

Praepagen TQPV-IPA Page 1

 Substance key: 000000603933
 Revision Date: 16.05.2019

 Version: 1 - 3 / RI
 Date of printing: 28.02.2023

1. PRODUCT AND COMPANY IDENTIFICATION

Trade name

Praepagen TQPV-IPA

Material number: 289340

Substance name: Palm Stearin Fatty Acid, reaction products with

triethanolamine, di-Me sulfate-quaternized in isopropanol

Recommended use:

Industry sector: Industrial & Institutional Cleaning

Type of use: Raw material for the production of soft wash rinsing agents

Supplier name/address/telephone no.:

Clariant Produkte (Deutschland) GmbH

Frankfurt am Main 65926, Germany Telephone: +49 69 305 18000

Information about the substance/preparation

Product Safety: BU Care Chemicals

Product Stewardship

e-mail: SDS.Europe@clariant.com

Emergency telephone number: +65 3158 1074

2. HAZARDS IDENTIFICATION

GHS Classification

Skin corrosion/irritation : Category 2

GHS label elements

Hazard pictograms

!>

Signal word : Warning

Hazard statements : H315 Causes skin irritation.

Precautionary statements : Prevention:

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves.

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.



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Other hazards which do not result in classification

Flammable solvent vapours may collect in the vapour spaces of closed containers. Keep away from fire and other sources of ignition.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)		
Propan-2-ol	67-63-0	>= 10 -< 30		

4. FIRST AID MEASURES

General advice Get medical advice/ attention if you feel unwell.

Remove/Take off immediately all contaminated clothing.

If inhaled Remove to fresh air.

Get medical attention if symptoms occur.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty

of water.

In case of eye contact : In the case of contact with eyes, rinse immediately with plenty

of water and seek medical advice.

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

container or label.

Most important symptoms and effects, both acute and

delayed

No symptoms known currently. No hazards known at this time.

Notes to physician Treat symptomatically.

5. FIREFIGHTING MEASURES

Suitable extinguishing media Water spray jet

> Alcohol-resistant foam Carbon dioxide (CO2)

Dry powder

Specific hazards during

firefighting

In case of fires, hazardous combustion gases are formed:

Carbon monoxide (CO) Nitrogen oxides (NOx) Sulphur dioxide (SO2)

Specific extinguishing : Wear suitable protective equipment.

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methods

for firefighters

Special protective equipment : Self-contained breathing apparatus

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Wear suitable protective clothing. Keep away sources of ignition.

Environmental precautions

The product should not be allowed to enter drains, water

courses or the soil.

Methods and materials for containment and cleaning up Soak up with inert absorbent material (e.g. sand, silica gel,

acid binder, universal binder, sawdust).

7. HANDLING AND STORAGE

Advice on protection against

fire and explosion

Traces of flammable substances can collect in the vapour space of closed systems, therefore keep sources of ignition

Take precautionary measures against build-up of electrostatic

charges, e.g. earthing during loading and off-loading

operations.

Advice on safe handling Handle and open container with care.

Provide adequate ventilation.

Further information on storage conditions

- frost-sensitive - if the product becomes turbid as a result of exposure to low temperatures, warm it slowly to approx. 50°C

and stir it. Before using the product, ensure that is is

completely homogeneous.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Propan-2-ol	67-63-0	PSD	500 ppm 1.230 mg/m3	ID OEL
		NAB	400 ppm 983 mg/m3	ID OEL
		TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH



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Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Samplin g time	Permissible concentratio n	Basis
Propan-2-ol	67-63-0	Acetone	Urine	End of shift at end of workwee k	40 mg/l	ACGIH BEI

Engineering measures

Handle only in a place equipped with local exhaust (or other

appropriate exhaust).

Personal protective equipment

Respiratory protection : Use respiratory protection in case of insufficient exhaust

ventilation or prolonged exposure Full mask to standard DIN EN 136

Filter A (organic gases and vapours) to standard DIN EN 141

Filter class 2

The use of filter apparatus presupposes that the environment atmosphere contains at least 17% oxygen by volume, and does not exceed the maximum gas concentration, usually 0.5% by volume. Relevant guidelines to be considered include EN 136/141/143/371/372 as well as other national

regulations.

