

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878

TRIGONOX 23-C75

Version	Revision Date:	HR / EN	Date of last issue: 01.09.2021
1.3	12.09.2023		Date of first issue: 05.03.2019

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : TRIGONOX 23-C75

UFI : 74M2-G01J-900X-XV7M

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

Use of the Substance/Mixture : Polymerization initiator

1.3 Details of the supplier of the safety data sheet

Company : Nouryon Functional Chemicals B.V.
Haaksbergweg 88
NL 1101 BZ Amsterdam
Netherlands

Telephone : +31889840367

E-mail address of person responsible for the SDS : polymer.emeia@nouryon.com

1.4 Emergency telephone number

Emergency telephone number : 24 hours:+31 57 06 79211, US-CHEMTREC:1-800-424-9300, CA-CANUTEC:1-613-996-6666, JP: +81 (836) 74 8810, CN: 化学事故应急咨询电话 : +86 532 8388 9090-: Nouryon Emergency Response Centre: +31 570 679211
Poison Centre: +385 1 2348 342

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification REGULATION (EC) No 1272/2008

Organic peroxides, Type D	H242: Heating may cause a fire.
Skin irritation, Category 2	H315: Causes skin irritation.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.

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Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters airways.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements :

- H242 Heating may cause a fire.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P234 Keep only in original packaging.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
- P331 Do NOT induce vomiting.
- P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.
- P391 Collect spillage.

Storage:

- P411 Store at temperatures not exceeding 0°C/ 32°F.

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Hazardous components which must be listed on the label:

tert-Butyl peroxyneodecanoate
Isododecane

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification REGULATION (EC) No 1272/2008	Concentration (% w/w)
tert-Butyl peroxyneodecanoate	26748-41-4 247-955-1 01-2119948628-22	Org. Perox. D; H242 Skin Irrit. 2; H315 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	74 - 76
Isododecane	13475-82-6 236-757-0 01-2119490725-29	Flam. Liq. 3; H226 Asp. Tox. 1; H304 Aquatic Chronic 4; H413 EUH066	24 - 26

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For explanation of abbreviations see section 16.

Remarks : The following CAS number is relevant for EU REACH: 13475-82-6.

The following substances have multiple CAS-number

Isododecane : 93685-81-5

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	: Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled	: If breathed in, move person into fresh air. Consult a physician after significant exposure.
In case of skin contact	: Take off contaminated clothing and shoes immediately. Rinse immediately with plenty of water. If skin irritation persists, call a physician.
In case of eye contact	: Rinse with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	: Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	: The symptoms and effects are as expected from the hazards as shown in section 2. No specific product related symptoms are known.
Risks	: May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction.

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4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : CAUTION: reignition may occur.
Supports combustion.
Do not use a solid water stream as it may scatter and spread fire.
Water spray may be ineffective unless used by experienced firefighters.
Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous decomposition products formed under fire conditions.

Hazardous combustion products : Fire will produce smoke containing hazardous combustion products (see section 10).

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Use water spray to cool unopened containers.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.

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Wear respiratory protection.
Ensure adequate ventilation.
Remove all sources of ignition.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Evacuate personnel to safe areas.
Only qualified personnel equipped with suitable protective equipment may intervene.
Prevent unauthorised persons entering the zone.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Discharge into the environment must be avoided.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material and dispose of as hazardous waste.
Use only inert inorganic material such as vermiculite or perlite as absorbent.
Keep mixture of absorbent material and spilled product wetted with water.
Confinement must be avoided.
Never return spills in original containers for re-use.

6.4 Reference to other sections

For disposal considerations see section 13.
For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8.
Avoid formation of aerosol.
Do not breathe vapours or spray mist.
Avoid contact with skin, eyes and clothing.
Smoking, eating and drinking should be prohibited in the application area.
Open drum carefully as content may be under pressure.
Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Use explosion protected equipment. Keep away from sources of ignition - No smoking. No sparking tools should be used.

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Keep away from reducing agents (e.g. amines), acids, alkalies and heavy metal compounds (e.g. accelerators, driers, metal soaps). Do not cut or weld on or near this container even when empty. Keep away from combustible material.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday. Wash contaminated clothing before re-use.

Temperature class : It is recommended to use electrical equipment of temperature group T3. However, autoignition can never be excluded.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Prevent unauthorized access. No smoking. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards. Keep only in original container. Store away from other materials.

