

SAFETY DATA SHEET

according to the Hazardous Products Regulations



DHBP-45-IC2

Version	Revision Date:	SDS Number:	Date of last issue: 01/18/2022
1.2	06/20/2024	600000000176	Date of first issue: 09/23/2020

SECTION 1. IDENTIFICATION

Trade name : DHBP-45-IC2

Other means of identification : No data available

Manufacturer or supplier's details

Company name of supplier : United Initiators, Inc.

Address : 555 Garden Street
Elyria OH 44035 USA

United Initiators Canada Ltd.
2147 PG Pulp Mill Road
Prince George, BC-V2N 2S6 CANADA

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
CANUTEC (24h): 1-613-996-6666

For Transportation Incidents : TERRAPURE EMERGENCY RESPONSE SERVICES (24h):
1-800-567-7455

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 : polymerization initiators

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Organic peroxides : Type E

Combustible dust : Category 1

Skin irritation : Category 2

GHS label elements

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Hazard pictograms

:



Signal Word

:

Warning

Hazard Statements

:

H242 Heating may cause a fire.
May form combustible dust concentrations in air.
H315 Causes skin irritation.

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.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.
P332 + P313 If skin irritation occurs: 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.
P410 Protect from sunlight.
P411 Store at temperatures not exceeding < 40 °C/ < 104 °F.
P420 Store separately.

Disposal:

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

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture

:

Mixture

Chemical nature

:

Organic Peroxide
Solid mixture

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Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
2,5-Dimethyl-2,5-di(tert.-butylperoxy)hexane	2,5-Dimethyl-2,5-di(tert.-butylperoxy)hexane	78-63-7	$\geq 45 - < 50$ *
Calcium carbonate	Calcium carbonate	471-34-1	$\geq 35 - < 40$ *
Silicon dioxide	Silicon dioxide	7631-86-9	$\geq 15 - < 20$ *

* Actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

- General advice : Take off contaminated clothing and shoes immediately.
Call a physician immediately.
Never give anything by mouth to an unconscious person.
If unconscious, place in recovery position and seek medical advice.
Move out of dangerous area.
Show this material safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : Administer oxygen if breathing is difficult or cyanosis is observed.
If breathed in, move person into fresh air.
If not breathing, give artificial respiration.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : If symptoms persist, call a physician.
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.
- 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.

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- Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Call a physician immediately.
Rinse mouth thoroughly with water.
Keep respiratory tract clear.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : Causes skin irritation.
- Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
- Notes to physician : Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray jet
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire fighting : Risk of explosion if heated under confinement.
Possible emission of gaseous decomposition products may lead to a dangerous pressure build-up.
Avoid confinement.
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.
- The product burns violently.
Flash back possible over considerable distance.
Do not allow run-off from fire fighting to enter drains or water courses.
Vapors may form explosive mixtures with air.
The product will float on water and can be reignited on surface water.
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.

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- Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use a water spray to cool fully closed 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.
- 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 : Follow safe handling advice and personal protective equipment recommendations.
Use personal protective equipment.
Avoid dust formation.
Avoid breathing dust.
Remove all sources of ignition.
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.
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.

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- Advice on protection against fire and explosion : Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).
Keep away from heat and sources of ignition.
Use only explosion-proof equipment.
Keep away from open flames, hot surfaces and sources of ignition.
Keep away from combustible material.
Avoid dust formation.
Provide appropriate exhaust ventilation at places where dust is formed.
- Advice on safe handling : Open drum carefully as content may be under pressure.
Avoid formation of respirable particles.
Protect from contamination.
Do not swallow.
Do not breathe vapors/dust.
Avoid contact with skin and eyes.
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.
- Conditions for safe storage : Store in original container.
Keep containers tightly closed in a cool, well-ventilated place.
Store in cool place.
Keep in a well-ventilated place.
Contamination may result in dangerous pressure increases - closed containers may rupture.
Observe label precautions.
Store in accordance with the particular national regulations.
Avoid impurities (e.g. rust, dust, ash), risk of decomposition.
Electrical installations / working materials must comply with the technological safety standards.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
- Materials to avoid : Keep away from combustible materials.
Keep away from strong acids, bases, heavy metal salts and other reducing substances.
- Recommended storage temperature : < 40 °C
- Further information on storage stability : Stable under recommended storage conditions.

