

SAFETY DATA SHEET

BP-50-FT



Version 2.0 Revision Date: 20.02.2020 SDS Number: 600000000192 Date of last issue: 09.11.2018
Date of first issue: 09.11.2018

SECTION 1: Identification of the hazardous chemical and of the supplier

Product identifier

Product name : BP-50-FT

Recommended use of the chemical and restrictions on use

Recommended use : Hardener

Manufacturer or supplier's details

Company : United Initiators GmbH

Address : Dr.-Gustav-Adolph-Str. 3
82049 Pullach 09

Telephone : +49 / 89 / 74422 – 0

Emergency telephone number : +49 / 89 / 74422 – 0 (24 h)

E-mail address : contact@united-in.com

SECTION 2: Hazards identification

Classification of the hazardous chemical

Organic peroxides : Type D

Serious eye damage/eye irritation : Category 2

Skin sensitisation : Category 1

Reproductive toxicity : Category 1B

Hazardous to the aquatic environment - acute hazard : Category 1

Hazardous to the aquatic environment - chronic hazard : Category 1

Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H242 Heating may cause a fire.
H317 May cause an allergic skin reaction.

SAFETY DATA SHEET

BP-50-FT



Version 2.0 Revision Date: 20.02.2020 SDS Number: 600000000192 Date of last issue: 09.11.2018
Date of first issue: 09.11.2018

Precautionary statements :

H319 Causes serious eye irritation.
H360D May damage the unborn child.
H410 Very toxic to aquatic life with long lasting effects.

Prevention:
P201 Obtain special instructions before use.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P220 Keep/Store away from clothing/ strong acids, bases, heavy metal salts and other reducing substances /combustible materials.
P234 Keep only in original container.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.
P281 Use personal protective equipment as required.

Response:
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P391 Collect spillage.

Storage:
P411 + P235 Store at temperatures not exceeding < 30 °C/ < 86 °F. Keep cool.

Other hazards which do not result in classification

None known.

SECTION 3: Composition and information of the ingredients of the hazardous chemical

Substance / Mixture : Mixture

Chemical nature : Organic Peroxide
Solid mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
dicyclohexyl phthalate	84-61-7	>= 50 -< 55
Dibenzoyl peroxide	94-36-0	>= 45 -< 50

SECTION 4: First aid measures

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
Call a physician immediately.

If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
If breathed in, move person into fresh air.

SAFETY DATA SHEET

BP-50-FT



Version 2.0 Revision Date: 20.02.2020 SDS Number: 600000000192 Date of last issue: 09.11.2018
Date of first issue: 09.11.2018

- 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.
- Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction.
Causes serious eye irritation.
May damage the unborn child.
- 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: Firefighting measures

Extinguishing media

Suitable extinguishing media : Water spray jet
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical

Unsuitable extinguishing media : High volume water jet

Physicochemical hazards arising from the chemical

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.
The product burns violently.
Flash back possible over considerable distance.
Vapours 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.

Special protective equipment and precautions for fire-fighters

Special protective equipment : Wear self-contained breathing apparatus for firefighting if nec-

SAFETY DATA SHEET

BP-50-FT



Version	Revision Date:	SDS Number:	Date of last issue: 09.11.2018
2.0	20.02.2020	600000000192	Date of first issue: 09.11.2018

for firefighters

essary.
Use personal protective equipment.

Specific extinguishing methods

: 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.

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.

Hazchem Code

: 1WE

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

: Use personal protective equipment.
Avoid dust formation.
Avoid breathing dust.
Remove all sources of ignition.
Follow safe handling advice and personal protective equipment recommendations.
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/vapours/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.

SAFETY DATA SHEET

BP-50-FT



Version	Revision Date:	SDS Number:	Date of last issue: 09.11.2018
2.0	20.02.2020	600000000192	Date of first issue: 09.11.2018

SECTION 7: Handling and storage

Handling

Precautions for safe handling

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Advice on protection against fire and explosion : Avoid dust formation.
Provide appropriate exhaust ventilation at places where dust is formed.
Keep away from heat and sources of ignition.
Use only explosion-proof equipment.
Keep away from combustible material.
- Advice on safe handling : Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
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.
Persons susceptible to skin sensitisation 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.

Storage

Conditions for safe storage, including any incompatibilities

- 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.
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 : < 30 °C
- Further information on storage : No decomposition if stored normally.

SAFETY DATA SHEET

BP-50-FT



Version 2.0 Revision Date: 20.02.2020 SDS Number: 600000000192 Date of last issue: 09.11.2018
Date of first issue: 09.11.2018

age stability

SECTION 8: Exposure controls and personal protection

Control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Dibenzoyl peroxide	94-36-0	TWA	5 mg/m ³	MY PEL
		TWA	5 mg/m ³	ACGIH

Appropriate engineering controls : Minimize workplace exposure concentrations.

