

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## TRIGONOX 25-C75

Version 2

Revision Date 23.12.2021

Print Date 14.03.2023

CY / EN

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifier

Trade name : TRIGONOX 25-C75

UFI : HT12-70MC-E00Y-AWHK

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

Use of the Substance/Mixture : Specific use(s): 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

Telefax :

E-mail address : 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: 1401

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### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

# TRIGONOX 25-C75

Version 2

Revision Date 23.12.2021

Print Date 14.03.2023

CY / EN

Organic peroxides, C, H242  
Skin irritation, 2, H315  
Skin sensitisation, 1, H317  
Specific target organ toxicity - single exposure, 3, Respiratory system, H335  
Aspiration hazard, 1, H304  
Long-term (chronic) aquatic hazard, 2, H411

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 2.2 Label elements

### Labelling (REGULATION (EC) No 1272/2008)

Pictogram

:



Signal word

: Danger

Hazard statements

: H242  
H304

Heating may cause a fire.  
May be fatal if swallowed and enters airways.  
Causes skin irritation.  
May cause an allergic skin reaction.  
May cause respiratory irritation.  
Toxic to aquatic life with long lasting effects.

H315  
H317  
H335  
H411

Precautionary statements

: **Prevention:**  
P210

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

P234  
P273  
P280

**Response:**  
P301 + P310

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P331  
P370 + P378

Do NOT induce vomiting.  
In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.  
Collect spillage.

P391

**Storage:**  
P411

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

### Hazardous components which must be listed on the label:

tert-Butyl peroxyvalate

927-07-1

## 2.3 Other hazards

# TRIGONOX 25-C75

Version 2

Revision Date 23.12.2021

Print Date 14.03.2023

CY / EN

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No further data available.

PBT and vPvB 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.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixtures

Pure substance/mixture : Mixture

#### Hazardous substance

Chemical name	PBT vPvB OEL	CAS-No. EC-No. REACH No.	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
tert-Butyl peroxyvalate		927-07-1 213-147-2 01-2119961356-32	Org. Perox. A; H240 Skin Irrit. 2; H315 Skin Sens. 1B; H317 STOT SE 3; H335 Asp. Tox. 1; H304 Aquatic Chronic 2; H411 M-Factor (Chronic): 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	>= 24 - <= 26

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

#### The following substances have multiple CAS-number

Isododecane : 93685-81-5

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 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.

# TRIGONOX 25-C75

Version 2

Revision Date 23.12.2021

Print Date 14.03.2023

CY / EN

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.  
May cause respiratory irritation.

## 4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

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## 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 / Specific hazards arising from the chemical : 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.

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.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.  
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.

Emergency measures on accidental release : 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 materials for containment and cleaning up

Methods for cleaning up /  
Methods for containment : 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.

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

# TRIGONOX 25-C75

Version 2

Revision Date 23.12.2021

Print Date 14.03.2023

CY / EN

Keep away from combustible material.

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.  
Keep in a well-ventilated place.  
Observe label precautions.  
Electrical installations / working materials must comply with the technological safety standards.  
Keep only in original container.  
Store away from other materials.

Minimum storage temperature: : Avoid temperatures below: -15 °C  
Maximum storage temperature: : -5 °C  
Other data : If product freezes or separates, contact the manufacturer.  
: Maximum storage temperature is for quality only.

## 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 of exposure)	Control parameters	Basis
Isobutane	75-28-5	STEL	1 000 ppm	ACGIH
tert-Butanol	75-65-0	TWA	100 ppm	ACGIH
		TWA	100 ppm	ACGIH
Isobutylene	115-11-7	TWA	250 ppm	ACGIH
Carbon dioxide	124-38-9	TWA	5 000 ppm 9 000 mg/m <sup>3</sup>	2006/15/EC
	Further information: Indicative			
		TWA	5 000 ppm 9 000 mg/m <sup>3</sup>	CY OEL
		TWA	5 000 ppm	ACGIH
		STEL	30 000 ppm	ACGIH

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

Substance name	End Use	Exposure routes	Potential health effects	Value
tert-Butyl peroxyvalate	Workers	Dermal	Long-term systemic effects	1,6 mg/kg bw/day
	Workers	Inhalation	Long-term systemic	2,8 mg/m <sup>3</sup>