Further information on storage stability : If product freezes or separates, contact the manufacturer.

Maximum storage temperature is for quality only.

No decomposition if stored and applied as directed.

Minimum storage temperature: : Avoid temperatures below:
-25 °C

Maximum storage temperature: : -10 °C

7.3 Specific end use(s)

Specific use(s) : Consult the technical guidelines for the use of this substance/mixture.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form	Control parameters	Basis
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		of exposure)		
tert-Butanol	75-65-0	GVI	100 ppm 308 mg/m ³	HR OEL
		STEL	150 ppm 462 mg/m ³	HR OEL
Carbon dioxide	124-38-9	TWA	5.000 ppm 9.000 mg/m ³	2006/15/EC
Further information: Indicative				
		GVI	5.000 ppm 9.000 mg/m ³	HR OEL
Further information: 2006/15/EU				

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
tert-Butyl peroxyneodecanoate	Workers	Inhalation	Acute systemic effects	2,1 mg/m ³
	Workers	Inhalation	Long-term systemic effects	3 mg/m ³

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
tert-Butyl peroxyneodecanoate	Fresh water	0,0049 mg/l
	Marine water	0,00049 mg/l
	Intermittent water	0,0033 mg/l
	Sewage treatment plant	96,69 mg/l
	Fresh water sediment	2,19 mg/kg
	Marine sediment	0,219 mg/kg
	Soil	0,434 mg/kg

8.2 Exposure controls

Engineering measures

Explosion proof ventilation recommended.
Effective exhaust ventilation system

Personal protective equipment

Eye/face protection : Tightly fitting safety goggles

Hand protection

Material : Neoprene

Material : Nitrile rubber

Skin and body protection : Protective suit

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Respiratory protection : In the case of vapour or aerosol formation use a respirator with an approved filter.
Filter A

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	colourless
Odour	:	very faint
Odour Threshold	:	No data available
Freezing point	:	-20 °C
Boiling point	:	Not applicable
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	Not applicable
		Above the SADT value
Auto-ignition temperature	:	Test method not applicable
Decomposition temperature	:	SADT - (Self accelerating decomposition temperature) is the lowest temperature at which self accelerating decomposition may occur with a substance in the packaging as used in

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transport. A dangerous self-accelerating decomposition reaction and, under certain circumstances, explosion or fire can be caused by thermal decomposition at and above the SADT. Contact with incompatible substances can cause decomposition below the SADT.

Self-Accelerating decomposition temperature (SADT) : 20 °C

pH : substance/mixture is non-soluble (in water)

Viscosity
Viscosity, dynamic : 17 mPa.s (0 °C)

Viscosity, kinematic : 19,5 mm²/s (0 °C)

Solubility(ies)
Water solubility : immiscible

Solubility in other solvents : Solvent: organic solvent
miscible with most organic solvents

Partition coefficient: n-octanol/water : No data available

Vapour pressure : No data available

Relative density : 0,88 (0 °C)

Relative vapour density : No data available

9.2 Other information

Explosives : Not explosive

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Oxidizing properties	:	Not applicable
Flammability (liquids)	:	Decomposition products may be flammable.
Evaporation rate	:	No data available
Active Oxygen Content	:	4,84 - 4,98 %
Organic peroxides	:	74 - 76 %

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid : Confinement must be avoided.
Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Contact with the following incompatible materials will result in hazardous decomposition:
Acids and bases
Iron
Copper
Reducing agents
Heavy metals
Rust
Do not mix with peroxide accelerators, unless under controlled processing.
Use only stainless steel 316, PP, polyethylene or glass-lined equipment.
For queries regarding the suitability of other materials please

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contact the supplier.

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

Hazardous decomposition products : tert-Butanol
Carbon dioxide
Neononane isomer(s)

Thermal decomposition : SADT - (Self accelerating decomposition temperature) is the lowest temperature at which self accelerating decomposition may occur with a substance in the packaging as used in transport. A dangerous self-accelerating decomposition reaction and, under certain circumstances, explosion or fire can be caused by thermal decomposition at and above the SADT. Contact with incompatible substances can cause decomposition below the SADT.

Self-Accelerating decomposition temperature (SADT) : 20 °C

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Not classified due to lack of data.