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Calcium carbonate	471-34-1	TWAEV (total dust)	10 mg/m ³	CA QC OEL
		TWA	10 mg/m ³ (Calcium carbonate)	CA AB OEL
		TWA (Total dust)	10 mg/m ³	CA BC OEL
		TWA (respirable dust fraction)	3 mg/m ³	CA BC OEL
		STEL	20 mg/m ³	CA BC OEL
Silicon dioxide	7631-86-9	TWA (Respirable particulates)	0.025 mg/m ³ (Silica)	CA AB OEL

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 : Filter type P

Use NIOSH approved respiratory protection.

Hand protection

Material : butyl-rubber
Break through time : 480 min
Glove thickness : 0.47 mm

Material : Nitrile rubber
Break through time : 480 min
Glove thickness : 0.40 mm

Remarks : The data about break through time/strength of material are standard values! The exact break through time/strength of material has to be obtained from the producer of the

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- protective glove. 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 manufacturer. Wash hands before breaks and at the end of workday.
- Eye protection : Ensure that eyewash stations and safety showers are close to the workstation location.
Please follow all applicable local/national requirements when selecting protective measures for a specific workplace.
Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.
Tightly fitting safety goggles
Please wear suitable protective goggles. Also wear face protection if there is a splash hazard.
- Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.

Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces.
Wear as appropriate:
Flame retardant antistatic protective clothing.
- Protective measures : The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- Hygiene measures : Avoid contact with skin, eyes and clothing.
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 : powder
- Color : white

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Odor	:	ether-like
Odor Threshold	:	No data available
pH	:	No data available substance/mixture is non-soluble (in water)
Melting point/range	:	Decomposition: Decomposes below the melting point.
Boiling point/boiling range	:	Not applicable
Flash point	:	Not applicable
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	May form combustible dust concentrations in air. Remarks: Organic peroxide
Self-ignition	:	The substance or mixture is not classified as pyrophoric.
Upper explosion limit / Upper flammability limit	:	Upper explosion limit No data available
Lower explosion limit / Lower flammability limit	:	Lower explosion limit No data available
Vapor pressure	:	No data available
Relative vapor density	:	not determined
Relative density	:	not determined
Density	:	Not applicable
Bulk density	:	ca. 510 kg/m3
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	Not applicable
Autoignition temperature	:	not determined
Self-Accelerating decomposition temperature (SADT)	:	90 °C Method: UN-Test H.4 SADT-Self Accelerating Decomposition Temperature. Lowest

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temperature at which the tested package size will undergo a self-accelerating decomposition reaction.

Viscosity

Viscosity, dynamic : Not applicable

Viscosity, kinematic : Not applicable

Explosive properties : Not explosive Avoid dust formation.

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

Self-heating substances : The substance or mixture is not classified as self heating.

Particle Size Distribution : D10 = 3 μ m
Type of distribution: volume distribution
Measurement technique: laser diffraction

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Stable under recommended storage conditions.
Heating may cause a fire or explosion.

Chemical stability : Stable under recommended storage conditions.
No decomposition if stored normally.

Possibility of hazardous reactions : Dust may form explosive mixture in 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

Hazardous decomposition products : Irritant, caustic, flammable, noxious/toxic gases and vapours can develop in the case of fire and decomposition

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SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified due to lack of data.

Components:

2,5-Dimethyl-2,5-di(tert.-butylperoxy)hexane:

Acute oral toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 401
Assessment: The substance or mixture has no acute oral toxicity
Remarks: No mortality observed at this dose.

Acute inhalation toxicity : Remarks: study scientifically unjustified

Acute dermal toxicity : LD50 (Rabbit): 4,100 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Calcium carbonate:

Acute oral toxicity : LD50 (Rat): 4,500 mg/kg
Method: OECD Test Guideline 420
Assessment: The substance or mixture has no acute oral toxicity
Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: No mortality observed at this dose.

Silicon dioxide:

Acute oral toxicity : LD50 (Rat): > 3,300 mg/kg
Method: OECD Test Guideline 401
Assessment: The substance or mixture has no acute oral toxicity
Remarks: No mortality observed at this dose.

Acute inhalation toxicity : LC0 (Rat): > 0.139 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Assessment: The substance or mixture has no acute dermal

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toxicity

Remarks: Based on data from similar materials

Skin corrosion/irritation

Causes skin irritation.

