according to the OSHA Hazard Communication Standard



KOLUMN

Version Revision Date: SDS Number: Date of last issue: -

0.0 10/01/2024 S00086112662 Date of first issue: 01.10.2024

SECTION 1. IDENTIFICATION

Product name : KOLUMN
Design code : A21972C

Product Registration number : 100-1648

Manufacturer or supplier's details

Company name of supplier : Syngenta Crop Protection, LLC

Address : Post Office Box 18300

Greensboro NC 27419

United States of America (USA)

Telephone : 1 800 334 9481 Telefax : 1 336 632 2192

E-mail address : sds.requests@syngenta.com

Emergency telephone : 1 800 888 8372

Recommended use of the chemical and restrictions on use

Recommended use : Seed treatment

Restrictions on use : General Use Pesticide

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity (Inhalation) : Category 3

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H331 Toxic if inhaled.

Precautionary Statements : P

Prevention:

P261 Avoid breathing mist or vapors.

P271 Use only outdoors or in a well-ventilated area.

Response:

P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/

doctor.
Storage:

according to the OSHA Hazard Communication Standard



KOLUMN

Version Revision Date: SDS Number: Date of last issue: -

0.0 10/01/2024 S00086112662 Date of first issue: 01.10.2024

P403 + P233 Store in a well-ventilated place. Keep container

tightly closed.

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste dis-

posal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
pydiflumetofen	1228284-64-7	41.6667
propane-1,2-diol	57-55-6	>= 1 - < 5
Residues (petroleum), catalytic re-	68425-94-5	>= 1 - < 5
former fractionator, sulfonated, poly-		
mers with formaldehyde, sodium salts		

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : Have the product container, label or Safety Data Sheet with

you when calling the emergency number, a poison control

center or physician, or going for treatment.

If inhaled : Take the victim into fresh air.

If breathing is irregular or stopped, administer artificial

respiration.

Keep patient warm and at rest.

Call a physician or poison control center immediately.

In case of skin contact : Take off all contaminated clothing immediately.

Wash off immediately with plenty of water. If skin irritation persists, call a physician.

Wash contaminated clothing before re-use.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids,

for at least 15 minutes. Remove contact lenses.

Immediate medical attention is required.

If swallowed : If swallowed, seek medical advice immediately and show this

container or label.

Do NOT induce vomiting.

Most important symptoms and effects, both acute and

delayed

: Nonspecific

s, both acute and No symptoms known or expected.

Toxic if inhaled.

Notes to physician : There is no specific antidote available.

Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Extinguishing media - small fires

according to the OSHA Hazard Communication Standard



KOLUMN

Version Revision Date: SDS Number: Date of last issue: -

0.0 10/01/2024 S00086112662 Date of first issue: 01.10.2024

Use water spray, alcohol-resistant foam, dry chemical or

carbon dioxide.

Extinguishing media - large fires

Alcohol-resistant foam

or

Water spray

Unsuitable extinguishing

media

Do not use a solid water stream as it may scatter and spread

fire

Specific hazards during fire

fighting

As the product contains combustible organic ingredients, fire

will produce dense black smoke containing hazardous

products of combustion (see section 10).

Exposure to decomposition products may be a hazard to

health.

Hazardous combustion prod- :

ucts

Carbon oxides

Nitrogen oxides (NOx) Chlorine compounds Fluorine compounds

Sulfur oxides

Further information : Do not allow run-off from fire fighting to enter drains or water

courses.

Cool closed containers exposed to fire with water spray.

Special protective equipment:

for fire-fighters

Wear full protective clothing and self-contained breathing

apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emer-

gency procedures

Personal precautions, protec- : Refer to protective measures listed in sections 7 and 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so.

Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform

respective authorities.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to

local / national regulations (see section 13). Clean contaminated surface thoroughly. Clean with detergents. Avoid solvents.

Retain and dispose of contaminated wash water.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : No special protective measures against fire required.

Avoid contact with skin and eyes.

according to the OSHA Hazard Communication Standard



KOLUMN

Version Revision Date: SDS Number: Date of last issue: -

0.0 10/01/2024 S00086112662 Date of first issue: 01.10.2024

When using do not eat, drink or smoke.

For personal protection see section 8.

Conditions for safe storage : No special storage conditions required.

Keep containers tightly closed in a dry, cool and well-

ventilated place.

Keep out of the reach of children.