Hand protection Remarks

Long-term exposure Impervious butyl rubber gloves Minimum thickness (glove): not determined The data about break through time/strength of material is not valid for undissolved solids/dust.

For short-term exposure (splash protection): Nitrile rubber gloves. Minimum thickness (glove): not determined The data about break through time/strength of material is not valid for undissolved solids/dust.

These types of protective gloves are offered by various manufacturers. Please note the manufacturers' detailed statements, especially about the minimum thickness and the minimum breakthrough time. Consider also the particular working conditions under which the gloves are being used.

Eye protection : Safety glasses

Protective measures : Avoid contact with skin and eyes.

Do not inhale vapours

Hygiene measures : Wash hands before breaks and at the end of workday.

Use protective skin cream before handling the product. Take off immediately all contaminated clothing and wash it

before reuse.



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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Wax like

Colour : yellow

Odour : characteristic

Odour Threshold : not tested.

pH : 3,6 (25 °C)

Concentration: 10 g/l Method: ASTM E 70

By analogy with a product of similar composition

Melting point : 43 °C

Method: DSC

Boiling point : > 100 °C

Method: OECD Test Guideline 103

By analogy with a product of similar composition

Flash point : Not applicable

The lower explosion point was determined to be

approximately 36 °C.

Evaporation rate : Not applicable

Self-ignition : The product melts below 160 °C. Therefore, no further testing

of self-heating properties is required. The substance or

mixture is not classified as pyrophoric.

Burning number : 3

Local combustion without spreading

Upper explosion limit / upper

flammability limit

12 %(V)

Data relate to solvent

Lower explosion limit / Lower

flammability limit

2 %(V)

Data relate to solvent

Vapour pressure : 42 mbar (20 °C)

The data refer to both the solvent and the solvent mixture

Relative vapour density : Not applicable

Density : 0,966 g/cm3 (60 °C)

Method: DIN EN ISO 12185

Bulk density : not tested.

Solubility(ies)

Water solubility : miscible



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Solubility in other solvents : Description: soluble in isopropanol

Partition coefficient: n-

octanol/water

Not applicable

Auto-ignition temperature : Not applicable

Decomposition temperature : > 250 °C

The substance or mixture is not classified self-reactive. By analogy with a product of similar composition

Viscosity

Viscosity, dynamic : ca. 161 mPa.s (60 °C)

Method: DIN 53015

Viscosity, kinematic : ca. 166 mm2/s (60 °C)

Method: calculated

Explosive properties : There are no chemical groups associated with explosive

properties present in the molecule.

Oxidizing properties : There are no chemical groups associated with oxidising

properties present in the molecule.

Minimum ignition energy : not tested.

Particle size : not tested.

10. STABILITY AND REACTIVITY

Reactivity : See section 10.3. "Possibility of hazardous reactions"

Chemical stability : Stable under normal conditions.

Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

Conditions to avoid : None known.

Incompatible materials : not known

Hazardous decomposition

products

: No decomposition if stored and applied as directed.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat, male and female): 4.480 mg/kg

Method: OECD Test Guideline 401

Remarks: The values mentioned are those of the active

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ingredient.

By analogy with a product of similar composition

Acute inhalation toxicity : Remarks: not tested.

Acute dermal toxicity : LD50 (Rat, male and female): > 2.000 mg/kg

Method: OECD Test Guideline 402

Remarks: The values mentioned are those of the active

ingredient.

By analogy with a product of similar composition

Components:

Propan-2-ol:

Acute oral toxicity : LD50 (Rat, no data available): 5.840 mg/kg

Method: OECD Test Guideline 401

GLP: no

Acute inhalation toxicity : LC50 (Rat, male and female): > 25 mg/l, > 10000 ppm

Exposure time: 6 h
Test atmosphere: vapour

Method: OECD Test Guideline 403

GLP: yes

Acute dermal toxicity : LD50 (Rabbit, no data available): 13.900 mg/kg

Method: OECD Test Guideline 402

GLP: no

Skin corrosion/irritation

Product:

Species : Rabbit

Method : OECD Test Guideline 404

Result : Irritating to skin.

