SAFETY DATA SHEET

Creation Date 06-June-2014 **Revision Date** 24-December-2021 **Revision Number** 5

1. Identification

Product Name **ScintiSafe™ Econo 2 Cocktail (Scintanalyzed)**

Cat No. : **SX21-5**

Synonyms No information available

Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company
Importer/Distributor
Fisher Scientific
112 Colonnade Road,
Ottawa, ON K2E 7L6,
Canada
Tel: 1-800-234-7437

Manufacturer
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

WHMIS 2015 Classification Classified as hazardous under the Hazardous Products Regulations (SOR/2015-17)

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 1
Carcinogenicity	Category 2
Aspiration Toxicity	Category 1

Label Elements

Signal Word
Danger

Hazard Statements
May be fatal if swallowed and enters airways
Causes skin irritation
Causes serious eye damage
Suspected of causing cancer

Precautionary Statements
Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Use only outdoors or in a well-ventilated area
Response
IF ON SKIN: Wash with plenty of soap and water
IF INHALED: Remove person to fresh air and keep comfortable for breathing
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
Do NOT induce vomiting
Take off contaminated clothing
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

Other Hazards
Harmful to aquatic life with long lasting effects
Contains a known or suspected endocrine disruptor

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Benzene, C10-13-alkyl derivatives	67774-74-7	60-80
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	577-11-7	10-20
Tributyl phosphate	126-73-8	2.5-10
Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-	9016-45-9	2.5-10
Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-, branched, phosphates	68412-53-3	<=2.5
Oxazole, 2,5-diphenyl-	92-71-7	<=2.5
Benzene, 1,4-bis[2-(2-methylphenyl)ethenyl]-	13280-61-0	<=2.5

4. First-aid measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.

Inhalation Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention if symptoms

occur. Risk of serious damage to the lungs (by aspiration).

Ingestion Do NOT induce vomiting. Get medical attention if symptoms occur. Call a physician or poison control center immediately. If vomiting occurs naturally, have victim lean forward.

Most important symptoms/effects Causes eye burns.
Notes to Physician Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

Unsuitable Extinguishing Media No information available

Flash Point 150 °C / 302 °F

Method - No information available

Autoignition Temperature 400 °C / 752 °F

Explosion Limits
Upper 9.0 vol %
Lower 1.0 vol %
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. Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products
Carbon monoxide (CO). Carbon dioxide (CO_2). Sulfur oxides.
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	Flammability	Instability	Physical hazards
2	1	0	N/A

6. Accidental release measures

Personal Precautions Use personal protective equipment as required. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing.
Environmental Precautions Avoid release to the environment. See Section 12 for additional Ecological Information. Do not flush into surface water or sanitary sewer system. Collect spillage.

Methods for Containment and Clean Up Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

7. Handling and storage

Handling Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation.

Storage. Keep containers tightly closed in a dry, cool and well-ventilated place. Incompatible Materials. Strong oxidizing agents. Strong acids. Strong bases.

8. Exposure controls / personal protection

Exposure Guidelines

Component	Alberta	British Columbia	Ontario TWAEV	Quebec	ACGIH TLV	OSHA PEL	NIOSH IDLH
Tributyl phosphate	TWA: 0.2 ppm TWA: 2.2 mg/m³	TWA: 0.2 ppm	TWA: 5 mg/m³	TWA: 5 mg/m³	TWA: 5 mg/m³	(Vacated) TWA: 0.2 ppm (Vacated) TWA: 2.5 mg/m³ TWA: 5 mg/m³	IDLH: 30 ppm TWA: 0.2 ppm TWA: 2.5 mg/m³

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. Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection Goggles

Hand Protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Glove material	Breakthrough time	Glove thickness	Glove comments
Nitrile rubber Neoprene Natural rubber PVC	See manufacturers recommendations	-	Splash protection only

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. 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.
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly
Recommended Filter type: Organic gases and vapours filter Type A Brown conforming to EN14387

When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls

Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

9. Physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	Characteristic

Odor Threshold	No information available
pH	Not applicable
Melting Point/Range	-70 °C / -94 °F
Boiling Point/Range	271 - °C / 519.8 - 644 °F
Flash Point	150 °C / 302 °F
Evaporation Rate	No information available
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	9.0 vol %
Lower	1.0 vol %
Vapor Pressure	No information available
Vapor Density	No information available
Specific Gravity	0.9
Solubility	Immiscible with water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	400 °C / 752 °F
Decomposition Temperature	No information available
Viscosity	No information available
VOC Content(%)	2.5-10

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Stable under normal conditions.

