Printing date 28.01.2023 Version number 1 Revision: 28.01.2023

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

- · 1.1 Product identifier
- · Trade name: 4-tert-butylphenol
- · CAS Number:

98-54-4

· EC number:

202-679-0

· Index number:

604-090-00-8

- Registration number 01-2119489419-21-0027
- · 1.2 Relevant identified uses of the substance or mixture and uses advised against
- · Product category PC 32: Polymer preparations and compounds
- · Process category

PROC 8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC 9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

PROC28: Manual maintenance (cleaning and repair) of machinery

PROC 4: Chemical production where opportunity for exposure arises

PROC 5: Mixing or blending in batch processes

PROC 10: Roller application or brushing

PROC 7: Industrial spraying

PROC 8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC 1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions

PROC 2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

PROC 3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions

PROC 14: Tabletting, compression, extrusion, pelletisation, granulation

PROC 15: Use as laboratory reage

Environmental release category

ERC6a: Use of intermediate

ERC6c: Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article)

ERC5: Use at industrial site leading to inclusion into/onto article

ERC12a: Processing of articles at industrial sites with low release

- · Technical function Intermediate (precursor)
- · Application of the substance / the mixture adhesives and sealants and coating products.
- · 1.3 Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

Vinati Organics Limited

Parinee Crescenzo, 11th floor, 1102,

"G" Block, Plot no. C-38 & C-39,

Bandra-Kurla Complex,

Bandra (East) Mumbai -51,

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Maharashtra, India

· Further information obtainable from:

Mr. Mahesh Rashinkar

Desk Phone - +91 2356 295155

Mobile - +91 9822058741

Email: Mahesh.rashinkar@vinatiorganics.com

OR Details:

Global Product Compliance (Europe) AB, Ideon Science Park, Scheelevägen 17,

Beta 5, 22370 Lund,

Sweden

· 1.4 Emergency telephone number:

Mr. Jayavant Bagal +91 94233 80234

#### SECTION 2: Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008



health hazard

Repr. 2 H361f Suspected of damaging fertility.



corrosion

Eye Dam. 1 H318 Causes serious eye damage.



environment

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



Skin Irrit. 2

H315 Causes skin irritation.

- · 2.2 Label elements
- · Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

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Trade name: 4-tert-butylphenol

(Contd. of page 2)

#### · Hazard pictograms







GHS05 GHS08 GHS09

- · Signal word Danger
- · Hazard statements

H315 Causes skin irritation.

H318 Causes serious eye damage. H361f Suspected of damaging fertility.

H410 Very toxic to aquatic life with long lasting effects.

· Precautionary statements

P201 Obtain special instructions before use.

P280 Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P321 Specific treatment (see on this label).

P362+P364 Take off contaminated clothing and wash it before reuse.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/

international regulations.

· 2.3 Other hazards

The substance has an endocrine- disrupting property with regard to the environment.

- · Results of PBT and vPvB assessment
- PBT: The substance is not PBT.
- · vPvB: The substance is not vPvB.

# SECTION 3: Composition/information on ingredients

- · 3.1 Chemical characterisation: Substances
- · CAS No. Description

98-54-4 4-tert-butylphenol

- Identification number(s)
- · EC number: 202-679-0
- · Index number: 604-090-00-8
- · Additional information:

IUPAC name: 2-(p-Hydroxyphenyl)-2-methylpropane

Mol. formula: C10H14O

Molecular Weight: 150.22 gm/mol

Synonyms: p-tert-Butylphenol, Butylphen, PTBP

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Trade name: 4-tert-butylphenol

(Contd. of page 3)

·SVHC

CAS: 98-54-4 4-tert-butylphenol

#### SECTION 4: First aid measures

- · 4.1 Description of first aid measures
- General information:

If you feel unwell, seek medical advice (show the label where possible).

· After inhalation:

In case of unconsciousness place patient stably in side position for transportation. Provide fresh air. If symptoms persist, call a physician.