Remarks : By analogy with a product of similar composition

Components:

Propan-2-ol:

Species : Rabbit Exposure time : 4 h Method : Other

Result : No skin irritation

GLP : no

Serious eye damage/eye irritation

Product:

Species : rabbit eye Result : No eye irritation

Remarks : By analogy with a product of similar composition



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Components:

Propan-2-ol:

Species : Rabbit

Result : Irritating to eyes.

Method : OECD Test Guideline 405

GLP : no

Respiratory or skin sensitisation

Product:

Species : Guinea pig

Method : OECD Test Guideline 406

Result : non-sensitizing

Remarks : By analogy with a product of similar composition

Components:

Propan-2-ol:

Test Type : Buehler Test Exposure routes : Skin contact Species : Guinea pig

Method : OECD Test Guideline 406
Result : Not a skin sensitizer.

GLP : yes

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Test Type: Ames test

Method: OECD Test Guideline 471

Result: Negative with and without metabolic activation Remarks: Data corresponds to that of the active component

By analogy with a product of similar composition

Test Type: HGPRT assay

Test system: V79 cells (embryonic lung fibroblasts) of the

Chinese hamster

Method: OECD Test Guideline 476

Result: Negative with and without metabolic activation Remarks: Data corresponds to that of the active component

By analogy with a product of similar composition

Test Type: Chromosome Aberration Test

Test system: V79 cells (embryonic lung fibroblasts) of the

Chinese hamster

Method: OECD Test Guideline 473

Result: Negative with and without metabolic activation Remarks: Data corresponds to that of the active component

By analogy with a product of similar composition

Genotoxicity in vivo : Test Type: Micronucleus test



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Species: Mouse (male and female) Application Route: oral (gavage) Method: OECD Test Guideline 474

Result: negative

Germ cell mutagenicity -

Assessment

It is concluded that the product is not mutagenic based on evaluation of several mutagenicity tests., Information refers to

the main component.

Components:

Propan-2-ol:

Genotoxicity in vitro : Test Type: In vitro gene mutation study in mammalian cells

Test system: Chinese hamster ovary cells

Concentration: 500 - 5000 µg/ml

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative GLP: yes

Test Type: Ames test

Test system: Salmonella typhimurium Concentration: 100 - 10000 µg/plate

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

GLP: no

Genotoxicity in vivo : Test Type: Micronucleus test

Species: Mouse (male and female)

Strain: ICR

Cell type: Bone marrow

Application Route: Intraperitoneal injection

Exposure time: Single exposure Dose: 350-1173-2500-3500 mg/kg Method: OECD Test Guideline 474

Result: negative GLP: yes

Germ cell mutagenicity -

Assessment

In vitro tests did not show mutagenic effects, In vivo tests did

not show mutagenic effects

Carcinogenicity

Product:

Carcinogenicity - Assessment

: No information available.

Components:

Propan-2-ol:

Species : Rat, male and female

Application Route : Inhalation



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Exposure time : 104 w

Dose : 200 - 2500 - 5000 ppm

Group : yes

Frequency of Treatment : 6 hours/day, 5 days/week

: ca. 12,29 mg/l

Method : OECD Test Guideline 451

GLP : yes

Carcinogenicity - Assessment

Did not show carcinogenic effects in animal experiments.

Reproductive toxicity

Product:

Reproductive toxicity -

Assessment

No information available.

No information available.

Components:

Propan-2-ol:

Effects on fertility : Test Type: Fertility/early embryonic development

Species: Rat, male and female

Strain: wistar

Application Route: Drinking water

Dose: 0,5 - 1 - 2 %

General Toxicity - Parent: NOAEL: 853 mg/kg body weight

Method: OECD Test Guideline 415

GLP: yes

Test Type: Two-generation study Species: Rat, male and female Strain: Sprague-Dawley Application Route: oral (gavage)

Application Route: oral (gavage)
Dose: 100 - 500 - 1000 mg/kg

General Toxicity - Parent: NOAEL: 500 mg/kg body weight General Toxicity F1: NOAEL: 500 mg/kg body weight General Toxicity F2: NOAEL: 500 mg/kg body weight

Method: OECD Test Guideline 416

GLP: yes

Effects on foetal development

Test Type: Pre-natal

Species: Rat Strain: wistar

Application Route: Drinking water

Dose: 0,5 - 1,25 - 2,5 %

Duration of Single Treatment: 10 d

General Toxicity Maternal: NOAEL: 596 mg/kg body weight Developmental Toxicity: NOAEL: 596 mg/kg body weight