Keep away from food, drink and animal feedingstuffs.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
pydiflumetofen	1228284-64- 7	TWA	5 mg/m3	Syngenta
propane-1,2-diol	57-55-6	TWA	10 mg/m3	US WEEL

Engineering measures

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THE PRODUCT. FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use.

Maintain air concentrations below occupational exposure

Where necessary, seek additional occupational hygiene

advice.

Personal protective equipment

Respiratory protection

Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Remarks

Wear protective gloves. 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

according to the OSHA Hazard Communication Standard



KOLUMN

Version Revision Date: SDS Number: Date of last issue: -

0.0 10/01/2024 S00086112662 Date of first issue: 01.10.2024

> danger of cuts, abrasion, and the contact time. The break through time depends amongst other things from the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of

degradation or chemical breakthrough.

Eye protection No special protective equipment required.

Skin and body protection Choose body protection in relation to its type, to the

concentration and amount of dangerous substances, and to

the specific work-place.

Remove and wash contaminated clothing before re-use.

Wear as appropriate: Impervious clothing

Protective measures The use of technical measures should always have priority

> over the use of personal protective equipment. When selecting personal protective equipment, seek

appropriate professional advice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance liquid

Color white

Odor No data available

Odor Threshold No data available

6 - 10 рΗ

Concentration: 1 %w/v

Melting point/freezing point No data available

Initial boiling point and boiling :

range

No data available

Flash point : Method: Pensky-Martens closed cup

does not flash

No data available Evaporation rate

Flammability (solid, gas) No data available

Upper explosion limit / Upper :

flammability limit

No data available

Lower explosion limit / Lower : No data available

flammability limit

: No data available Vapor pressure

Relative vapor density : No data available

: 1.17 - 1.21 g/cm3 (68 °F / 20 °C) Density

according to the OSHA Hazard Communication Standard



KOLUMN

Version Revision Date: SDS Number: Date of last issue: -

0.0 10/01/2024 S00086112662 Date of first issue: 01.10.2024

Solubility(ies)

Solubility in other solvents : No data available

Partition coefficient: n-

octanol/water

: No data available

Autoignition temperature : 1013 °F / 545 °C

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : 400 - 800 mPa.s (68 - 77 °F / 20 - 25 °C)

Viscosity, kinematic : No data available

Explosive properties : Not explosive

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

Particle characteristics

Particle size : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : None reasonably foreseeable. Chemical stability Stable under normal conditions.

Possibility of hazardous reac- : No dangerous reaction known under conditions of normal use.

Conditions to avoid : No decomposition if used as directed.

Incompatible materials : None known.

Hazardous decomposition

products

: No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Ingestion Inhalation Skin contact Eye contact

Acute toxicity

Toxic if inhaled.

Product:

Acute oral toxicity : LD50 (Rat, female): > 2,000 mg/kg

Assessment: The component/mixture is minimally toxic after

single ingestion.

Acute inhalation toxicity LC50 (Rat, male and female): > 0.51 mg/l

> Exposure time: 4 h Test atmosphere: dust/mist

Assessment: The component/mixture is toxic after short term

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KOLUMN

Version Revision Date: SDS Number: Date of last issue: -

0.0 10/01/2024 S00086112662 Date of first issue: 01.10.2024

inhalation., The substance/mixture is not toxic on inhalation as

defined by dangerous goods regulations.

Components:

pydiflumetofen:

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.11 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The component/mixture is minimally toxic after

short term inhalation.

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

propane-1,2-diol:

Acute oral toxicity : LD50 (Rat): > 20,000 mg/kg

Assessment: The substance or mixture has no acute oral tox-

icity

LC50 (Rabbit): 317,042 mg/l Acute inhalation toxicity

Exposure time: 2 h

Test atmosphere: dust/mist

: LD50 (Rabbit): > 2,000 mg/kg Acute dermal toxicity

Assessment: The substance or mixture has no acute dermal

toxicity

Residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formalde-

hyde, sodium salts:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Skin corrosion/irritation

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

Product:

Species : Rabbit

Result : No skin irritation

Components:

pydiflumetofen:

Species Rabbit

Result No skin irritation

propane-1,2-diol:

No skin irritation Result

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KOLUMN

Version Revision Date: SDS Number: Date of last issue: -

0.0 10/01/2024 S00086112662 Date of first issue: 01.10.2024

Residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:

Species : reconstructed human epidermis (RhE)

Result : No skin irritation

Serious eye damage/eye irritation

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

Product:

Species : Rabbit

Result : No eye irritation

Components:

pydiflumetofen:

Species : Rabbit

Result : No eye irritation

propane-1,2-diol:

Result : No eye irritation

Residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formalde-

hyde, sodium salts:

Species : Rabbit

Result : Irritation to eyes, reversing within 21 days

Respiratory or skin sensitization

Skin sensitization

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

Respiratory sensitization

Not classified due to lack of data.

