

SAFETY DATA SHEET

NOROX SHP-90



Version
1.1

Revision Date:
07/17/2017

SDS Number:
600000000163

Print Date:
01/23/2018

SECTION 1. IDENTIFICATION

Product name : NOROX SHP-90

Manufacturer or supplier's details

Company name of supplier : United Initiators, Inc.

Address : 555 Garden Street
Elyria OH 44035

Telephone : +1-440-323-3112

Telefax : +1-440-323-2659

Emergency telephone : CHEMTREC US (24h): +1-800-424-9300
CHEMTREC WORLD (24h): +1-703-527-3887

E-mail address of person responsible for the SDS : cs-initiators.nafta@united-in.com

Recommended use of the chemical and restrictions on use

Recommended use : Hardener

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Flammable liquids : Category 4

Organic peroxides : Type D

Skin irritation : Category 2

Eye irritation : Category 2A

Skin sensitization : Sub-category 1A

Specific target organ systemic toxicity - single exposure : Category 3 (Respiratory system)

Acute aquatic toxicity : Category 2

GHS label elements

Hazard pictograms :



Signal Word : Danger

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Hazard Statements : H227 Combustible liquid.
H242 Heating may cause a fire.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H401 Toxic to aquatic life.

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.
P240 Ground and bond container and receiving equipment.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.

Storage:

P403 **Store in a well-ventilated place.**
P403 + P233 **Store in a well-ventilated place. Keep container tightly closed.**
P405 **Store locked up.**
P410 **Protect from sunlight.**
P411 **Store at temperatures not exceeding < 100 °F/ < 38 °C.**
P420 **Store separately.**

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture
Chemical nature : Organic Peroxide
Liquid

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
2,4-Pentanedione, peroxide	37187-22-7	>= 30 - < 35
Diacetone alcohol	123-42-2	>= 25 - < 30
Polyethylene glycol	25322-68-3	>= 20 - < 25
tert-Butyl perbenzoate	614-45-9	>= 10 - < 15

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this material safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
Symptoms of poisoning may appear several hours later.
Call a physician immediately.

If inhaled : Call a physician or poison control center immediately.
If unconscious, place in recovery position and seek medical advice.
Keep respiratory tract clear.
If breathed in, move person into fresh air.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Wash contaminated clothing before re-use.
If on skin, rinse well with water.
If on clothes, remove clothes.
If symptoms persist, call a physician.

In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.
Call a physician immediately.
Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed : Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause respiratory irritation.

Protection of first-aiders : First Aid responders should pay attention to self-protection

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and use the recommended protective clothing

Notes to physician : Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire fighting : Contact with incompatible materials or exposure to temperatures exceeding SADT may result in a self-accelerating decomposition reaction with release of flammable vapors which may auto-ignite.
- Flash back possible over considerable distance.
Vapors may form explosive mixtures with air.
Cool closed containers exposed to fire with water spray.
- Specific extinguishing methods : Do not use a solid water stream as it may scatter and spread fire.
Remove undamaged containers from fire area if it is safe to do so.
Use water spray to cool unopened containers.
- Further information : 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.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.
Use personal protective equipment.
-

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Remove all sources of ignition.
Follow safe handling advice and personal protective equipment recommendations.
Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Never return spills in original containers for re-use.
Treat recovered material as described in the section "Disposal considerations".
- Environmental precautions : Prevent product from entering drains.
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Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Contact with incompatible substances can cause decomposition at or below SADT.
Clear spills immediately.
Suppress (knock down) gases/vapors/mists with a water spray jet.
To clean the floor and all objects contaminated by this material, use plenty of water.
Soak up with inert absorbent material.
Isolate waste and do not reuse.
Non-sparking tools should be used.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.

SECTION 7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Advice on protection against fire and explosion : Keep away from heat and sources of ignition. Use only explosion-proof equipment. Keep away from combustible material.

Advice on safe handling : Do not swallow.
Do not breathe vapors/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
Avoid formation of aerosol.
Take precautionary measures against static discharges.
Never return any product to the container from which it was originally removed.
Provide sufficient air exchange and/or exhaust in work rooms.
Avoid confinement.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Smoking, eating and drinking should be prohibited in the application area.
Wash thoroughly after handling.
For personal protection see section 8.
Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Protect from contamination.