Product:

Remarks : May cause skin irritation in susceptible persons.

Components:

2,5-Dimethyl-2,5-di(tert.-butylperoxy)hexane:

Species	: Rabbit
Exposure time	: 4 h
Method	: OECD Test Guideline 404
Result	: Skin irritation

Calcium carbonate:

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

Silicon dioxide:

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

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

Product:

Remarks : Product dust may be irritating to eyes, skin and respiratory system.

Components:

2,5-Dimethyl-2,5-di(tert.-butylperoxy)hexane:

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

Calcium carbonate:

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

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Silicon dioxide:

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

Respiratory or skin sensitization

Skin sensitization

Not classified due to lack of data.

Respiratory sensitization

Not classified due to lack of data.

Components:

2,5-Dimethyl-2,5-di(tert.-butylperoxy)hexane:

Test Type	:	Maximization Test
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitization.

Calcium carbonate:

Routes of exposure	:	Skin contact
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	Does not cause skin sensitization.

Silicon dioxide:

Remarks	:	This information is not available.
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Germ cell mutagenicity

Not classified due to lack of data.

Components:

2,5-Dimethyl-2,5-di(tert.-butylperoxy)hexane:

Genotoxicity in vitro	:	Test Type: Ames test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative
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	:	Test Type: In vitro mammalian cell gene mutation test Test system: mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative
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Genotoxicity in vivo	:	Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse (male and female)
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Application Route: Oral
Method: OECD Test Guideline 474
Result: negative

Calcium carbonate:

Genotoxicity in vitro : Method: OECD Test Guideline 471
Result: negative

Method: OECD Test Guideline 473
Result: negative

Method: OECD Test Guideline 476
Result: negative

Silicon dioxide:

Genotoxicity in vitro : Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Species: Rat
Application Route: Inhalation
Exposure time: 90 d
Method: No information available.
Result: negative

Germ cell mutagenicity - Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity

Not classified due to lack of data.

Components:

2,5-Dimethyl-2,5-di(tert.-butylperoxy)hexane:

Remarks : This information is not available.

Silicon dioxide:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Reproductive toxicity

Not classified due to lack of data.

Components:

2,5-Dimethyl-2,5-di(tert.-butylperoxy)hexane:

Effects on fetal development : Test Type: Prenatal development toxicity study (teratogenicity)
Species: Rat
Application Route: oral (gavage)
General Toxicity Maternal: NOAEL: 300 mg/kg body weight

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Developmental Toxicity: 300 mg/kg body weight
Method: OECD Test Guideline 414
GLP: yes

Silicon dioxide:

Reproductive toxicity - Assessment : No toxicity to reproduction

STOT-single exposure

Not classified due to lack of data.

Components:

Silicon dioxide:

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.
Remarks : Not classified due to data which are conclusive although insufficient for classification.

STOT-repeated exposure

Not classified due to lack of data.

Components:

Silicon dioxide:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Remarks : Not classified due to data which are conclusive although insufficient for classification.

Repeated dose toxicity

Components:

2,5-Dimethyl-2,5-di(tert.-butylperoxy)hexane:

Species : Rat, male and female
NOAEL : 200 mg/kg bw/day
Application Route : Oral
Exposure time : 28 d
Method : OECD Test Guideline 407
GLP : yes

Species : Rat, male and female
NOAEL : 150 mg/kg bw/day
Application Route : Oral
Exposure time : 90
Method : OECD Test Guideline 408
GLP : yes

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Aspiration toxicity

Not classified due to lack of data.

Components:

2,5-Dimethyl-2,5-di(tert.-butylperoxy)hexane:

Not classified due to data which are conclusive although insufficient for classification.

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

2,5-Dimethyl-2,5-di(tert.-butylperoxy)hexane:

Toxicity to fish	: LC50 (Oryzias latipes (Japanese medaka)): 4.5 mg/l Exposure time: 96 h Test Type: semi-static test Method: OECD Test Guideline 203 Remarks: No toxicity at the limit of solubility.
Toxicity to algae/aquatic plants	: EC50 (Pseudokirchneriella subcapitata (green algae)): >= 0.236 mg/l Exposure time: 72 h Test Type: Growth inhibition Analytical monitoring: yes Method: OECD Test Guideline 201 Remarks: No toxicity at the limit of solubility.
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Daphnia magna (Water flea)): > 0.0065 mg/l Exposure time: 21 d Test Type: semi-static test Method: OECD Test Guideline 211 Remarks: No toxicity at the limit of solubility.
Toxicity to microorganisms	: NOEC (activated sludge): > 1,000 mg/l Exposure time: 3 h Test Type: Respiration inhibition Method: OECD Test Guideline 209 Remarks: No toxicity at the limit of solubility.