# TRIGONOX 25-C75

Version 2

Revision Date 23.12.2021

Print Date 14.03.2023

CY / EN

effects

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

Substance name	Environmental Compartment	Value
tert-Butyl peroxyvalate	Fresh water	0,01417 mg/l
	Intermittent water	0,01417 mg/l
	Marine water	0,001417 mg/l
	Fresh water sediment	0,106 mg/kg dry weight
	Marine sediment	0,0106 mg/kg dry weight
	Sewage treatment plant	10000 mg/l
	Soil	0,0129 mg/kg dry weight

## 8.2 Exposure controls

### Engineering measures

Explosion proof ventilation recommended.  
Effective exhaust ventilation system

### Personal protective equipment

- Eye protection : Tightly fitting safety goggles
- Hand protection  
Material : Neoprene  
Material : Nitrile rubber
- Skin and body protection : Protective suit
- Respiratory protection : In the case of vapour or aerosol formation use a respirator with an approved filter.  
Filter A
- 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.

### Environmental exposure controls

- General advice : Prevent product from entering drains.  
Discharge into the environment must be avoided.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- Physical state : liquid
- Colour : colourless
- Odour : Faint.
- Odour Threshold : No data available



# TRIGONOX 25-C75

Version 2

Revision Date 23.12.2021

Print Date 14.03.2023

CY / EN

Melting point	:	<= -15 °C
Boiling point/boiling range	:	Decomposes below the boiling point.
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	Above the SADT value, No flash point was obtained, but the product may release flammable vapour.
Auto-ignition temperature	:	Test method not applicable
Decomposition temperature 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 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	:	2,1 mPa.s (20 °C)
Viscosity, kinematic	:	No data available
Solubility(ies) Water solubility	:	immiscible
Solubility in other solvents	:	miscible with most organic solvents
Partition coefficient: n-octanol/water	:	log Pow: 3,17
Vapour pressure	:	4 hPa (38 °C)
Relative density	:	0,875 (0 °C)
Bulk density	:	Not applicable
Relative vapour density	:	No data available

## 9.2 Other information

Explosives	:	Not explosive
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Oxidizing properties	:	Not classified as oxidising.
Flammability (liquids)	:	Decomposition products may be flammable.
Evaporation rate	:	No data available
Active Oxygen Content	:	6,8 - 7,0 %
Organic peroxides	:	74 - 76 %

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

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## 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

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 contact the supplier.

### 10.6 Hazardous decomposition products

Hazardous decomposition products : Isobutane  
tert-Butanol  
Isobutylene  
Carbon dioxide  
Carbon oxides

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

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## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Product information:

Acute toxicity	: Not classified based on available information.
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/eye irritation	: Not classified based on available information.
Respiratory or skin sensitisation	: Respiratory sensitisation: Not classified based on available information. Skin sensitisation: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified based on available information.
Carcinogenicity	: Not classified based on available information.
Reproductive toxicity	: Not classified based on available information.
STOT - single exposure	: May cause respiratory irritation.
STOT - repeated exposure	: Not classified based on available information.
Aspiration hazard	: May be fatal if swallowed and enters airways.
Further information	: Solvents may degrease the skin. Solvents may degrease the skin.

#### Test result

Acute oral toxicity	: LD50: 4 169 mg/kg Species: Rat
Acute inhalation toxicity	: LC50 (Rat, male and female): 7,79 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403
Acute dermal toxicity	: LD50: 2 500 mg/kg Species: Rabbit Method: OECD Test Guideline 402

