (Rat) | - | - |
| Sodium Hydroxide 1310-73-2 | - | = 1350 mg/kg (Rabbit) | - |
| Sodium Chloride 7647-14-5 | = 3 g/kg (Rat) | > 10 g/kg (Rabbit) | > 42 g/m ³ (Rat) 1 h |
| Acetic Acid 64-19-7 | = 3310 mg/kg (Rat) | = 1060 mg/kg (Rabbit) | = 11.4 mg/L (Rat) 4 h |

Information on Toxicological Effects

Symptoms No information available

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

Sensitization No information available

| | |
|---------------------------------|---------------------------|
| Mutagenic Effects | No information available |
| Carcinogenicity | No information available. |
| Reproductive Effects | No information available |
| STOT - single exposure | No information available |
| STOT - repeated exposure | No information available |
| Aspiration hazard | No information available |

Numerical measures of toxicity - Product Information**12. ECOLOGICAL INFORMATION****Ecotoxicity**

| Component | Freshwater Algae | Freshwater Fish | Water Flea |
|-------------------------------|------------------|---|---|
| Sodium Hydroxide 1310-73-2 | - | 45.4: 96 h Oncorhynchus mykiss mg/L LC50 static | - |
| Sodium Chloride 7647-14-5 | - | 5560 - 6080: 96 h Lepomis macrochirus mg/L LC50 flow-through 12946: 96 h Lepomis macrochirus mg/L LC50 static 4747 - 7824: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 7050: 96 h Pimephales promelas mg/L LC50 semi-static 6420 - 6700: 96 h Pimephales promelas mg/L LC50 static 6020 - 7070: 96 h Pimephales promelas mg/L LC50 static | 340.7 - 469.2: 48 h Daphnia magna mg/L EC50 Static 1000: 48 h Daphnia magna mg/L EC50 |
| Acetic Acid 64-19-7 | - | 75: 96 h Lepomis macrochirus mg/L LC50 static 79: 96 h Pimephales promelas mg/L LC50 static | 47: 24 h Daphnia magna mg/L EC50 65: 48 h Daphnia magna mg/L EC50 Static |

Persistence and Degradability

No information available

Bioaccumulation/ Accumulation

No information available

Mobility

.

| Component | log Pow |
|------------------------|---------|
| Acetic Acid 64-19-7 | -0.31 |

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS**Waste treatment methods****Waste Disposal Methods**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Improper disposal or reuse of this container may be dangerous and illegal.

| Component | CAWAST |
|-------------------------------|---------------------------------|
| Sodium Hydroxide 1310-73-2 | Toxic Corrosive |
| Acetic Acid 64-19-7 | Toxic Corrosive Ignitable |

14. TRANSPORT INFORMATION

DOT

UN-No UN1760
 Proper Shipping Name Corrosive liquid, n.o.s
 Hazard Class 8
 Packing Group III
 Special Provisions IB3, T7, TP1, TP28
 Shipping Description UN1760, CORROSIVE LIQUID, N.O.S (Sodium Hydroxide, Acetic Acid), 8, III
 Emergency Response Guide Number 154

TDG

UN-No UN1760
 Proper Shipping Name CORROSIVE LIQUID, N.O.S.
 Hazard Class 8
 Packing Group III
 Description UN1760, Corrosive liquid, n.o.s. (Sodium Hydroxide, Acetic Acid), 8, III

MEX

UN-No UN1760
 Proper Shipping Name CORROSIVE LIQUID, N.O.S.
 Hazard Class 8
 Special Provisions 223, 274
 Packing Group III
 Description UN1760, Corrosive liquid, n.o.s. (Sodium Hydroxide, Acetic Acid), 8, III

ICAO

UN-No UN1760
 Proper Shipping Name CORROSIVE LIQUID, N.O.S.
 Hazard Class 8
 Packing Group III
 Special Provisions A3
 Description UN1760, Corrosive liquid, n.o.s. (Sodium Hydroxide, Acetic Acid), 8, III