Conditions for safe storage : Avoid impurities (e.g. rust, dust, ash), risk of decomposition.
Electrical installations / working materials must comply with the technological safety standards.

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Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Store in original container.
Keep containers tightly closed in a cool, well-ventilated place.
Store in accordance with the particular national regulations.

Materials to avoid : Keep away from strong acids, bases, heavy metal salts and other reducing substances.

Recommended storage temperature : < 38 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Diacetone alcohol	123-42-2	TWA	50 ppm 238 mg/m3	CA AB OEL
		TWA	50 ppm	CA BC OEL
		TWAEV	50 ppm 238 mg/m3	CA QC OEL
		TWA	50 ppm	ACGIH

Engineering measures : Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.

Filter type : ABEK-filter

Hand protection

Material : butyl-rubber

Break through time : >= 480 min

Glove thickness : 0.5 mm

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work.
For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove Wash hands before breaks and at the end of workday.

Eye protection : Tightly fitting safety goggles
Please wear suitable protective goggles. Also wear face protection if there is a splash hazard.
Ensure that eyewash stations and safety showers are close to the workstation location.

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- Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
- Hygiene measures : Keep away from food and drink.
When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and immediately after handling the product.
-

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
- Color : light yellow
- Odor : mild
- pH : Not applicable
- Melting point/range : No data available
- Boiling point/boiling range : No data available
- Flash point : 93 °C
- Evaporation rate : No data available
- Flammability (solid, gas) : Not applicable
- Self-ignition :
- Upper explosion limit : No data available
- Lower explosion limit : No data available
- Vapor pressure : No data available
- Relative vapor density : > 1
- Density : 1.1 - 1.2 g/cm³
- Solubility(ies)
Water solubility : soluble
- Partition coefficient: n-octanol/water : No data available
- Self-Accelerating decomposition temperature (SADT) : > 50 °C
SADT-Self Accelerating Decomposition Temperature. Lowest temperature at which the tested package size will undergo a self-accelerating decomposition reaction.

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> 122 °F

SADT-Self Accelerating Decomposition Temperature. Lowest temperature at which the tested package size will undergo a self-accelerating decomposition reaction.

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Oxidizing properties : The substance or mixture is not classified as oxidizing.
Organic peroxide

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Stable under recommended storage conditions.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Vapors may form explosive mixture with air.

Conditions to avoid : Protect from contamination.
Contact with incompatible substances can cause decomposition at or below SADT.
Heat, flames and sparks.
Avoid confinement.

Incompatible materials : Accelerators, strong acids and bases, heavy metals and heavy metal salts, reducing agents

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: 4,660 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: 8.42 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Ingredients:

2,4-Pentanedione, peroxide:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 401

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Acute inhalation toxicity : LC50 (Rat, male): > 13.1 mg/l
Exposure time: 1 h
Test atmosphere: dust/mist
Method: Expert judgment
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: Expert judgment
Assessment: The substance or mixture has no acute dermal toxicity

Diacetone alcohol:

Acute oral toxicity : LD50 (Rat): 3,002 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC0 (Rat): >= 7.6 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: OECD Test Guideline 403

Acute dermal toxicity : LD0 (Rat): > 1,875 mg/kg
Method: OECD Test Guideline 402

Polyethylene glycol:

Acute oral toxicity : LD50 (Rat): > 10,000 mg/kg

Acute dermal toxicity : Remarks: No data available

tert-Butyl perbenzoate:

Acute oral toxicity : LD0 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 423
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): 1.01 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 436

Acute dermal toxicity : LD0 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Causes skin irritation.

Product:

Remarks: May cause skin irritation and/or dermatitis.

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Ingredients:

2,4-Pentanedione, peroxide:

Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Diacetone alcohol:

Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Polyethylene glycol:

Result: No skin irritation

tert-Butyl perbenzoate:

Species: Rabbit
Method: OECD Test Guideline 404
Result: Skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks: May cause irreversible eye damage.

Ingredients:

2,4-Pentanedione, peroxide:

Species: Rabbit
Result: Eye irritation
Method: OECD Test Guideline 405

Diacetone alcohol:

Species: Rabbit
Result: Mild eye irritation
Method: OECD Test Guideline 405

Polyethylene glycol:

Result: No eye irritation

tert-Butyl perbenzoate:

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

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Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Product:

Remarks: Causes sensitization.

