SAFETY DATA SHEET

Creation Date 20-October-2015 **Revision Date** 23-May-2023 **Revision Number** 7

1. Identification

Product Name **3,6,9-Triethyl-3,6,9-trimethyl-1,4,7-triperoxynonane, 41% solution in aromatic free mineral spirit**

Cat No. : **AC349940000; AC349940050; AC349941000**

Synonyms Trigonox 301

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

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

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

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

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

Flammable liquids	Category 4
Organic peroxides	Type D
Skin Corrosion/Irritation	Category 2
Skin Sensitization	Category 1
Aspiration Toxicity	Category 1

Label Elements

Signal Word
Danger

Hazard Statements
Combustible liquid
Heating may cause a fire

May be fatal if swallowed and enters airways
Causes skin irritation
May cause an allergic skin reaction

Precautionary Statements
Prevention
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Keep/Store away from clothing/combustible materials
Keep only in original container
Use explosion-proof electrical/ventilating/lighting/equipment
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves/protective clothing/eye protection/face protection
Response
IF SWALLOWED: Immediately call a POISON CENTER/doctor
IF ON SKIN: Wash with plenty of soap and water
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Do NOT induce vomiting
If skin irritation or rash occurs: Get medical advice/attention
If eye irritation persists: Get medical advice/attention
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish
Take off contaminated clothing and wash it before reuse
Storage
Store locked up
Store in a well-ventilated place. Keep cool
Protect from sunlight
Store away from other materials
Disposal
Dispose of contents/container to an approved waste disposal plant

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Petroleum distillates, hydrotreated light	64742-47-8	59
1,2,4,5,7,8-Hexoxonane, 3,6,9-triethyl-3,6,9-trimethyl-	24748-23-0	41

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 Get medical attention. Wash off immediately with plenty of water for at least 15 minutes.

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

serious damage to the lungs (by aspiration).

Ingestion Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Call a physician or poison control center immediately. If vomiting occurs naturally, have victim lean forward.

Most important symptoms/effects May cause allergic skin reaction. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

Notes to Physician Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.

Unsuitable Extinguishing Media No information available

Flash Point 74 °C / 165.2 °F

Method - No information available

Autoignition Temperature 180 °C / 356 °F

Explosion Limits
Upper No data available
Lower No data available

Oxidizing Properties Oxidizer

Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical
Combustible material. Oxidizer: Contact with combustible/organic material may cause fire. Keep product and empty container away from heat and sources of ignition. Risk of ignition. May ignite combustibles (wood paper, oil, clothing, etc.). Containers may explode when heated.

Hazardous Combustion Products
Carbon monoxide (CO). Carbon dioxide (CO_2). Acetone.
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
3	2	3	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. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Remove all sources of ignition.

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 clothing and other combustible materials. Keep away from open flames, hot surfaces and sources of ignition.

Storage.

Do not store near combustible materials. Keep away from heat, sparks and flame. Do not freeze. Keep at temperatures between 10 ° and 40 °C. Keep container tightly closed in a dry and well-ventilated place. Incompatible Materials. Acids. Bases. Metals. Reducing Agent. Strong reducing agents. Combustible material.

8. Exposure controls / personal protection

Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limitsestablished by the region specific regulatory bodies.

Engineering Measures

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

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.

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

9. Physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	mild
Odor Threshold	No information available
pH	No information available
Melting Point/Range	< 10 °C / < 50 °F
Boiling Point/Range	No information available
Flash Point	74 °C / 165.2 °F
Evaporation Rate	No information available
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	<1 hPa (20°C)
Vapor Density	No information available
Specific Gravity	0.875
Solubility	Immiscible with water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	180 °C / 356 °F
Decomposition Temperature	No information available
Viscosity	No information available
Self-Accelerating Decomposition Temperature (SADT)	110°C

10. Stability and reactivity

Reactive Hazard Yes

Stability Oxidizer: Contact with combustible/organic material may cause fire. Stable under recommended storage conditions.

Conditions to Avoid Incompatible products. Excess heat. Combustible material. Keep away from open flames, hot surfaces and sources of ignition.