IATA

UN-No UN1760
 Proper Shipping Name CORROSIVE LIQUID, N.O.S.
 Hazard Class 8
 Packing Group III
 ERG Code 8L
 Special Provisions A3, A803
 Description UN1760, Corrosive liquid, n.o.s. (Sodium Hydroxide, Acetic Acid), 8, III

IMDG/IMO

UN-No UN1760
 Proper Shipping Name CORROSIVE LIQUID, N.O.S.
 Hazard Class 8
 Packing Group III
 EmS No. F-A, S-B
 Special Provisions 274, 223
 Description UN1760, Corrosive liquid, n.o.s. (Sodium Hydroxide, Acetic Acid), 8, III

RID

| | |
|-----------------------------|--|
| UN-No | UN1760 |
| Proper Shipping Name | CORROSIVE LIQUID, N.O.S. |
| Hazard Class | 8 |
| Packing Group | III |
| Classification Code | C9 |
| Description | UN1760, Corrosive liquid, n.o.s. (Sodium Hydroxide, Acetic Acid), 8, III |
| ADR/RID-Labels | 8 |

ADR

| | |
|--------------------------------|--|
| UN-No | UN1760 |
| Proper Shipping Name | CORROSIVE LIQUID, N.O.S. |
| Hazard Class | 8 |
| Packing Group | III |
| Classification Code | C9 |
| Tunnel restriction code | (E) |
| Special Provisions | 274 |
| Description | UN1760, Corrosive liquid, n.o.s. (Sodium Hydroxide, Acetic Acid), 8, III |
| ADR/RID-Labels | 8 |

ADN

| | |
|-----------------------------|--|
| Proper Shipping Name | CORROSIVE LIQUID, N.O.S. |
| Hazard Class | 8 |
| Packing Group | III |
| Classification Code | C9 |
| Special Provisions | 274 |
| Description | UN1760, Corrosive liquid, n.o.s. (Sodium Hydroxide, Acetic Acid), 8, III |
| Hazard Labels | 8 |
| Limited Quantity | 5 L |

15. REGULATORY INFORMATION**International Inventories**

| | |
|----------------------|-----------------|
| USINV | Complies |
| CANINV | Complies |
| EINECS/ELINCS | Complies |
| ENCS | Does not Comply |
| IECSC | Complies |
| KECL | Does not Comply |
| PICCS | Complies |
| AICS | Does not Comply |

USINV/ TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

CANINV/ DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS - Japanese Existing and New Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40n of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

| | |
|------------------------------|----|
| Acute Health Hazard | No |
| Chronic Health Hazard | No |
| Fire Hazard | No |

Sudden Release of Pressure Hazard No
 Reactive Hazard No

Clean Water Act

| Component | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|-------------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Sodium Hydroxide 1310-73-2 | 1000 lb | - | - | X |
| Acetic Acid 64-19-7 | 5000 lb | - | - | X |

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Component | Hazardous Substances RQs | CERCLA EHS RQs | RQ |
|-------------------------------|--------------------------|----------------|--|
| Sodium Hydroxide 1310-73-2 | 1000 lb | - | RQ 1000 lb final RQ RQ 454 kg final RQ |
| Acetic Acid 64-19-7 | 5000 lb | - | RQ 5000 lb final RQ RQ 2270 kg final RQ |

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

State Right-to-Know

| Component | New Jersey | Massachusetts | Pennsylvania |
|-------------------------------|------------|---------------|--------------|
| Water 7732-18-5 | - | - | X |
| Sodium Hydroxide 1310-73-2 | X | X | X |
| Acetic Acid 64-19-7 | X | X | X |

U.S. EPA Label Information

No information available

16. OTHER INFORMATION

Prepared By Environmental, Health and Safety
Prepared For Thermo Fisher Scientific Inc.©
Issue Date No information available
Revision Date 18-May-2015
Expiration Date SDS is valid 3 years from revision date. Contact wai.techservbev@thermofisher.com for the latest revision.
Reason for revision Update to CLP Format

Disclaimer

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End of Safety Data Sheet