

SAFETY DATA SHEET

Creation Date 20-Jul-2009

Revision Date 24-Dec-2021

Revision Number 5

1. Identification

Product Name Universal pH Indicator Solution

Cat No. : SI60-1; SI60-500

Synonyms None

Recommended Use Laboratory chemicals.

Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

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

Emergency Telephone Number CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 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)

Flammable liquids	Category 3
Serious Eye Damage/Eye Irritation	Category 2
Specific target organ toxicity (single exposure)	Category 2 Category 3
Target Organs - Respiratory system, Central nervous system (CNS), Optic nerve.	

Label Elements

Signal Word

Warning

Hazard Statements

Flammable liquid and vapor
Causes serious eye irritation
May cause drowsiness or dizziness
May cause damage to organs

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling
 Do not breathe dust/fume/gas/mist/vapors/spray
 Do not eat, drink or smoke when using this product
 Use only outdoors or in a well-ventilated area
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment
 Use explosion-proof electrical/ventilating/lighting equipment
 Use only non-sparking tools
 Take precautionary measures against static discharge
 Wear protective gloves/protective clothing/eye protection/face protection
 Keep cool

Response

If exposed or you feel unwell: 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
 Call a POISON CENTER or doctor/physician if you feel unwell

Skin

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

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention

Fire

In case of fire: Use CO₂, dry chemical, or foam for extinction

Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

May form explosive peroxides

WARNING. Reproductive Harm - <https://www.p65warnings.ca.gov/>.

3. Composition/Information on Ingredients

Component	CAS No	Weight %
Water	7732-18-5	49
Isopropyl alcohol	67-63-0	42.0
Phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis[2-bromo-3-methyl-6-(1-methylethyl)-, S,S-dioxide, monosodium salt	34722-90-2	3.5
Methyl alcohol	67-56-1	2.0
Methyl Red sodium salt	845-10-3	1.5
1(3H)-Isobenzofuranone, 3,3-bis(4-hydroxyphenyl)-, disodium salt	518-51-4	< 1.0
Phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis[5-methyl-2-(62625-21-2	<1.0

1-methylethyl)-, S,S-dioxide, monosodium salt

4. First-aid measures

General Advice	If symptoms persist, call a physician.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.
Ingestion	Clean mouth with water and drink afterwards plenty of water.
Most important symptoms and effects	None reasonably foreseeable. . Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	CO ₂ , dry chemical, dry sand, alcohol-resistant foam. Water mist may be used to cool closed containers. Water mist may be used to cool closed containers.
Unsuitable Extinguishing Media	Do not use a solid water stream as it may scatter and spread fire
Flash Point	23.9 °C / 75 °F
Method -	No information available
Autoignition Temperature	No information available
Explosion Limits	
Upper	12 vol %
Lower	2.0 vol %
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical

Flammable. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition. Vapors may form explosive mixtures with air.

Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO₂).

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
2

Flammability
2

Instability
0

Physical hazards
N/A

6. Accidental release measures

Personal Precautions	Use personal protective equipment as required. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
Environmental Precautions	Should not be released into the environment.

Methods for Containment and Clean Up Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7. Handling and storage

Handling Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Take precautionary measures against static discharges.

Storage. Keep containers tightly closed in a dry, cool and well-ventilated place. May form explosive peroxides on prolonged storage. Flammables area. Keep away from heat, sparks and flame. Incompatible Materials. Strong oxidizing agents. Strong acids. Alkali metals.

8. Exposure controls / personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Isopropyl alcohol	TWA: 200 ppm STEL: 400 ppm	(Vacated) TWA: 400 ppm (Vacated) TWA: 980 mg/m ³ (Vacated) STEL: 500 ppm (Vacated) STEL: 1225 mg/m ³ TWA: 400 ppm TWA: 980 mg/m ³	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m ³ STEL: 500 ppm STEL: 1225 mg/m ³	TWA: 200 ppm STEL: 400 ppm
Methyl alcohol	TWA: 200 ppm STEL: 250 ppm Skin	(Vacated) TWA: 200 ppm (Vacated) TWA: 260 mg/m ³ (Vacated) STEL: 250 ppm (Vacated) STEL: 325 mg/m ³ Skin TWA: 200 ppm TWA: 260 mg/m ³	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³	TWA: 200 ppm STEL: 250 ppm

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection 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.