· After skin contact:

Immediately wash with water and soap and rinse thoroughly.

Wash off immediately with plenty of water. Consult a physician.

· After eye contact:

Rinse opened eye for several minutes under running water.

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

· After swallowing:

Consult a physician. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

- · Information for doctor: Treat symptomatically and supportively.
- **4.2 Most important symptoms and effects, both acute and delayed**No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**No further relevant information available.

# SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- · Suitable extinguishing agents: Water spray, Dry powder, Foam, Carbon dioxide (CO2)
- · For safety reasons unsuitable extinguishing agents: No information available
- 5.2 Special hazards arising from the substance or mixture phenol: olefins
- 5.3 Advice for firefighters

Wear suitable protective clothing to avoid contact with skin.

Wear self-contained respiratory protective device.

Protective equipment:

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

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Trade name: 4-tert-butylphenol

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#### SECTION 6: Accidental release measures

• 6.1 Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Avoid dust formation.

· 6.2 Environmental precautions:

Do not allow to enter sewers/ surface or ground water.

Avoid subsoil penetration. Do not flush into surface water or sanitary sewer system.

6.3 Methods and material for containment and cleaning up:

Use mechanical handling equipment. Sweep up and shovel into suitable containers for disposal

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

#### SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Wear personal protective equipment. Provide appropriate exhaust ventilation at places where dust is formed. In case of insufficient ventilation, wear suitable respiratory equipment.

- · Information about fire and explosion protection: No special measures required.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: Keep away from direct sunlight.
- · Information about storage in one common storage facility:

Do not store together with incompatible materials and foodstuffs.

Further information about storage conditions:

Keep container tightly sealed.

Storage temperature ≤ 35 °C

· 7.3 Specific end use(s) No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- · 8.1 Control parameters
- · Additional information about design of technical facilities: No further data; see item 7.
- Ingredients with limit values that require monitoring at the workplace:

Exposure Limits - Denmark

Source Type Value OEL TWA 0.5 mg/m3 0.08 ppm

Remarks: H

Exposure Limits - Germany

Source Type Value TRGS 900 OEL 0.5 mg/m3 0.08 ppm

Remarks: 4

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Trade name: 4-tert-butylphenol

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Remarks: H

Exposure Limits - Switzerland

Source Type Value OEL OEL 0.5 mg/m3 0.08 ppm

Remarks: M · DNELs

Data for WORKERS

INHALATION Exposure Threshold

Systemic Effects

Long-term:(DNEL) 500 µg/m³repeated dose toxicity

Acute /short term: Low hazard (no threshold

derived) Local Effects

Long-term: No hazard identified Acute /short term: No hazard identified

DERMAL Exposure Threshold Most sensitive study

Systemic Effects

Long-term:(DNEL) 71 µg/kg bw/day repeated dose toxicity

EYE Exposure

Medium hazard (no threshold derived) Data for the GENERAL POPULATION

INHALATION Exposure Threshold Most sensitive study

Systemic Effects

Long-term:(DNEL) 90 µg/m³repeated dose toxicity

Acute /short term: Low hazard (no threshold

derived) Local Effects

Long-term: No hazard identified

Acute /short term: No hazard identified

DERMAL Exposure Threshold Most sensitive study

Systemic Effects

Long-term:(DNEL) 26 µg/kg bw/day repeated dose toxicity Acute /short term:(Medium hazard (no threshold derived))-

Local Effects

Long-term:(Medium hazard (no threshold derived))-

Acute /short term:(Medium hazard (no threshold derived))-

ORAL Exposure Threshold Most sensitive study

Systemic Effects

Long-term:(DNEL) 26 µg/kg bw/day repeated dose toxicity Acute /short term:(Low hazard (no threshold derived))- EYE Exposure: Medium hazard (no threshold derived)