Conditions to Avoid Incompatible products. Excess heat.

Incompatible Materials Strong oxidizing agents, Strong acids, Strong bases

Hazardous Decomposition Products Carbon monoxide (CO), Carbon dioxide (CO_2), Sulfur oxides

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
Benzene, C10-13-alkyl derivatives	LD50 > 5000 mg/kg (Rat)	LD50 > 10200 mg/kg (Rabbit)	Not listed
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	>3100 mg/kg (Rat)	>10000 mg/kg (Rabbit)	>20.0 mg/L/4h (Rat)
Tributyl phosphate	LD50 = 1390 mg/kg (Rat)	LD50 > 10000 mg/kg (Rabbit)	LC50 = 1.359 mg/L (Rat) 4 h
Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-	LD50 = 2590 mg/kg (Rat)	LD50 = 1780 µL/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 Severe eye irritant; Irritating to skin

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
Benzene, C10-13-alkyl derivatives	67774-74-7	Not listed	Not listed	Not listed	Not listed	Not listed
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	577-11-7	Not listed	Not listed	Not listed	Not listed	Not listed
Tributyl phosphate	126-73-8	Not listed	Not listed	A3	Not listed	Not listed
Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-	9016-45-9	Not listed	Not listed	Not listed	Not listed	Not listed
Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-, branched, phosphates	68412-53-3	Not listed	Not listed	Not listed	Not listed	Not listed
Oxazole, 2,5-diphenyl-	92-71-7	Not listed	Not listed	Not listed	Not listed	Not listed
Benzene, 1,4-bis[2-(2-methylphenyl)ethenyl]-	13280-61-0	Not listed	Not listed	Not listed	Not listed	Not listed

ACGIH: (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen
A2 - Suspected Human Carcinogen
A3 - Animal Carcinogen
ACGIH: (American Conference of Governmental Industrial Hygienists)

Mutagenic Effects No information available

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 No information available

Endocrine Disruptor Information

Component	EU - Endocrine Disrupters Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-	Group III Chemical	Not applicable	Not applicable

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

12. Ecological information

Ecotoxicity

The product contains following substances which are hazardous for the environment. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Contains a substance which is:. Toxic to aquatic organisms. Very toxic to aquatic organisms.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Benzene, C10-13-alkyl derivatives	Not listed	Not listed	Not listed	EC50: 0.009 - 0.08 mg/L, 48h (Daphnia magna)

Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	Not listed	20-40 mg/L LC50 96 h 37 mg/L LC50 96 h 24 mg/L LC50 96 h	Not listed	36 mg/L EC50 = 48 h
Tributyl phosphate	EC50: = 4.4 mg/L, 96h (Pseudokirchneriella subcapitata) EC50: = 1.1 mg/L, 72h (Desmodesmus subspicatus)	LC50: = 8.18 mg/L, 96h (Pimephales promelas) LC50: = 4.5 mg/L, 96h (Oryzias latipes) LC50: = 9.6 mg/L, 96h static (Oryzias latipes) LC50: 1.0 - 10.0 mg/L, 96h static (Pimephales promelas) LC50: = 4.2 mg/L, 96h static (Oncorhynchus mykiss) LC50: = 13 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: 7.66 - 8.74 mg/L, 96h flow-through (Pimephales promelas)	Not listed	EC50: 1.58 - 8.43 mg/L, 48h Static (Daphnia magna)

Persistence and Degradability Immiscible with water

Bioaccumulation/ Accumulation No information available.

Mobility Is not likely mobile in the environment due its low water solubility.