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

9. Physical and chemical properties

Physical State

Liquid

Appearance	Green
Odor	Alcohol-like
Odor Threshold	No information available
pH	~ 7.5
Melting Point/Range	No data available
Boiling Point/Range	80 °C / 176 °F
Flash Point	23.9 °C / 75 °F
Evaporation Rate	No information available
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	12 vol %
Lower	2.0 vol %
Vapor Pressure	25 mmHg
Vapor Density	No information available
Specific Gravity	0.93
Solubility	Soluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	No information available

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Stable under normal conditions. May form explosive peroxides on prolonged storage.
Conditions to Avoid	Incompatible products. Keep away from open flames, hot surfaces and sources of ignition.
Incompatible Materials	Strong oxidizing agents, Strong acids, Alkali metals
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO ₂)
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Oral LD50 Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

Dermal LD50 Based on ATE data, the classification criteria are not met. ATE > 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
Water	-	-	-
Isopropyl alcohol	5045 mg/kg (Rat) 3600 mg/kg (Mouse)	12800 mg/kg (Rat)	72.6 mg/L (Rat) 4 h
Methyl alcohol	LD50 = 1187 – 2769 mg/kg (Rat)	LD50 = 17100 mg/kg (Rabbit)	LC50 = 128.2 mg/L (Rat) 4 h

Toxicologically Synergistic No information available

Products

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

Irritation	Irritating to eyes and respiratory system
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
Isopropyl alcohol	67-63-0	Not listed	Not listed	Not listed	Not listed	Not listed
Phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis[2-bromo-3-methyl-6-(1-methylethyl)-, S,S-dioxide, monosodium salt	34722-90-2	Not listed	Not listed	Not listed	Not listed	Not listed
Methyl alcohol	67-56-1	Not listed	Not listed	Not listed	Not listed	Not listed
Methyl Red sodium salt	845-10-3	Not listed	Not listed	Not listed	Not listed	Not listed
1(3H)-Isobenzofuranone, 3,3-bis(4-hydroxyphenyl)-, disodium salt	518-51-4	Not listed	Not listed	Not listed	Not listed	Not listed
Phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis[5-methyl-2-(1-methylethyl)-, S,S-dioxide, monosodium salt	62625-21-2	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Respiratory system Central nervous system (CNS) Optic nerve

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

Endocrine Disruptor Information No information available

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

12. Ecological information

Ecotoxicity

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Isopropyl alcohol	EC50: > 1000 mg/L, 96h (Desmodesmus subspicatus) EC50: > 1000 mg/L, 72h (Desmodesmus subspicatus)	LC50: = 9640 mg/L, 96h flow-through (Pimephales promelas) LC50: > 1400000 µg/L, 96h (Lepomis macrochirus) LC50: = 11130 mg/L, 96h static (Pimephales promelas) LC50: = 10000000 µg/L, 96h (Daphnia)	= 35390 mg/L EC50 Photobacterium phosphoreum 5 min	13299 mg/L EC50 = 48 h 9714 mg/L EC50 = 24 h
Methyl alcohol	Not listed	Pimephales promelas: LC50 > 10000 mg/L 96h	EC50 = 39000 mg/L 25 min EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min	EC50 > 10000 mg/L 24h

Persistence and Degradability Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its volatility.

Component	log Pow
Isopropyl alcohol	0.05
Methyl alcohol	-0.74

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.

Component	RCRA - U Series Wastes	RCRA - P Series Wastes
Methyl alcohol - 67-56-1	U154	-

14. Transport information

DOT

UN-No UN1987
 Proper Shipping Name ALCOHOLS, N.O.S.
 Hazard Class 3
 Packing Group III

TDG

UN-No UN1987
 Proper Shipping Name ALCOHOLS, N.O.S.
 Hazard Class 3
 Packing Group III

IATA

UN-No UN1987
 Proper Shipping Name ALCOHOLS, N.O.S.
 Hazard Class 3
 Packing Group III

IMDG/IMO

UN-No UN1987
 Proper Shipping Name ALCOHOLS, N.O.S.
 Hazard Class 3
 Packing Group III

15. Regulatory information

United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
Water	7732-18-5	X	ACTIVE	-
Isopropyl alcohol	67-63-0	X	ACTIVE	-
Phenol, 4,4'-(3H-2,1-benzoxathiol-3-yliden e)bis[2-bromo-3-methyl-6-(1-meth ylethyl)-, S,S-dioxide, monosodium salt	34722-90-2	X	ACTIVE	-
Methyl alcohol	67-56-1	X	ACTIVE	-
Methyl Red sodium salt	845-10-3	X	ACTIVE	-
1(3H)-Isobenzofuranone, 3,3-bis(4-hydroxyphenyl)-, disodium salt	518-51-4	X	ACTIVE	-
Phenol, 4,4'-(3H-2,1-benzoxathiol-3-yliden e)bis[5-methyl-2-(1-methylethyl)-, S,S-dioxide, monosodium salt	62625-21-2	X	ACTIVE	-