Components:

tert-Butyl peroxyneodecanoate:

Acute oral toxicity : LD50 Oral (Rat, male and female): 10.776 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 37,5 mg/l
Exposure time: 4 h
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 Dermal (Rabbit, male and female): > 6.000 mg/kg

Isododecane:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 401

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Acute inhalation toxicity : LC50 (Rat): > 6,1 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Saturated vapour concentration

LC50 (Rat): > 5,6 mg/l
Exposure time: 4 h
Test atmosphere: aerosol
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 3.160 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Causes skin irritation.

Components:

tert-Butyl peroxyneodecanoate:

Species : Rabbit
Exposure time : 4 h
Assessment : Category 2
Method : OECD Test Guideline 404
Result : Irritating to skin.

Isododecane:

Result : Repeated exposure may cause skin dryness or cracking.

Serious eye damage/eye irritation

Not classified due to lack of data.

Components:

tert-Butyl peroxyneodecanoate:

Species : Rabbit
Assessment : No eye irritation
Result : No eye irritation

Isododecane:

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Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified due to lack of data.

Components:

tert-Butyl peroxyneodecanoate:

Assessment : May cause sensitisation by skin contact.

Assessment : Severe skin irritation
May cause sensitisation by skin contact.

Isododecane:

Test Type : Maximisation Test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Not sensitizing.

Germ cell mutagenicity

Not classified due to lack of data.

Product:

Germ cell mutagenicity-
Assessment : Based on available data, the classification criteria are not met.

Components:

tert-Butyl peroxyneodecanoate:

Genotoxicity in vitro : Test Type: In vitro gene mutation test (CHO cells):
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Test Type: Ames test
Test system: Salmonella typhimurium

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Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: Positive results in some in vitro tests.

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse (male and female)
Strain: NMRI and DBA
Cell type: Bone marrow
Application Route: Intraperitoneal
Method: OECD Test Guideline 474
Result: negative

Germ cell mutagenicity-
Assessment : Based on available data, the classification criteria are not met.

Isododecane:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

Test Type: Ames test
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: Chromosome aberration test in vivo
Species: Rat
Application Route: inhalation (vapour)
Method: OECD Test Guideline 478
Result: negative

Test Type: Micronucleus test
Species: Mouse
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity

Not classified due to lack of data.

Product:

Carcinogenicity -
Assessment : Based on available data, the classification criteria are not met.

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Components:

tert-Butyl peroxyneodecanoate:

Remarks : No human information is available.

Carcinogenicity - Assessment : Based on available data, the classification criteria are not met.

Isododecane:

Species : Rat, female
Application Route : inhalation (vapour)
Exposure time : 105w
Frequency of Treatment : 5 days/week
NOAEC : 1.100 mg/m³
Method : OECD Test Guideline 453

Species : Rat, male
Application Route : inhalation (vapour)
Exposure time : 105w
Frequency of Treatment : 5 days/week
NOAEC : 138 mg/m³
Method : OECD Test Guideline 453

Reproductive toxicity

Not classified due to lack of data.

Product:

Reproductive toxicity - Assessment : Based on available data, the classification criteria are not met. not teratogenic if the exposure limit value is applied

Components:

tert-Butyl peroxyneodecanoate:

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Rat, male and female
Application Route: Oral
Dose: 60, 200, 600 mg/kg bw/day
Duration of Single Treatment: 24 h
Frequency of Treatment: 1 daily
General Toxicity - Parent: NOAEL: 200 mg/kg bw/day
General Toxicity F1: NOAEL: 60 mg/kg bw/day
Method: OECD Test Guideline 422
Result: Animal testing did not show any effects on fertility.
GLP: yes

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- Effects on foetal development : Test Type: Fertility/early embryonic development
Species: Rat, male and female
Application Route: Oral
Dose: 60, 200, 600 milligram per kilogram
Duration of Single Treatment: 24 h
Frequency of Treatment: 1 daily
General Toxicity Maternal: NOAEL: 200 mg/kg bw/day
Teratogenicity: NOAEL Mating/Fertility: 60 mg/kg bw/day
Method: OECD Test Guideline 422
Result: Animal testing did not show any effects on fertility.
GLP: yes
- Reproductive toxicity - Assessment : Based on available data, the classification criteria are not met. not teratogenic if the exposure limit value is applied
- Isododecane:**
- Effects on fertility : Species: Rat
Application Route: Oral
Frequency of Treatment: 7 days/week
General Toxicity - Parent: NOAEL: > 1.000 mg/kg bw/day
General Toxicity F1: NOAEL: > 1.000 mg/kg bw/day
Method: OECD Test Guideline 422
- Effects on foetal development : Species: Rat
Application Route: inhalation (vapour)
General Toxicity Maternal: NOAEL: > 5.220 mg/m3
Developmental Toxicity: NOAEL: > 5.220 mg/m3
Method: OECD Test Guideline 414

STOT - single exposure

Not classified due to lack of data.