**PNECs** 

Hazard for Aquatic Organisms

Freshwater10 µg/L

Intermittent releases (freshwater)48 µg/L

Marine water1 µg/L

Intermittent releases (marine water)-

Sewage treatment plant (STP)1.5 mg/L

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Sediment (freshwater)270 µg/kg sediment dw Sediment (marine water)27 µg/kg sediment dw

Hazard for Air

AirNo hazard identified (1) Hazard for Terrestrial Organism Soil250 μg/kg soil dw (1)

Hazard for Predators

Secondary poisoning46.67 mg/kg food (1)

- · Additional information: The lists valid during the making were used as basis.
- · 8.2 Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

· Respiratory protection:

In inadequately ventilated areas, where workplace limits are exceeded, where unpleasant odours exist or where aerosols are in use, or smoke and mist occur, use self-contained breathing apparatus or breathing apparatus with a combined filter (e.g. A-P2 or ABEK-P2), in compliance with EN 141.

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other., Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time., Be aware that in daily use the durability of a chemical resistant protective glove can be notably shorter than the break through time measured according to EN 374, due to the numerous outside influences (e.g. temperature).

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#### · Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

butyl-rubber;Break through time: ≥ 480 min;Material thickness: 0.5 mm

#### Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection:



Tightly sealed goggles

#### · Body protection:

Chemical resistant gloves, boots, and apron.

Protective suit, Use disposable clothing if appropriate.

#### SECTION 9: Physical and chemical properties

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· General Information

Appearance:Solid• Form:Flakes• Colour:White• Odour:Phenolic

· **Odour threshold:** Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point: 97-100 °C Initial boiling point and boiling range: 238 °C

· Flash point: the flash point is only a relevant property for

liquids, thus it does not need to be done for substances that are solids or gases at room

temperature.

· Flammability (solid, gas): Non flammable

· Ignition temperature: 510 °C

• Explosive properties: Product does not present an explosion hazard.

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	(Contd. of page 8
· Oxidising properties	No oxidizing properties.
· Vapour pressure at 20 °C:	0.5 Pa
· Density at 20 °C:	0.908 g/cm³
· Solubility in / Miscibility with water at 20 °C:	607 mg/l
· Partition coefficient: n-octanol/water:	3 log POW
· 9.2 Other information	No further relevant information available.

## SECTION 10: Stability and reactivity

- · 10.1 Reactivity None known, based on information available
- 10.2 Chemical stability Stable under normal conditions.
- · Thermal decomposition / conditions to be avoided: Acids, Oxidizing agents
- 10.3 Possibility of hazardous reactions None under normal processing.
- · 10.4 Conditions to avoid Incompatible products. Avoid dust formation. Excess heat.
- 10.5 Incompatible materials: Strong oxidizing agents, Strong acids
- · 10.6 Hazardous decomposition products: phenol; olefins

#### SECTION 11: Toxicological information

- · 11.1 Information on toxicological effects
- · Acute toxicity Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:				
Oral	LD50	2,951 mg/kg (rat)		
Dermal	LD50	2,288 mg/kg (rabbit)		

- · Primary irritant effect:
- Skin corrosion/irritation

Causes skin irritation.

A study was performed to assess the irritancy potential of the test material to the skin of the New Zealand White rabbit. The test material produced a primary irritation index of 5.5 and was classified as a severe irritant to rabbit skin according to the Draize classification scheme. No corrosive effects were noted.

Serious eye damage/irritation

Causes serious eve damage.

An eye irritation test was performed in New Zealand White rabbits to assess the irritancy potential of the test chemical. Instillation of 80 mg PTBP produced severe corneal injury (with (Contd. on page 10)

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Trade name: 4-tert-butylphenol

(Contd. of page 9)

vascularization and surface bulges), iritis, and severe conjunctival irritation which persisted through the 21-day postexposure observation period. Similar effects were observed in the group dosed with 10 mg PTBP. Although the severity of the effects in this lower dosage group decreased with time, the signs of irritation and injury again persisted in most eyes for the 21-day post-exposure observation period.

