

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

Product Identifier

Product Name Acid Reagent

Product Number(s) 977011

Pure substance/mixture Mixture

Contains Acetic Acid, Sodium Hydroxide

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)

Hazards not otherwise classified (HNOC)

No information available

Other InformationHarmful to aquatic life with long lasting effects
Harmful to aquatic organisms**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS-No	Weight %	Trade Secret
Acetic Acid	64-19-7	40 - 50%	*
Sodium Hydroxide	1310-73-2	10 - 20%	*

*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
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
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

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	No information available

<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
Acetic Acid 64-19-7	= 3310 mg/kg (Rat)	= 1060 mg/kg (Rabbit)	= 11.4 mg/L (Rat) 4 h
Sodium Hydroxide 1310-73-2	-	= 1350 mg/kg (Rabbit)	-

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

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	7043 mg/kg
ATEmix (dermal)	1734 mg/kg
ATEmix (inhalation-dust/mist)	24.3 mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Component	Freshwater Algae	Freshwater Fish	Water Flea
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
Sodium Hydroxide 1310-73-2	-	45.4: 96 h Oncorhynchus mykiss mg/L LC50 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
Acetic Acid 64-19-7	Toxic Corrosive Ignitable
Sodium Hydroxide 1310-73-2	Toxic Corrosive

14. TRANSPORT INFORMATION

DOT

UN-No UN2790
 Proper Shipping Name Acetic acid solution
 Hazard Class 8
 Packing Group II
 Special Provisions A3, A6, A7, A10, B2, IB2, T7, TP2
 Shipping Description UN2790, Acetic acid solution, 8, II
 Emergency Response Guide Number 153

TDG

UN-No UN2790
 Proper Shipping Name Acetic acid solution
 Hazard Class 8
 Packing Group II
 Description UN2790, Acetic acid solution, 8, II

MEX

UN-No UN2790
 Proper Shipping Name Acetic acid solution
 Hazard Class 8
 Packing Group II
 Description UN2790, Acetic acid solution, 8, II

ICAO

UN-No UN2790
 Proper Shipping Name Acetic acid solution
 Hazard Class 8
 Packing Group II

Description UN2790, Acetic acid solution, 8, II

IATA

UN-No UN2790
 Proper Shipping Name Acetic acid solution
 Hazard Class 8
 Packing Group II
 ERG Code 8L
 Description UN2790, Acetic acid solution, 8, II

IMDG/IMO

UN-No UN2790
 Proper Shipping Name Acetic acid solution
 Hazard Class 8
 Packing Group II
 EmS No. F-A, S-B
 Description UN2790, Acetic acid solution, 8, II

RID

UN-No UN2790
 Proper Shipping Name Acetic acid solution
 Hazard Class 8
 Packing Group II
 Classification Code C3
 Description UN2790, Acetic acid solution, 8, II
 ADR/RID-Labels 8

ADR

UN-No UN2790
 Proper Shipping Name Acetic acid solution
 Hazard Class 8
 Packing Group II
 Classification Code C3
 Tunnel restriction code (E)
 Description UN2790, Acetic acid solution, 8, II
 ADR/RID-Labels 8

ADN

Proper Shipping Name Acetic acid solution
 Hazard Class 8
 Packing Group II
 Classification Code C3
 Description UN2790, Acetic acid solution, 8, II
 Hazard Labels 8
 Limited Quantity 1 L

15. REGULATORY INFORMATION**International Inventories**

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

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 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
Acetic Acid 64-19-7	5000 lb	-	-	X
Sodium Hydroxide 1310-73-2	1000 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
Acetic Acid 64-19-7	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
Sodium Hydroxide 1310-73-2	1000 lb	-	RQ 1000 lb final RQ RQ 454 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
Acetic Acid 64-19-7	X	X	X
Sodium Hydroxide 1310-73-2	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