# TRIGONOX 25-C75

Version 2

Revision Date 23.12.2021

Print Date 14.03.2023

CY / EN

## tert-Butyl peroxyvalate

### Acute toxicity:

- Acute oral toxicity : LD50: 4 169 mg/kg  
Species: Rat
- Acute inhalation toxicity : LC50 (Rat, male and female): 7,79 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403
- Acute dermal toxicity : LD50: 2 500 mg/kg  
Species: Rabbit  
Method: OECD Test Guideline 402
- Skin corrosion/irritation : Species: Rabbit  
Result: Skin irritation  
Method: OECD Test Guideline 404  
Exposure time: 24 h
- Serious eye damage/eye irritation : Species: Rabbit  
Result: No eye irritation  
Method: OECD Test Guideline 405
- Respiratory or skin sensitisation : Species: Guinea pig  
Classification: The product is a skin sensitiser, sub-category 1B.  
Method: OECD Test Guideline 406
- Germ cell mutagenicity
- Genotoxicity in vitro : In vitro mammalian cell gene mutation test  
Chinese hamster ovary cells  
Result: negative  
Method: OECD Test Guideline 476
- Ames test  
Result: positive  
Method: OECD Test Guideline 471
- Genotoxicity in vivo : In vivo micronucleus test  
Species: Mouse  
Method: OECD Test Guideline 474  
Result: negative
- Reproductive toxicity/Fertility : Species: Rat, male and female  
Application Route: Oral  
Dose: 0 50, 150, 310 milligram per kilogram  
General Toxicity - Parent: No observed adverse effect level:  
150 mg/kg bw/day  
General Toxicity F1: No observed adverse effect level F1: 150  
mg/kg bw/day  
Fertility: No observed adverse effect level Parent: 310 mg/kg  
bw/day  
Method: OECD Test Guideline 422

# TRIGONOX 25-C75

Version 2

Revision Date 23.12.2021

Print Date 14.03.2023

CY / EN

	GLP: yes
Reproductive toxicity/Development/Teratogenicity	: Species: Rat, male and female Strain: wistar Application Route: Oral Dose: 0,50,150,450 milligram per kilogram General Toxicity Maternal: No observed adverse effect level: 50 mg/kg bw/day Developmental Toxicity: No observed adverse effect level: 150 mg/kg bw/day Method: OECD Test Guideline 414 GLP: yes
STOT - single exposure	: Exposure routes: Inhalation Target Organs: Respiratory system The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.
STOT - repeated exposure	: Exposure routes: Ingestion The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Aspiration hazard	: The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.
<b>Isododecane</b>	
<b>Acute toxicity:</b>	
Acute oral toxicity	: LD50: > 5 000 mg/kg Species: Rat Method: OECD Test Guideline 401
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 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: > 3 160 mg/kg Species: Rabbit Method: OECD Test Guideline 402
Skin corrosion/irritation	: Result: Repeated exposure may cause skin dryness or cracking.
Serious eye damage/eye irritation	: Species: Rabbit Result: No eye irritation

# TRIGONOX 25-C75

Version 2

Revision Date 23.12.2021

Print Date 14.03.2023

CY / EN

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	Method: OECD Test Guideline 405
Respiratory or skin sensitisation	: Maximisation Test Species: Guinea pig Result: Not sensitizing. Method: OECD Test Guideline 406
Germ cell mutagenicity	
Genotoxicity in vitro	: Chromosome aberration test in vitro Result: negative Method: OECD Test Guideline 473
	Ames test Result: negative Method: OECD Test Guideline 471
Genotoxicity in vivo	: Chromosome aberration test in vivo Species: Rat Method: OECD Test Guideline 478 Result: negative
	Micronucleus test Species: Mouse Method: OECD Test Guideline 474 Result: negative
Carcinogenicity	: Species: Rat, (female) Application Route: inhalation (vapour) Exposure time: 105w Frequency of Treatment: 5 days/week NOAEC: 1 100 mg/m <sup>3</sup> Method: OECD Test Guideline 453
	Species: Rat, (male) Application Route: inhalation (vapour) Exposure time: 105w Frequency of Treatment: 5 days/week NOAEC: 138 mg/m <sup>3</sup> Method: OECD Test Guideline 453
Reproductive toxicity/Fertility	: Species: Rat Application Route: Oral Frequency of Treatment: 7 days/week General Toxicity - Parent: No observed adverse effect level: > 1 000 mg/kg bw/day General Toxicity F1: No observed adverse effect level: > 1 000 mg/kg bw/day Method: OECD Test Guideline 422
Reproductive toxicity/Development/Teratogenicity	: Species: Rat Application Route: inhalation (vapour) General Toxicity Maternal: No observed adverse effect level: > 5 220 mg/m <sup>3</sup> Developmental Toxicity: No observed adverse effect level: > 5

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220 mg/m<sup>3</sup>  
Method: OECD Test Guideline 414

Aspiration hazard : 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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## SECTION 12: ECOLOGICAL INFORMATION

### Product information:

#### Ecotoxicology Assessment

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

## 12.1 Toxicity

### **tert-Butyl peroxyvalate**

Short-term (acute) aquatic hazard : Toxic to aquatic life.