Incompatible Materials Acids, Bases, Metals, Reducing Agent, Strong reducing agents, Combustible material

Hazardous Decomposition Products Carbon monoxide (CO), Carbon dioxide (CO_2), Acetone

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Petroleum distillates, hydrotreated light	LD50 > 5000 mg/kg (Rat)	LD50 > 2000 mg/kg (Rabbit)	LC50 > 5.2 mg/L (Rat) 4 h
1,2,4,5,7,8-Hexoxonane, 3,6,9-triethyl-3,6,9-trimethyl-	Not listed	LD50 > 2000 mg/kg (Rat)	Not listed

Toxicologically Synergistic Products No information available

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

Irritation Irritating to eyes and skin

Sensitization May cause sensitization by skin contact

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

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Petroleum distillates, hydrotreated light	64742-47-8	Not listed	Not listed	Not listed	Not listed	Not listed
1,2,4,5,7,8-Hexoxonane, 3,6,9-triethyl-3,6,9-trimethyl-	24748-23-0	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 Category 1

Symptoms / effects,both acute and delayed Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

Endocrine Disruptor Information No information available

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

12. Ecological information

Ecotoxicity

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants. Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Petroleum distillates, hydrotreated light	Not listed	LC50: = 2.4 mg/L, 96h static (Oncorhynchus mykiss) LC50: = 2.2 mg/L, 96h static (Lepomis macrochirus) LC50: = 45 mg/L, 96h flow-through (Pimephales promelas)	Not listed	Not listed
1,2,4,5,7,8-Hexoxonane, 3,6,9-triethyl-3,6,9-trimethyl-	Not listed	LC50: > 1.4 mg/L, 96h semi-static (Oncorhynchus mykiss)	Not listed	Not listed

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
1,2,4,5,7,8-Hexoxonane, 3,6,9-triethyl-3,6,9-trimethyl-	4.84

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	UN3105
Proper Shipping Name	ORGANIC PEROXIDE TYPE D, LIQUID
Hazard Class	5.2
Packing Group	II

TDG

UN-No	UN3105
Proper Shipping Name	ORGANIC PEROXIDE TYPE D, LIQUID
Hazard Class	5.2
Packing Group	II

IATA

UN-No	UN3105
Proper Shipping Name	ORGANIC PEROXIDE TYPE D, LIQUID
Hazard Class	5.2

IMDG/IMO

UN-No	UN3105
Proper Shipping Name	ORGANIC PEROXIDE TYPE D, LIQUID
Hazard Class	5.2

15. Regulatory information

International Inventories

Component	CAS-No	DSL	NDSL	TSCA	TSCA Inventory notification - Active-Inactive	EINECS	ELINCS	NLP
Petroleum distillates, hydrotreated light	64742-47-8	X	-	X	ACTIVE	265-149-8	-	-
1,2,4,5,7,8-Hexoxonane, 3,6,9-triethyl-3,6,9-trimethyl-	24748-23-0	X	-	X	ACTIVE	-	429-320-2	-

Component	CAS-No	IECSC	KECL	ENCS	ISHL	TCSI	AICS	NZIoC	PICCS
Petroleum distillates, hydrotreated light	64742-47-8	X	KE-12550	-	-	X	X	X	X
1,2,4,5,7,8-Hexoxonane, 3,6,9-triethyl-3,6,9-trimethyl-	24748-23-0	X	2010-2-58	X	X	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)
Petroleum distillates, hydrotreated	Part 5, Other Groups and Mixtures		

light			

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)
1,2,4,5,7,8-Hexoxonane, 3,6,9-triethyl-3,6,9-trimethyl-	-	Use restricted. See item 75. (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)
Petroleum distillates, hydrotreated light	64742-47-8	Listed	Not applicable	Not applicable	Not applicable
1,2,4,5,7,8-Hexoxonane, 3,6,9-triethyl-3,6,9-trimethyl-	24748-23-0	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)
Petroleum distillates, hydrotreated light	64742-47-8	Not applicable	Not applicable	Not applicable	Not applicable
1,2,4,5,7,8-Hexoxonane, 3,6,9-triethyl-3,6,9-trimethyl-	24748-23-0	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 requirements of WHMIS 2015 to align with the Globally Harmonised System (GHS) for the Classification and Labelling of Chemicals.

Disclaimer
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End of SDS