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

- - Not Listed

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Water	7732-18-5	X	-	231-791-2	X	X		X	X	KE-35400
Isopropyl alcohol	67-63-0	X	-	200-661-7	X	X	X	X	X	KE-29363
Phenol, 4,4'-(3H-2,1-benzoxathiol-3-yliden e)bis[2-bromo-3-methyl-6-(1-meth ylethyl)-, S,S-dioxide, monosodium salt	34722-90-2	X	-	252-169-7	X	-		X	X	-
Methyl alcohol	67-56-1	X	-	200-659-6	X	X	X	X	X	KE-23193
Methyl Red sodium salt	845-10-3	X	-	212-682-9	X	-		X	X	KE-11175
1(3H)-Isobenzofuranone, 3,3-bis(4-hydroxyphenyl)-, disodium salt	518-51-4	X	-	208-254-6	-	-		-	-	-
Phenol, 4,4'-(3H-2,1-benzoxathiol-3-yliden e)bis[5-methyl-2-(1-methylethyl)-, S,S-dioxide, monosodium salt	62625-21-2	X	-	263-650-6	-	-		-	X	-

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)**U.S. Federal Regulations****SARA 313**

Component	CAS No	Weight %	SARA 313 - Threshold Values %
Isopropyl alcohol	67-63-0	42.0	1.0
Methyl alcohol	67-56-1	2.0	1.0

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act)**Clean Air Act**

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Methyl alcohol	X		-

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Methyl alcohol	5000 lb	-

California Proposition 65 This product contains the following Proposition 65 chemicals.

Component	CAS No	California Prop. 65	Prop 65 NSRL	Category
Methyl alcohol	67-56-1	Developmental	-	Developmental

**U.S. State Right-to-Know
Regulations**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Water	-	-	X	-	-
Isopropyl alcohol	X	X	X	-	X
Methyl alcohol	X	X	X	X	X

U.S. Department of Transportation

Reportable Quantity (RQ): Y
 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**

No information available

Authorisation/Restrictions according to EU REACH

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Isopropyl alcohol	-	Use restricted. See item 75. (see link for restriction details)	-
Methyl alcohol	-	Use restricted. See item 69. (see link for restriction details)	-

<https://echa.europa.eu/substances-restricted-under-reach>

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Water	7732-18-5	Listed	Not applicable	Not applicable	Not applicable
Isopropyl alcohol	67-63-0	Listed	Not applicable	Not applicable	Not applicable
Phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis[2-bromo-3-methyl-6-(1-methylethyl)-, S,S-dioxide, monosodium salt	34722-90-2	Not applicable	Not applicable	Not applicable	Not applicable
Methyl alcohol	67-56-1	Listed	Not applicable	Not applicable	Not applicable
Methyl Red sodium salt	845-10-3	Not applicable	Not applicable	Not applicable	Not applicable
1(3H)-Isobenzofuranone, 3,3-bis(4-hydroxyphenyl)-, disodium salt	518-51-4	Not applicable	Not applicable	Not applicable	Not applicable
Phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis[5-methyl-2-(1-methylethyl)-, S,S-dioxide, monosodium salt	62625-21-2	Not applicable	Not applicable	Not applicable	Not applicable

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Water	7732-18-5	Not applicable	Not applicable	Not applicable	Not applicable
Isopropyl alcohol	67-63-0	Not applicable	Not applicable	Not applicable	Annex I - Y42
Phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis[2-bromo-3-methyl-6-	34722-90-2	Not applicable	Not applicable	Not applicable	Not applicable

(1-methylethyl)-, S,S-dioxide, monosodium salt					
Methyl alcohol	67-56-1	500 tonne	5000 tonne	Not applicable	Not applicable
Methyl Red sodium salt	845-10-3	Not applicable	Not applicable	Not applicable	Not applicable
1(3H)-Isobenzofuranone, 3,3-bis(4-hydroxyphenyl)-, disodium salt	518-51-4	Not applicable	Not applicable	Not applicable	Not applicable
Phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis[5-methyl-2-(1-methylethyl)-, S,S-dioxide, monosodium salt	62625-21-2	Not applicable	Not applicable	Not applicable	Not applicable

16. Other information

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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 in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text

End of SDS