Components:

tert-Butyl peroxyneodecanoate:

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Not classified due to lack of data.

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Components:

tert-Butyl peroxyneodecanoate:

Exposure routes : Ingestion
Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

tert-Butyl peroxyneodecanoate:

Species : Rat, male and female
: 10 mg/kg bw/day
Application Route : Oral
Method : OECD Test Guideline 408
GLP : yes
Remarks : Read-across from supporting substance (structural analogue or surrogate).

Aspiration toxicity

May be fatal if swallowed and enters airways.

Components:

tert-Butyl peroxyneodecanoate:

No aspiration toxicity classification

Isododecane:

May be fatal if swallowed and enters airways.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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Further information

Product:

Remarks : Solvents may degrease the skin.

Remarks : No further data available.

SECTION 12: Ecological information

12.1 Toxicity

Components:

tert-Butyl peroxyneodecanoate:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): 0,33 mg/l Exposure time: 96 h Test Type: Fresh water Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0,79 mg/l Exposure time: 48 h Test Type: Fresh water Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 0,48 mg/l End point: EL50 Exposure time: 72 h Test Type: Growth inhibition Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes
M-Factor (Acute aquatic toxicity)	:	1
Toxicity to microorganisms	:	EC50 (activated sludge): 2.054 mg/l Exposure time: 3 h Test Type: Respiration inhibition Analytical monitoring: no Method: OECD Test Guideline 209

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GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,049 mg/l
End point: reproduction rate
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test
Method: OECD Test Guideline 211
GLP: yes

M-Factor (Chronic aquatic toxicity) : 1

Isododecane:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 1.000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

LC50 (Oncorhynchus mykiss (rainbow trout)): > 1,2 mg/l
Exposure time: 96 h
Method: Other guidelines
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 1.000 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

EC50 (Daphnia magna (Water flea)): > 1,3 mg/l
Exposure time: 48 h
Method: Other guidelines
Remarks: No toxicity at the limit of solubility

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): > 0,0225 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: No toxicity at the limit of solubility

NOEC (Desmodesmus subspicatus (green algae)): > 0,0225 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: No toxicity at the limit of solubility

Toxicity to microorganisms : EL50 (Pseudomonas putida): > 1,48 mg/l

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Exposure time: 5 h
Method: Other guidelines

Toxicity to fish (Chronic toxicity) : NOELR: > 0,267 mg/l
Exposure time: 28 d
Species: Oncorhynchus mykiss (rainbow trout)
Method: QSAR

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,011 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

Ecotoxicology Assessment

Chronic aquatic toxicity : May cause long lasting harmful effects to aquatic life.

12.2 Persistence and degradability

Components:

tert-Butyl peroxyneodecanoate:

Biodegradability : Test Type: Closed Bottle test
Inoculum: activated sludge
Concentration: 2,1 mg/l
Result: Not readily biodegradable.
Biodegradation: 26 %
Exposure time: 28 d
Method: OECD Test Guideline 301
GLP: yes

Physico-chemical removability : Remarks: Readily eliminated from water

Isododecane:

Biodegradability : Result: Not readily biodegradable.

12.3 Bioaccumulative potential

Components:

tert-Butyl peroxyneodecanoate:

Bioaccumulation : Remarks: This substance is not considered to be persistent, bioaccumulating and toxic (PBT).
This substance is not considered to be very persistent and

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very bioaccumulating (vPvB).