Component	log Pow
Tributyl phosphate	2.5

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 Not regulated
TDG Not regulated
IATA Not regulated
IMDG/IMO Not regulated

15. Regulatory information

International Inventories

Component	CAS-No	DSL	NDSL	TSCA	TSCA Inventory notification - Active-Inactive	EINECS	ELINCS	NLP
Benzene, C10-13-alkyl derivatives	67774-74-7	X	-	X	ACTIVE	267-051-0	-	-
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	577-11-7	X	-	X	ACTIVE	209-406-4	-	-
Tributyl phosphate	126-73-8	X	-	X	ACTIVE	204-800-2	-	-
Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-	9016-45-9	X	-	X	ACTIVE	-	-	500-024-6
Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-, branched, phosphates	68412-53-3	X	-	X	ACTIVE	-	-	-
Oxazole, 2,5-diphenyl-	92-71-7	X	-	X	ACTIVE	202-181-3	-	-
Benzene, 1,4-bis[2-(2-methylphenyl)ethenyl]-	13280-61-0	X	-	X	ACTIVE	236-285-5	-	-

Component	CAS-No	IECSC	KECL	ENCS	ISHL	TCSI	AICS	NZIoC	PICCS
Benzene, C10-13-alkyl derivatives	67774-74-7	X	KE-02156	-	-	X	X	X	X
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	577-11-7	X	KE-32402	X	X	X	X	X	X
Tributyl phosphate	126-73-8	X	KE-34036	X	X	X	X	X	X
Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-	9016-45-9	X	KE-26244	X	X	X	X	X	X
Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-, branched, phosphates	68412-53-3	X	99-3-1253	-	-	X	X	X	X
Oxazole, 2,5-diphenyl-	92-71-7	X	KE-12092	X	X	X	X	X	X
Benzene, 1,4-bis[2-(2-methylphenyl)ethenyl]-	13280-61-0	X	KE-03298	-	-	X	-	X	-

Legend:
X - Listed '-' - Not Listed
KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
IECSC - Chinese Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
ENCS - Japanese Existing and New Chemical Substances
AICS - Australian Inventory of Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances

Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

Component	Canada - National Pollutant Release Inventory (NPRI)	Canadian Environmental Protection Agency (CEPA) - List of Toxic Substances	Canada's Chemicals Management Plan (CEPA)
Tributyl phosphate			Subject to Monitoring and Surveillance Activities
Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-	Part 1, Group B Substance	Schedule I	
Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-, branched, phosphates	Part 1, Group B Substance		

Other International Regulations

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)
Tributyl phosphate	-	Use restricted. See item 75. (see link for restriction details)	-
Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-	-	Use restricted. See item 46[b]. (see link for restriction details) Use restricted. See item 46a. (see link for restriction details)	SVHC Candidate list - 500-024-6; 932-998-7 - Endocrine disrupting properties, Article 57f - environment

After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

https://echa.europa.eu/authorisation-list

https://echa.europa.eu/substances-restricted-under-reach
https://echa.europa.eu/candidate-list-table

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)
Benzene, C10-13-alkyl derivatives	67774-74-7	Listed	Not applicable	Not applicable	Not applicable
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	577-11-7	Listed	Not applicable	Not applicable	Not applicable
Tributyl phosphate	126-73-8	Listed	Not applicable	Not applicable	Not applicable
Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-	9016-45-9	Listed	Not applicable	Not applicable	Not applicable
Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-, branched, phosphates	68412-53-3	Not applicable	Not applicable	Not applicable	Not applicable
Oxazole, 2,5-diphenyl-	92-71-7	Not applicable	Not applicable	Not applicable	Not applicable
Benzene, 1,4-bis[2-(2-methylphenyl)ethenyl]-	13280-61-0	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)
Benzene, C10-13-alkyl derivatives	67774-74-7	Not applicable	Not applicable	Not applicable	Not applicable
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	577-11-7	Not applicable	Not applicable	Not applicable	Not applicable
Tributyl phosphate	126-73-8	Not applicable	Not applicable	Not applicable	Not applicable
Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-	9016-45-9	Not applicable	Not applicable	Not applicable	Not applicable
Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-, branched, phosphates	68412-53-3	Not applicable	Not applicable	Not applicable	Not applicable
Oxazole, 2,5-diphenyl-	92-71-7	Not applicable	Not applicable	Not applicable	Not applicable
Benzene, 1,4-bis[2-(2-methylphenyl)ethenyl]-	13280-61-0	Not applicable	Not applicable	Not applicable	Not applicable

16. Other information

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

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Revision Summary This document has been updated to comply with the requirements of WHMIS 2015 to align with the Globally Harmonised System (GHS) for the Classification and Labelling of Chemicals.

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