Individual protection measures, such as personal protective equipment

Eye/face 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.

Skin protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.

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 manufacturer. Wash hands before breaks and at the end of workday.

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

Filter type : Filter type P

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 : powder

SAFETY DATA SHEET

BP-50-FT



Version 2.0 Revision Date: 20.02.2020 SDS Number: 600000000192 Date of last issue: 09.11.2018
Date of first issue: 09.11.2018

Colour : white

Odour : aromatic

pH : No data available

Melting point/range : Decomposition: Decomposes below the melting point.

Boiling point/boiling range : Not applicable

Flash point : Not applicable

Flammability (solid, gas) : Not applicable

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : No data available

Density : No data available

Bulk density : 620 kg/m³

Solubility(ies)

 Water solubility : insoluble

 Solubility in other solvents : Solvent: Phthalates
Description: soluble

Self-Accelerating decomposition temperature (SADT) : 60 °C
Method: UN-Test H.4
SADT-Self Accelerating Decomposition Temperature. Lowest temperature at which the tested package size will undergo a self-accelerating decomposition reaction.

Viscosity

 Viscosity, dynamic : Not applicable

 Viscosity, kinematic : No data available

Explosive properties : Not explosive

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.

SAFETY DATA SHEET

BP-50-FT



Version 2.0 Revision Date: 20.02.2020 SDS Number: 600000000192 Date of last issue: 09.11.2018
Date of first issue: 09.11.2018

- 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
-

SECTION 11: Toxicological information

Information on likely routes of exposure : None known.

Acute toxicity

Not classified based on available information.

Components:

dicyclohexyl phthalate:

- Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 423
Assessment: The substance or mixture has no acute oral toxicity
- Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Dibenzoyl peroxide:

- Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
Assessment: The substance or mixture has no acute oral toxicity
- Acute inhalation toxicity : LC50 (Rat): > 24.3 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity
- Acute dermal toxicity : Remarks: No data available

SAFETY DATA SHEET

BP-50-FT



Version 2.0 Revision Date: 20.02.2020 SDS Number: 600000000192 Date of last issue: 09.11.2018
Date of first issue: 09.11.2018

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks : May cause skin irritation in susceptible persons.

Components:

dicyclohexyl phthalate:

Result : No skin irritation

Dibenzoyl peroxide:

Species : Rabbit
Result : No skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

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

Components:

dicyclohexyl phthalate:

Result : No eye irritation

Dibenzoyl peroxide:

Species : Rabbit
Result : Irritation to eyes, reversing within 7 days

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Product:

Remarks : Causes sensitisation.

Components:

dicyclohexyl phthalate:

Exposure routes : Skin contact
Species : Mouse
Result : May cause sensitisation by skin contact.

SAFETY DATA SHEET

BP-50-FT



Version 2.0 Revision Date: 20.02.2020 SDS Number: 600000000192 Date of last issue: 09.11.2018
Date of first issue: 09.11.2018

Dibenzoyl peroxide:

Exposure routes : Skin contact
Species : Mouse
Method : Local lymph node assay (LLNA)
Result : May cause sensitisation by skin contact.

Germ cell mutagenicity

Not classified based on available information.

Components:

dicyclohexyl phthalate:

Genotoxicity in vitro : Result: negative
Remarks: In vitro tests did not show mutagenic effects

Genotoxicity in vivo : Remarks: No data available

Dibenzoyl peroxide:

Genotoxicity in vitro : Result: negative
Remarks: In vitro tests did not show mutagenic effects

Genotoxicity in vivo : Result: negative
Remarks: In vivo tests did not show mutagenic effects

Carcinogenicity

Not classified based on available information.

Components:

dicyclohexyl phthalate:

Remarks : This information is not available.

Dibenzoyl peroxide:

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

Reproductive toxicity

May damage the unborn child.

Components:

dicyclohexyl phthalate:

Reproductive toxicity - Assessment : Clear evidence of adverse effects on development, based on animal experiments.
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Dibenzoyl peroxide:

Effects on fertility : Species: Rat, male
Application Route: Oral
General Toxicity - Parent: NOAEL: 1,000 mg/kg body weight
Method: OECD Test Guideline 422

SAFETY DATA SHEET

BP-50-FT



Version 2.0 Revision Date: 20.02.2020 SDS Number: 600000000192 Date of last issue: 09.11.2018
Date of first issue: 09.11.2018

Species: Rat, female
Application Route: Oral
General Toxicity - Parent: NOAEL: 500 mg/kg body weight
Method: OECD Test Guideline 422

Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

STOT - single exposure

Not classified based on available information.