Long-term (chronic) aquatic hazard : Toxic to aquatic life with long lasting effects.

### **Isododecane**

Long-term (chronic) aquatic hazard : May cause long lasting harmful effects to aquatic life.

### **tert-Butyl peroxyvalate**

Toxicity to fish : LC50: 18,85 mg/l  
Exposure time: 96 h  
Species: Danio rerio (zebra fish)  
Test Type: semi-static test  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50: 6,99 mg/l  
Exposure time: 48 h  
Species: Daphnia magna (Water flea)  
Test Type: semi-static test  
Method: OECD Test Guideline 202

Toxicity to algae : EC50: 1,417 mg/l  
Exposure time: 72 h  
Species: Pseudokirchneriella subcapitata (green algae)  
Test Type: Growth inhibition  
Method: OECD Test Guideline 201

NOEC: 0,096 mg/l  
Exposure time: 72 h  
Species: Pseudokirchneriella subcapitata (green algae)  
Test Type: Growth inhibition

# TRIGONOX 25-C75

Version 2

Revision Date 23.12.2021

Print Date 14.03.2023

CY / EN

Method: OECD Test Guideline 201

M-Factor (Chronic)

: 1

Toxicity to bacteria

: EC10: 10 000 mg/l  
Exposure time: 0,5 h  
Species: Pseudomonas putida  
Test Type: Respiration inhibition

## Isododecane

Toxicity to fish

: LL50: > 1 000 mg/l  
Exposure time: 96 h  
Species: Oncorhynchus mykiss (rainbow trout)  
Method: OECD Test Guideline 203

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

Toxicity to daphnia and other aquatic invertebrates

: EL50: > 1 000 mg/l  
Exposure time: 48 h  
Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 202

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

Toxicity to algae

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

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

Toxicity to bacteria

: EL50: > 1,48 mg/l  
Exposure time: 5 h  
Species: Pseudomonas putida  
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

: NOEC: 0,011 mg/l



# TRIGONOX 25-C75

Version 2

Revision Date 23.12.2021

Print Date 14.03.2023

CY / EN

aquatic invertebrates  
(Chronic toxicity)

Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 211

## 12.2 Persistence and degradability

**Product information** : No information available.

### tert-Butyl peroxy-pivalate

Biodegradability

: Test Type: Ready biodegradability  
Inoculum: Activated sludge, domestic, non-adapted  
Concentration: 1 000 mg/l  
Result: Not readily biodegradable.  
Biodegradation: 15 %  
Exposure time: 71 d  
Method: OECD Test Guideline 301D  
GLP: yes

### Isododecane

Biodegradability

: Result: Not readily biodegradable.

## 12.3 Bioaccumulative potential

**Product information** : No information available.

### tert-Butyl peroxy-pivalate

Bioaccumulation

: Bioconcentration factor (BCF): 32,57  
Method: Calculation method

## 12.4 Mobility in soil

**Product information** : No information available.

## 12.5 Results of PBT and vPvB assessment

### Product information:

PBT and vPvB 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.

## 12.6 Endocrine disrupting properties

### Product information:

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 information** : No information available.

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## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

- 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.