Ingredients:

2,4-Pentanedione, peroxide:

Test Type: Maximization Test

Routes of exposure: Skin contact

Species: Guinea pig

Method: OECD Test Guideline 406

Result: Probability or evidence of skin sensitization in humans

Remarks: Causes sensitization.

Diacetone alcohol:

Species: Guinea pig

Method: OECD Test Guideline 406

Result: Does not cause skin sensitization.

Polyethylene glycol:

Result: Does not cause skin sensitization.

tert-Butyl perbenzoate:

Species: Mouse

Method: OECD Test Guideline 429

Result: Probability or evidence of high skin sensitization rate in humans

Remarks: May cause sensitization by skin contact.

Germ cell mutagenicity

Not classified based on available information.

Ingredients:

2,4-Pentanedione, peroxide:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: positive

: Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse (male and female)

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Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative

Diacetone alcohol:

Genotoxicity in vitro : Method: OECD Test Guideline 476
Result: negative

: Method: OECD Test Guideline 471
Result: negative

: Method: OECD Test Guideline 473
Result: negative

Polyethylene glycol:

Genotoxicity in vitro : Test Type: Ames test
Result: negative

tert-Butyl perbenzoate:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: positive

: Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: positive

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

: Test Type: Mouse Lymphoma
Result: positive

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Application Route: Oral
Result: negative

Carcinogenicity

Not classified based on available information.

Ingredients:

2,4-Pentanedione, peroxide:

Remarks: This information is not available.

Diacetone alcohol:

Application Route: inhalation (vapor)
1.847 mg/l
Method: OECD Test Guideline 451
Remarks: Based on data from similar materials

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tert-Butyl perbenzoate:

Remarks: This information is not available.

Reproductive toxicity

Not classified based on available information.

Ingredients:

2,4-Pentanedione, peroxide:

Effects on fertility : Remarks: No data available

Effects on fetal development : Remarks: No data available

Diacetone alcohol:

Effects on fertility : Species: Rat
Application Route: oral (gavage)
General Toxicity Parent: NOAEL: 300 mg/kg body weight
General Toxicity F1: NOAEL: 300 mg/kg body weight
Method: OECD Test Guideline 422

Effects on fetal development : Species: Rat
Application Route: inhalation (vapor)
General Toxicity Maternal: NOAEL: 4.106
Embryo-fetal toxicity.: NOAEL: 12,292
Method: OECD Test Guideline 414

Polyethylene glycol:

tert-Butyl perbenzoate:

Effects on fertility : Species: Rat
Application Route: Oral
General Toxicity Parent: NOAEL: 300 mg/kg body weight
Method: OECD Test Guideline 421

Effects on fetal development : Species: Rat
Application Route: Oral
General Toxicity Maternal: NOAEL: 300 mg/kg body weight
Method: OECD Test Guideline 414

STOT-single exposure

May cause respiratory irritation.

Ingredients:

Diacetone alcohol:

Assessment: May cause respiratory irritation.

STOT-repeated exposure

Not classified based on available information.

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Repeated dose toxicity

Ingredients:

Diacetone alcohol:

Species: Rat
NOAEL: 1.04 mg/l
LOAEL: 4.685 mg/l
Application Route: inhalation (vapor)
Exposure time: 6 w
Method: OECD Test Guideline 412

Species: Rat
NOAEL: 100 mg/kg
Application Route: oral (gavage)
Method: OECD Test Guideline 422

Polyethylene glycol:

Species: Dog
NOAEL: 500 mg/kg
Application Route: Oral

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks: No data available

Ingredients:

2,4-Pentanedione, peroxide:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

2,4-Pentanedione, peroxide:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 67.6 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 7.05 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 5.36

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		mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC50: 614 mg/l Exposure time: 3 h Method: OECD Test Guideline 209
Diacetone alcohol:		
Toxicity to fish	:	LC50 (Oryzias latipes (Orange-red killifish)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 1,000 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 NOEC (Daphnia magna (Water flea)): 1,000 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae	:	EbC50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 NOEC (Pseudokirchneriella subcapitata (green algae)): 1,000 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 100 mg/l Exposure time: 21 d Method: OECD Test Guideline 211
Toxicity to microorganisms	:	EC50: > 1,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209
Polyethylene glycol:		
Toxicity to fish	:	LC50 (Poecilia reticulata (guppy)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): 1,000 mg/l Exposure time: 48 h Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (Cesar models), etc.
Toxicity to algae	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 398,913 mg/l Exposure time: 72 h Remarks: The value is given based on a SAR/AAR approach

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using OECD Toolbox, DEREK, VEGA QSAR models (Cesar models), etc.