Components:

Dibenzoyl peroxide:

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

STOT - repeated exposure

Not classified based on available information.

Components:

Dibenzoyl peroxide:

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

Repeated dose toxicity

Components:

dicyclohexyl phthalate:

Species : Rat
NOAEL : 50 mg/kg
Application Route : Ingestion
Exposure time : 90 d
Method : OECD Test Guideline 408

Aspiration toxicity

Not classified based on available information.

Components:

Dibenzoyl peroxide:

No aspiration toxicity classification

Further information

Product:

Remarks : No data available

SAFETY DATA SHEET

BP-50-FT



Version 2.0 Revision Date: 20.02.2020 SDS Number: 600000000192 Date of last issue: 09.11.2018
Date of first issue: 09.11.2018

SECTION 12: Ecological information

Ecotoxicity

Product:

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.
Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Components:

dicyclohexyl phthalate:

Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): > 2 mg/l
Exposure time: 96 h
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : NOEC (Daphnia magna (Water flea)): > 2 mg/l
Exposure time: 48 h
Remarks: No toxicity at the limit of solubility

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 2 mg/l
Exposure time: 72 h
Test Type: Growth inhibition
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)): 0.181 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

Toxicity to microorganisms : NOEC: > 100 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

Dibenzoyl peroxide:

Toxicity to fish : EC50 (Oncorhynchus mykiss (rainbow trout)): 0.06 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.11 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 0.06 mg/l

SAFETY DATA SHEET

BP-50-FT



Version 2.0 Revision Date: 20.02.2020 SDS Number: 600000000192 Date of last issue: 09.11.2018
Date of first issue: 09.11.2018

Exposure time: 72 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 10

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10 (Daphnia magna (Water flea)): 0.001 mg/l
Exposure time: 21 d
Test Type: semi-static test
Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity) : 10

Toxicity to microorganisms : EC50 (Bacteria): 35 mg/l

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Persistence and degradability

Components:

dicyclohexyl phthalate:

Biodegradability : Result: Readily biodegradable.

Dibenzoyl peroxide:

Biodegradability : Result: Inherently biodegradable.

Bioaccumulative potential

Components:

dicyclohexyl phthalate:

Partition coefficient: n-octanol/water : log Pow: 4.82 (25 °C)

Dibenzoyl peroxide:

Partition coefficient: n-octanol/water : log Pow: 3.2 (20 °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.
Very toxic to aquatic life with long lasting effects.

SAFETY DATA SHEET

BP-50-FT



Version	Revision Date:	SDS Number:	Date of last issue: 09.11.2018
2.0	20.02.2020	600000000192	Date of first issue: 09.11.2018

SECTION 13: Disposal information

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 3106
Proper shipping name : ORGANIC PEROXIDE TYPE D, SOLID (DIBENZOYL PEROXIDE)
Class : 5.2
Packing group : Not assigned by regulation
Labels : 5.2

IATA-DGR

- UN/ID No. : UN 3106
Proper shipping name : Organic peroxide type D, solid (Dibenzoyl peroxide)
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 3106
Proper shipping name : ORGANIC PEROXIDE TYPE D, SOLID (DIBENZOYL PEROXIDE)
Class : 5.2
Packing group : Not assigned by regulation
Labels : 5.2
EmS Code : F-J, S-R
Marine pollutant : yes

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

Not applicable for product as supplied.

- Hazchem Code : 1WE
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SAFETY DATA SHEET

BP-50-FT



Version	Revision Date:	SDS Number:	Date of last issue: 09.11.2018
2.0	20.02.2020	600000000192	Date of first issue: 09.11.2018

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.

SECTION 15: Regulatory information

Safety, health, and environmental regulations specific for the hazardous chemical

Gefahrgruppe nach § 3 BGV B4: II (German regulatory requirements)
Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013.
Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.

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

DSL (CA)	:	All components of this product are on the Canadian DSL
AICS (AU)	:	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

SECTION 16: Other information

Further information

Further information

Other information	:	This 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.
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Sources of key data used to	:	Internal technical data, data from raw material SDSs, OECD
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SAFETY DATA SHEET

BP-50-FT



Version	Revision Date:	SDS Number:	Date of last issue: 09.11.2018
2.0	20.02.2020	600000000192	Date of first issue: 09.11.2018

compile the Safety Data Sheet : eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Date format : dd.mm.yyyy

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
MY PEL : Malaysia. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.

ACGIH / TWA : 8-hour, time-weighted average
MY PEL / TWA : Eight-hour time-weighted average airborne concentration

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 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

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

MY / EN