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## SECTION 14: TRANSPORT INFORMATION

### 14.1 UN number

- ADN** : UN 3113  
**ADR** : UN 3113  
**IMDG-Code** : UN 3113  
**IATA-DGR** : UN 3113 (Not permitted for transport)

### 14.2 Proper shipping name

- ADN** : ORGANIC PEROXIDE TYPE C, LIQUID, TEMPERATURE CONTROLLED  
(tert-Butyl peroxyvalate)
- ADR** : ORGANIC PEROXIDE TYPE C, LIQUID, TEMPERATURE CONTROLLED  
(tert-Butyl peroxyvalate)
- IMDG-Code** : ORGANIC PEROXIDE TYPE C, LIQUID, TEMPERATURE CONTROLLED  
(tert-Butyl peroxyvalate)
- IATA-DGR** : Organic peroxide type C, liquid, temperature controlled (Not permitted for transport)

### 14.3 Transport hazard class

- ADN** : 5.2  
**ADR** : 5.2  
**IMDG-Code** : 5.2  
**IATA-DGR** : Not permitted for transport

### 14.4 Packing group

- ADN**  
Packing group : Not Assigned  
Classification Code : P2  
Labels : 5.2
- ADR**  
Packing group : Not Assigned  
Classification Code : P2  
Labels : 5.2  
Tunnel restriction code : (D)
- IMDG-Code**

# TRIGONOX 25-C75

Version 2

Revision Date 23.12.2021

Print Date 14.03.2023

CY / EN

Packing group : Not Assigned  
Labels : 5.2  
EmS Code : F-F, S-R  
Remarks : The control temperature is the maximum temperature at which the formulation can be transported safely during a prolonged period of time.

**IATA-DGR (Cargo)** : Not permitted for transport

**IATA-DGR (Passenger)** : Not permitted for transport  
Packing group : Not Assigned  
Labels : 5.2  
Remarks : The control temperature is the maximum temperature at which the formulation can be transported safely during a prolonged period of time.

## 14.5 Environmental hazards

**ADN**  
Environmentally hazardous : yes

**ADR**  
Environmentally hazardous : yes

**IMDG-Code**  
Marine pollutant : yes (tert-Butyl peroxyvalate)

**IATA-DGR** : Organic peroxide type C, liquid, temperature controlled (Not permitted for transport)

## 14.6 Special precautions for user

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.

## 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

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## 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, preparations 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

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

# TRIGONOX 25-C75

Version 2

Revision Date 23.12.2021

Print Date 14.03.2023

CY / EN

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

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

E2 ENVIRONMENTAL HAZARDS

## Notification status

TCSI : YES. On the inventory, or in compliance with the inventory  
TSCA : NO. Product contains substance(s) not listed on TSCA inventory.  
AIC : NO. Not in compliance with the inventory  
DSL : YES. All components of this product are on the Canadian DSL  
ENCS : YES. On the inventory, or in compliance with the inventory  
ISHL : YES. On the inventory, or in compliance with the inventory  
KECI : YES. On the inventory, or in compliance with the inventory  
PICCS : YES. On the inventory, or in compliance with the inventory  
IECSC : YES. On the inventory, or in compliance with the inventory  
NZIoC : YES. On the inventory, or in compliance with the inventory  
TECI : YES. On the inventory, or in compliance with the inventory

For explanation of abbreviation see section 16.

## 15.2 Chemical safety assessment

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

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## SECTION 16: OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3.

H226 : Flammable liquid and vapour.  
H240 : Heating may cause an explosion.  
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.  
H335 : May cause respiratory irritation.  
H411 : Toxic to aquatic life with long lasting effects.  
H413 : May cause long lasting harmful effects to aquatic life.

### Classification procedure:

Organic peroxides, C, H242, Based on product data or assessment

Skin irritation, 2, H315, Calculation method  
Skin sensitisation, 1, H317, Calculation method  
Specific target organ toxicity - single exposure, 3, Respiratory system, H335, Calculation method  
Aspiration hazard, 1, H304, Calculation method  
Long-term (chronic) aquatic hazard, 2, H411, Calculation method

## Full text of other abbreviations

2006/15/EC	:	Europe. Indicative occupational exposure limit values
ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
CY OEL	:	Cyprus. The Safety and Health at Work (Chemical Agents) Regulations, Occupational Exposure Limits
2006/15/EC / TWA	:	Limit Value - eight hours
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
CY OEL / TWA	:	Occupational Exposure Limit of 8 hours

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - 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 - 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

This data sheet contains changes from the previous version in section(s):  
Hazards identification  
Composition/information on ingredients  
Toxicological information

# TRIGONOX 25-C75

Version 2

Revision Date 23.12.2021

Print Date 14.03.2023

CY / EN

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