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Ecotoxicology Assessment

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

Calcium carbonate:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 14 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 14 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: No toxicity at the limit of solubility.

Toxicity to algae/aquatic plants : NOEC (Desmodesmus subspicatus (green algae)): 14 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: No toxicity at the limit of solubility.

Toxicity to microorganisms : EC50: > 1,000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Silicon dioxide:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 10,000 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: 24 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EL50 (Desmodesmus subspicatus (green algae)): > 10,000 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Persistence and degradability

Components:

2,5-Dimethyl-2,5-di(tert.-butylperoxy)hexane:

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301D
Remarks: Not classified due to data which are conclusive although insufficient for classification.

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Calcium carbonate:

Biodegradability : Remarks: Not applicable

Bioaccumulative potential

Components:

2,5-Dimethyl-2,5-di(tert.-butylperoxy)hexane:

Bioaccumulation : Bioconcentration factor (BCF): 521 - 839

Partition coefficient: n-octanol/water : log Pow: 7.34

Calcium carbonate:

Partition coefficient: n-octanol/water : Remarks: Not applicable

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information : No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of wastes in an approved waste disposal facility. 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.

Contaminated packaging : Dispose of in accordance with local regulations. Clean container with water. Dispose of contents/ container to an approved waste disposal plant. 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.

SECTION 14. TRANSPORT INFORMATION

International Regulations

SAFETY DATA SHEET

according to the Hazardous Products Regulations



DHBP-45-IC2

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UNRTDG

UN number : UN 3108
Proper shipping name : ORGANIC PEROXIDE TYPE E, SOLID
(2,5-DIMETHYL-2,5-DI-(tert-BUTYLPEROXY)HEXANE)
Class : 5.2
Packing group : Not assigned by regulation
Labels : 5.2
Environmentally hazardous : no

IATA-DGR

UN/ID No. : UN 3108
Proper shipping name : Organic peroxide type E, solid
(2,5-Dimethyl-2,5-di-(tert-butylperoxy)-hexane)
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 3108
Proper shipping name : ORGANIC PEROXIDE TYPE E, SOLID
(2,5-DIMETHYL-2,5-DI-(tert-BUTYLPEROXY)HEXANE)
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

TDG

UN number : UN 3108
Proper shipping name : ORGANIC PEROXIDE TYPE E, SOLID
(2,5-DIMETHYL-2,5-DI-(tert-BUTYLPEROXY)HEXANE)
Class : 5.2
Packing group : II
Labels : 5.2
ERG Code : 145
Marine pollutant : no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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SECTION 15. REGULATORY INFORMATION

International Regulations

Gefahrgruppe nach TRGS 741: III (German regulatory requirements)

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

TCSI (TW)	: On the inventory, or in compliance with the inventory
TSCA (US)	: All substances listed as active on the TSCA inventory
AIIIC (AU)	: On the inventory, or in compliance with the inventory
DSL (CA)	: All components of this product are on the Canadian DSL
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
TECI (TH)	: On the inventory, or in compliance with the inventory

Canadian lists

No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION

Further information

This material safety datasheet only contains information relating to safety and does not replace any product information or product specification.
These safety instructions also apply to empty packaging which may still contain product residues.
The hazards on the label also apply to residues in the container.

Sources of key data used to compile the Material Safety Data Sheet	: Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/
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Full text of other abbreviations

CA AB OEL : Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL : Canada. British Columbia OEL
CA QC OEL : Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
CA AB OEL / TWA : 8-hour Occupational exposure limit
CA BC OEL / TWA : 8-hour time weighted average
CA BC OEL / STEL : short-term exposure limit
CA QC OEL / TWAEV : Time-weighted average exposure value

AIIC - Australian Inventory of Industrial Chemicals; 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; 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 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; TECl - Thailand Existing Chemicals Inventory; 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

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

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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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