Partition coefficient: n-octanol/water : log Pow: 5,4 (20 °C)

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Components:

tert-Butyl peroxyneodecanoate:

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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- Product** : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Dispose of contents/container in accordance with local regulation.
- Contaminated packaging** : Empty remaining contents.
Dispose of as unused product.
Do not burn, or use a cutting torch on, the empty drum.
Due to the high risk of contamination recycling/recovery is not recommended.
Follow all warnings even after the container is emptied.
-

SECTION 14: Transport information

14.1 UN number or ID number

- ADN** : UN 3115
- ADR** : UN 3115
- RID** : UN 3115
Not permitted for transport
- IMDG** : UN 3115
- IATA** : UN 3115
Not permitted for transport

14.2 UN proper shipping name

- ADN** : ORGANIC PEROXIDE TYPE D, LIQUID, TEMPERATURE CONTROLLED
(tert-Butyl peroxyneodecanoate, 75%)
- ADR** : ORGANIC PEROXIDE TYPE D, LIQUID, TEMPERATURE CONTROLLED
(tert-Butyl peroxyneodecanoate, 75%)
- RID** : ORGANIC PEROXIDE TYPE D, LIQUID, TEMPERATURE CONTROLLED
Not permitted for transport
- IMDG** : ORGANIC PEROXIDE TYPE D, LIQUID, TEMPERATURE CONTROLLED
(tert-Butyl peroxyneodecanoate, 75%, tert-Butyl peroxyneodecanoate)

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IATA : ORGANIC PEROXIDE TYPE D, LIQUID, TEMPERATURE CONTROLLED
Not permitted for transport

14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADN	: 5.2	
ADR	: 5.2	
RID	: Not permitted for transport	
IMDG	: 5.2	
IATA	: Not permitted for transport	

14.4 Packing group

ADN
Packing group : Not assigned by regulation
Classification Code : P2
Labels : 5.2

ADR
Packing group : Not assigned by regulation
Classification Code : P2
Labels : 5.2
Tunnel restriction code : (D)

RID : Not permitted for transport

IMDG
Packing group : Not assigned by regulation
Labels : 5.2
EmS Code : F-F, S-R

IATA (Cargo) : Not permitted for transport

IATA (Passenger) : Not permitted for transport

14.5 Environmental hazards

ADN
Environmentally hazardous : yes

ADR
Environmentally hazardous : yes

RID : Not permitted for transport

IMDG
Marine pollutant : yes

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IATA (Passenger)

Environmentally hazardous : yes

IATA (Cargo)

Environmentally hazardous : yes

14.6 Special precautions for user

Further information for transport

Control temperature : 0 °C

Emergency temperature : 10 °C

Remarks : The control temperature is the maximum temperature at which the formulation can be transported safely during a prolonged period of time.

The transport classification(s) provided herein are for informational purposes only. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Conditions of restriction for the following entries should be considered:
Number on list 3

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

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REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. P6b SELF-REACTIVE SUBSTANCES AND MIXTURES and ORGANIC PEROXIDES

E1 ENVIRONMENTAL HAZARDS

The components of this product are reported in the following inventories:

TCSI : On the inventory, or in compliance with the inventory

TSCA : Product contains substance(s) not listed on TSCA inventory.

AIIC : Not in compliance with the inventory

DSL : All components of this product are on the Canadian DSL

ENCS : On the inventory, or in compliance with the inventory

ISHL : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

NZIoC : On the inventory, or in compliance with the inventory

TECI : On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

tert-Butyl peroxyneodecanoate : A Chemical Safety Assessment has been carried out for this substance.

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SECTION 16: Other information

Full text of H-Statements

H226	: Flammable liquid and vapour.
H242	: Heating may cause a fire.
H304	: May be fatal if swallowed and enters airways.
H315	: Causes skin irritation.
H317	: May cause an allergic skin reaction.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.
H413	: May cause long lasting harmful effects to aquatic life.
EUH066	: Repeated exposure may cause skin dryness or cracking.

Full text of other abbreviations

Aquatic Acute	: Short-term (acute) aquatic hazard
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Asp. Tox.	: Aspiration hazard
Flam. Liq.	: Flammable liquids
Org. Perox.	: Organic peroxides
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitisation
2006/15/EC	: Europe. Indicative occupational exposure limit values
HR OEL	: Croatia. Regulations on limit values for exposure to hazardous substances at work and on the biological limit values.
2006/15/EC / TWA	: Limit Value - eight hours
HR OEL / STEL	: Short term exposure limit
HR OEL / GVI	: time weighted average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50

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- Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:

Org. Perox. D	H242
Skin Irrit. 2	H315
Skin Sens. 1	H317
Asp. Tox. 1	H304
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Classification procedure:

Based on product data or assessment
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

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.

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