· Respiratory or skin sensitisation

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

- · Additional toxicological information:
- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- · Germ cell mutagenicity

AMES test was performed In both the presence and absence of metabolic activation (S9), S. typhimurium strains TA 1535, TA 1537, TA 98 and TA 100 as well as E. coli WP2uvrA were exposed to ptBP at 0, 1.6, 8, 40, 200 and 1000 µg/plate in a first experiment, and then at 0, 31.25, 62.5, 125, 250, 500 and 1000 µg/plate in an independent second experiment. DMSO was used as the solvent, and solvent only treatment groups were used as negative controls, all of which gave revertant colony counts within the normal range. Appropriate positive controls all markedly increased revertant colony counts,

validating both the sensitivity of the bacteria and the efficacy of the S9. Cytotoxicity was seen in all experiments with all strains from 1000 µg/plate, so ptBP was tested up to its toxic limit. No genotoxicity was observed in any bacterial tester strain in the presence or absence of metabolic activation.

- Carcinogenicity Based on available data, the classification criteria are not met.
- · Reproductive toxicity

Suspected of damaging fertility.

The NOAEL for systemic toxicity in the parental generation was considered to be 60 mg/kg body weight/day while the NOAEL for effects on fertility was 200 mg/kg bw/day .The substance is classified as toxic for reproduction (category 2) according to Regulation (EC) NO. 1272/2008

- · STOT-single exposure Based on available data, the classification criteria are not met.
- · STOT-repeated exposure Based on available data, the classification criteria are not met.
- · Aspiration hazard Based on available data, the classification criteria are not met.
- · 11.2 Information on other hazards
- •11.2.1 Endocrine disrupting properties: The substance does not have an endocrine-disrupting property for human health.
- 11.2.2 Information on other hazard: No further information is available.

## SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity:

EC50 (48 h) (static) 4.8 mg/L (Daphnia magna) (OECD Guideline 202)

(Contd. on page 11)

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#### · 12.2 Persistence and degradability

The product is Readily biodegradable.

The test compound 4-tert-Butylphenol was tested at two concentration ranges, 15 and 25 mg/L. The obtained carbonaceous BOD as percentage of ThOD was 60 % and 42 %, respectively, after 28 days of incubation

#### 12.3 Bioaccumulative potential

Not bioaccumulative

The bioaccumulation potential of ptBP was studied in the aquatic organism Cyprinus carpio, and a BCF value of 20-43 and 48-88 was achieved following exposure to 40  $\mu$ g/L and 4  $\mu$ g/L of ptBP, respectively. Based on the available data on the biotransformation of ptBP and considering the rapid elimination of phenolic compounds from mammalian or aquatic organisms, ptBP is unlikely to bioaccumulate in the food chain.

- · 12.4 Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 3 (German Regulation) (Assessment by list): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

- · 12.5 Results of PBT and vPvB assessment
- · PBT: The substance is not PBT.
- · **vPvB**: The substance is not vPvB.
- **12.6 Endocrine disrupting properties**: The substance has an endocrine- disrupting property with regard to the environment.
- 12.7 Other adverse effect: No further information is available.

## SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation Must not be disposed together with household garbage.
- Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.

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(Contd. of page 11)

· Recommended cleansing agents: Water, if necessary together with cleansing agents.

14.1 UN-Number	
ADR, IMDG, IATA	UN3077
14.2 UN proper shipping name	
ADR	3077 ENVIRONMENTALLY HAZARDOU
	SUBSTANCE, SOLID, N.O.S. (4-tert butylphenol)
IMDG, IATA	ENVIRONMENTALLY HAZARDOU
<b></b>	SUBSTANCE, SOLID, N.O.S. (4-teributylphenol)
14.3 Transport hazard class(es)	
ADR, IMDG, IATA	
Class	9 Miscellaneous dangerous substances an articles.
Label	9
14.4 Packing group	
ADR, IMDG, IATA	III
14.5 Environmental hazards:	
Marine pollutant:	Yes
Special marking (ADD)	Symbol (fish and tree)
Special marking (ADR): Special marking (IATA):	Symbol (fish and tree) Symbol (fish and tree)
. ,	
14.6 Special precautions for user	Warning: Miscellaneous dangerous substances and articles.
Hazard identification number (Kemler	
code):	90
EMS Number:	F-A,S-F
Stowage Category	A
Stowage Code	SW23 When transported in BK3 bull container, see 7.6.2.12 and 7.7.3.9.