Product:

Test Type : Local lymph node assay (LLNA)

Species : Mouse

Result : Does not cause skin sensitization.

Components:

pydiflumetofen:

Test Type : mouse lymphoma cells

Species : Mouse

Result : Does not cause skin sensitization.

propane-1,2-diol:

Result : Does not cause skin sensitization.

according to the OSHA Hazard Communication Standard



KOLUMN

Version Revision Date: SDS Number: Date of last issue: -

0.0 10/01/2024 S00086112662 Date of first issue: 01.10.2024

Germ cell mutagenicity

Not classified due to lack of data.

Components:

pydiflumetofen:

Germ cell mutagenicity -

: Animal testing did not show any mutagenic effects.

Assessment

propane-1,2-diol:

Germ cell mutagenicity -

Animal testing did not show any mutagenic effects.

Assessment

Carcinogenicity

Not classified due to lack of data.

Components:

pydiflumetofen:

Carcinogenicity - Assess-

ment

Weight of evidence does not support classification as a car-

cinogen

propane-1,2-diol:

Carcinogenicity - Assess-

ment

No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Not classified due to lack of data.

Components:

pydiflumetofen:

Reproductive toxicity - As-

sessment

No toxicity to reproduction, No effects on or via lactation

propane-1,2-diol:

Reproductive toxicity - As-

sessment

No toxicity to reproduction, No effects on or via lactation Animal testing did not show any effects on fetal development.

STOT-single exposure

Not classified due to lack of data.

Components:

pydiflumetofen:

Assessment : The substance or mixture is not classified as specific target

organ toxicant, single exposure.

propane-1,2-diol:

Assessment : The substance or mixture is not classified as specific target

organ toxicant, single exposure.

STOT-repeated exposure

Not classified due to lack of data.

according to the OSHA Hazard Communication Standard



KOLUMN

Version Revision Date: SDS Number: Date of last issue: -

0.0 10/01/2024 S00086112662 Date of first issue: 01.10.2024

Components:

pydiflumetofen:

Assessment : The substance or mixture is not classified as specific target

organ toxicant, repeated exposure.

propane-1,2-diol:

Assessment : The substance or mixture is not classified as specific target

organ toxicant, repeated exposure.

Aspiration toxicity

Not classified due to lack of data.

Components:

propane-1,2-diol:

No aspiration toxicity classification

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

pydiflumetofen:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.18 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0.42 mg/l

Exposure time: 48 h

LC50 (Hyalella azteca (Amphipod)): 0.12 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

ErC50 (Raphidocelis subcapitata (freshwater green alga)): >

5.9 mg/l

Exposure time: 72 h

EC10 (Raphidocelis subcapitata (freshwater green alga)): 2.3

mg/l

End point: Growth rate Exposure time: 72 h

ErC50 (Navicula pelliculosa (Freshwater diatom)): 1.6 mg/l

Exposure time: 72 h

EC10 (Navicula pelliculosa (Freshwater diatom)): 0.97 mg/l

End point: Growth rate Exposure time: 72 h

Toxicity to fish (Chronic tox-

icity)

EC10 (Pimephales promelas (fathead minnow)): 0.15 mg/l

Exposure time: 32 d

according to the OSHA Hazard Communication Standard



KOLUMN

Version Revision Date: SDS Number: Date of last issue: -

0.0 10/01/2024 S00086112662 Date of first issue: 01.10.2024

Toxicity to daphnia and other :

aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 0.042 mg/l

Exposure time: 21 d

propane-1,2-diol:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l

Exposure time: 96 h
Test Type: static test

Toxicity to daphnia and other :

aquatic invertebrates

(Ceriodaphnia dubia (water flea)): 18,340 mg/l

Exposure time: 48 h Test Type: static test

Toxicity to algae/aquatic

plants

: ErC50 (Raphidocelis subcapitata (freshwater green alga)):

19,000 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates (Chron-

ic toxicity)

NOEC (Ceriodaphnia dubia (Water flea)): 13,020 mg/l

Exposure time: 7 d

Test Type: semi-static test

Persistence and degradability

Components:

pydiflumetofen:

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life: 236 d

Remarks: Persistent in water.

propane-1,2-diol:

Biodegradability : Result: Readily biodegradable.

Residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formalde-

hyde, sodium salts:

Biodegradability : Result: Not readily biodegradable.

Bioaccumulative potential

Components:

pydiflumetofen:

Bioaccumulation : Remarks: Does not bioaccumulate.

Partition coefficient: n-

octanol/water

log Pow: 3.8 (77 °F / 25 °C)

Mobility in soil

Components:

pydiflumetofen:

Distribution among environ- : Remarks: Low mobility in soil.

according to the OSHA Hazard Communication Standard



KOLUMN

Version Revision Date: SDS Number: Date of last issue: -

0.0 10/01/2024 S00086112662 Date of first issue: 01.10.2024

mental compartments

Stability in soil : Dissipation time: 674 d

Percentage dissipation: 50 % (DT50)

Remarks: Persistent in soil.

Other adverse effects

Components:

pydiflumetofen:Results of PBT and vPvB

assessment

Substance is not persistent, bioaccumulative, and toxic (PBT). Substance is not very persistent and very bioaccumulative

(vPvB).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Do not contaminate ponds, waterways or ditches with

chemical or used container.

Do not dispose of waste into sewer.

Where possible recycling is preferred to disposal or

incineration.

If recycling is not practicable, dispose of in compliance with

local regulations.

This product will not be classified as a RCRA characteristic

hazardous waste when discarded.

Contaminated packaging : Empty remaining contents.

Triple rinse containers.

Empty containers should be taken to an approved waste

handling site for recycling or disposal. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(PYDIFLUMETOFEN)

Class : 9
Packing group : III
Labels : 9
Environmentally hazardous : yes

Remarks : This product can be subject to exemptions when packaged in

single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a

net mass of 5 kg or less for solids.

IATA-DGR

UN/ID No. : UN 3082

Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.

(PYDIFLUMETOFEN)

according to the OSHA Hazard Communication Standard



KOLUMN

Version Revision Date: SDS Number: Date of last issue: -

964

964

yes

10/01/2024 S00086112662 Date of first issue: 01.10.2024 0.0

9 Class Packing group : III

Miscellaneous Labels

Packing instruction (cargo

aircraft)

Packing instruction (passen-

ger aircraft)

Environmentally hazardous

Remarks

This product can be subject to exemptions when packaged in

single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a

net mass of 5 kg or less for solids.

IMDG-Code

UN 3082 UN number

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, Proper shipping name

(PYDIFLUMETOFEN)

Class 9 Packing group Ш Labels EmS Code : F-A, S-F Marine pollutant : yes

: This product can be subject to exemptions when packaged in Remarks

single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a

net mass of 5 kg or less for solids.

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

Not applicable for product as supplied.

Domestic regulation

49 CFR

Not regulated as a dangerous good

Special precautions for user

Remarks : 49CFR: no dangerous good in non-bulk packaging

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

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Caution

Harmful if swallowed.

Harmful if absorbed through skin.

Harmful if inhaled.

Avoid breathing spray mist.

Avoid contact with skin, eyes or clothing.

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

according to the OSHA Hazard Communication Standard



KOLUMN

Version Revision Date: SDS Number: Date of last issue: -

0.0 10/01/2024 S00086112662 Date of first issue: 01.10.2024

Remove and wash contaminated clothing before re-use.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Acute toxicity (any route of exposure)

SARA 313 : This material does not contain any chemical components with

known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:

Flammability Health 2 0 Instability

Special hazard

HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

US WEEL : USA. Workplace Environmental Exposure Levels (WEEL)

Syngenta / TWA : Time weighted average

US WEEL / TWA : 8-hr TWA

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; HMIS - Hazardous Materials Identification System; IARC - In-

according to the OSHA Hazard Communication Standard



KOLUMN

Version Revision Date: SDS Number: Date of last issue: -

0.0 10/01/2024 S00086112662 Date of first issue: 01.10.2024

ternational 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act: SDS - Safety Data Sheet: TCSI - Taiwan Chemical Substance Inventory; TECI - 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

Revision Date : 10/01/2024

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.

US / Z8