Toxicity to microorganisms : IC50: 1,651,512 mg/l
Exposure time: 46 h
Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (Cesar models), etc.

tert-Butyl perbenzoate:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 1.6 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 11 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 0.8 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.72 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 1

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10 (Daphnia magna (Water flea)): 0.49 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

Toxicity to microorganisms : EC50: 43 mg/l
Exposure time: 0.5 h
Method: OECD Test Guideline 209

Persistence and degradability

Ingredients:

2,4-Pentanedione, peroxide:

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301D

Diacetone alcohol:

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301A

Polyethylene glycol:

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Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301F

tert-Butyl perbenzoate:

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301D

Bioaccumulative potential

Ingredients:

2,4-Pentanedione, peroxide:

Partition coefficient: n-octanol/water : log Pow: 1.1 (25 °C)
Method: OECD Test Guideline 117

Diacetone alcohol:

Partition coefficient: n-octanol/water : log Pow: < 3

Polyethylene glycol:

Bioaccumulation : Bioconcentration factor (BCF): 3.2

Partition coefficient: n-octanol/water : log Pow: -2.3 (25 °C)

tert-Butyl perbenzoate:

Partition coefficient: n-octanol/water : log Pow: 2.89 (25 °C)

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information : **An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life.**

Ingredients:

2,4-Pentanedione, peroxide:

Additional ecological information : **An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life.**

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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

- Waste from residues : 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 wastes in an approved waste disposal facility.
- Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.
Dispose of in accordance with local regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

- UN number : UN 3105
Proper shipping name : ORGANIC PEROXIDE TYPE D, LIQUID
(ACETYL ACETONE PEROXIDE, tert-BUTYL PEROXYBENZOATE)
Class : 5.2
Packing group : Not assigned by regulation
Labels : 5.2

IATA-DGR

- UN/ID No. : UN 3105
Proper shipping name : Organic peroxide type D, liquid
(Acetyl acetone peroxide, tert-Butyl peroxybenzoate)
Class : 5.2
Packing group : Not assigned by regulation
Labels : Organic Peroxides, Keep Away From Heat
Packing instruction (cargo aircraft) : 570
Packing instruction (passenger aircraft) : 570

IMDG-Code

- UN number : UN 3105
Proper shipping name : ORGANIC PEROXIDE TYPE D, LIQUID
(ACETYL ACETONE PEROXIDE, tert-BUTYL PEROXYBENZOATE)
Class : 5.2
Packing group : Not assigned by regulation
Labels : 5.2
EmS Code : F-J, S-R
Marine pollutant : no

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

Not applicable for product as supplied.

Domestic regulation

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TDG

UN number	: UN 3105
Proper shipping name	: ORGANIC PEROXIDE TYPE D, LIQUID (ACETYL ACETONE PEROXIDE, tert-BUTYL PEROXYBENZOATE)
Class	: 5.2
Packing group	: II
Labels	: 5.2
ERG Code	: 145
Marine pollutant	: no

SECTION 15. REGULATORY INFORMATION

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

AICS (AU)	: On the inventory, or in compliance with the inventory
NZIoC (NZ)	: On the inventory, or in compliance with the inventory
ENCS (JP)	: On the inventory, or in compliance with the inventory
ISHL (JP)	: On the inventory, or in compliance with the inventory
KECI (KR)	: On the inventory, or in compliance with the inventory
PICCS (PH)	: On the inventory, or in compliance with the inventory
IECSC (CN)	: On the inventory, or in compliance with the inventory
TCSI (TW)	: On the inventory, or in compliance with the inventory
TSCA (US)	: On TSCA Inventory

Canadian lists

No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); 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; ERG - Emergency Response Guide; 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

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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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; 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; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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The information provided in this Material 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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