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44.7 Transport in hull apparating to Appara	(Contd. of page 1
<ul> <li>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</li> </ul>	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 3 ml
	Maximum net quantity per outer packaging 1000 ml
· Transport category	3
· Tunnel restriction code	(-)
· IMDG	
· Limited quantities (LQ)	5 kg
Excepted quantities (ÉQ)	Code: E1
	Maximum net quantity per inner packaging: 3 ml
	Maximum net quantity per outer packaging 1000 ml
· UN "Model Regulation":	UN 3077 ENVIRONMENTALLY HAZARDOU SUBSTANCE, SOLID, N.O.S. (4-TERT BUTYLPHENOL), 9, III

## SECTION 15: Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Labelling according to Regulation (EC) No 1272/2008

  The substance is classified and labelled according to the CLP regulation.
- · Hazard pictograms







GHS05 GHS08 GHS09

- · Signal word Danger
- · Hazard statements

H315 Causes skin irritation.

H318 Causes serious eye damage.

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(Contd. of page 13)

H361f Suspected of damaging fertility.

H410 Very toxic to aquatic life with long lasting effects.

· Precautionary statements

P201 Obtain special instructions before use.

P280 Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P321 Specific treatment (see on this label).

P362+P364 Take off contaminated clothing and wash it before reuse.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/

international regulations.

· Directive 2012/18/EU

· Named dangerous substances - ANNEX I Substance is not listed.

· Seveso category E1 Hazardous to the Aquatic Environment

· Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t

• Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t

· Other regulations, limitations and prohibitive regulations

International Inventories: Canada (DSL/NDSL): Listed

Europe (EINECS/ELINCS/NLP): Listed

Philippines (PICCS): Listed Japan (ENCS): Listed Australia (AICS): Listed China (IECSC): Listed Korea (ECL): Listed

· Substances of very high concern (SVHC) according to REACH, Article 57

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· 15.2 Chemical safety assessment:

A Chemical Safety Assessment has been carried out.

## SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · **Department issuing SDS:** Product safety department.
- · Contact:

Mr. Mahesh Rashinkar

Desk Phone - +91 2356 295155

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Trade name: 4-tert-butylphenol

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Mobile - +91 9822058741

Email: Mahesh.rashinkar@vinatiorganics.com

#### · Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement

Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Skin Irrit. 2: Skin corrosion/irritation - Category 2

Eye Dam. 1: Serious eye damage/eye irritation - Category 1

Repr. 2: Reproductive toxicity - Category 2

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard - Category 1

#### Sources

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on classification, labelling and packaging of substances and mixtures, amending and repealing COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006

- ECHA- https://echa.europa.eu/substance-information/-/substanceinfo/100.002.436
- -Toxplanet-https://chemical-search.toxplanet.com/#/product-search/chem-id/ei-fts-search/296b713c-c60c-491b-84c6-3f7ba6fdf800

#### \* Data compared to the previous version altered.

- Section 1: Identification of the substance/mixture and of the company/undertaking
- Section 2: Hazard Identification
- Section 3: Composition/information on ingredients
- Section 4: First-aid measures.
- Section 5: Fire-fighting measures
- Section 6: Accidental Release measures
- Section 7: Handling and storage.
- Section 8: Exposure Controls/Personal protection.
- Section 9: Physical and Chemical properties.
- Section 10: Stability and Reactivity
- Section 11: Toxicological Information.
- Section 12: Ecological Information
- Section 13: Disposal consideration
- Section 14:Transport information
- Section 15: Regulatory information
- Section 16: Other information