Method: OECD Test Guideline 414

GLP: yes



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Test Type: Pre-natal

Species: Rat

Strain: Sprague-Dawley

Application Route: oral (gavage) Dose: 400 - 800 - 1200 mg/kg Duration of Single Treatment: 9 d

General Toxicity Maternal: NOAEL: 400 mg/kg body weight

Teratogenicity: NOAEL: 400 mg/kg body weight

Developmental Toxicity: NOAEL: 400 mg/kg body weight

Method: OECD Test Guideline 414

GLP: yes

Reproductive toxicity -

Assessment

No reproductive toxicity to be expected. No teratogenic effects to be expected.

STOT - single exposure

Product:

Remarks : not tested.

Components:

Propan-2-ol:

Assessment : May cause drowsiness or dizziness.

STOT - repeated exposure

Product:

Remarks : not tested.

Components:

Propan-2-ol:

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

organ toxicant, repeated exposure.

Repeated dose toxicity

Product:

Species : Rat, male and female

NOAEL : 300 mg/kg Application Route : Drinking water

Method : OECD Test Guideline 408

Remarks : Information refers to the main component.

By analogy with a product of similar composition

Species : Rat, male and female

NOAEL : 1.000 mg/kg Application Route : oral (gavage)

Method : OECD Test Guideline 407

Remarks : Information refers to the main component.

By analogy with a product of similar composition



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Components:

Propan-2-ol:

Species : Rat, male and female

NOAEL : 12,5 mg/l
Application Route : Inhalation
Test atmosphere : vapour
Exposure time : 2 a

Number of exposures : 6 hours/day, 5 days/week Dose : 500 - 2500 - 5000 ppm

Group : yes
Method : Other
GLP : yes

Aspiration toxicity

Components:

Propan-2-ol:

No aspiration toxicity classification

Further information

Product:

Remarks : By analogy with a product of similar composition

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1,91 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Remarks: The values mentioned are those of the active

ingredient.

By analogy with a product of similar composition

Toxicity to daphnia and other :

aquatic invertebrates

LC50 (Daphnia magna (Water flea)): 2,23 mg/l

Exposure time: 48 h

Method: Directive 67/548/EEC, Annex V, C.2.

Remarks: The values mentioned are those of the active

ingredient.

By analogy with a product of similar composition

Toxicity to algae/aquatic

plants

EC50 (Desmodesmus subspicatus (green algae)): 22,3 mg/l

End point: Growth rate Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: The values mentioned are those of the active



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ingredient.

By analogy with a product of similar composition

NOEC (Desmodesmus subspicatus (green algae)): 1,48 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: The values mentioned are those of the active

ingredient.

By analogy with a product of similar composition

Toxicity to microorganisms : EC50 (activated sludge): > 243 mg/l

End point: Bacteria toxicity (respiration inhibition)

Exposure time: 3 h

Method: OECD Test Guideline 209

Remarks: The values mentioned are those of the active

ingredient.

By analogy with a product of similar composition

Components:

Propan-2-ol:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 9.640 mg/l

End point: mortality Exposure time: 96 h

Test Type: flow-through test Analytical monitoring: yes

Method: OECD Test Guideline 203

GLP: no

Toxicity to daphnia and other :

aquatic invertebrates

LC50 (Daphnia magna (Water flea)): > 10.000 mg/l

End point: Immobilization Exposure time: 24 h Test Type: static test Analytical monitoring: no

Method: OECD Test Guideline 202

GLP: no

Toxicity to algae/aquatic

plants

EC10 (Scenedesmus quadricauda (Green algae)): ca. 1.800

mg/l

End point: Growth rate Exposure time: 7 d Test Type: static test Analytical monitoring: no

Method: Other GLP: no

Toxicity to fish (Chronic

toxicity)

Remarks: not required

Toxicity to daphnia and other :

aquatic invertebrates (Chronic toxicity)

Remarks: not required



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Toxicity to microorganisms : EC10 (Pseudomonas putida): ca. 1.050 mg/l

Exposure time: 16 h Test Type: static test Analytical monitoring: no Method: DIN 38412 T.8

GLP: no

Plant toxicity : IC50: 2.104 mg/l

Exposure time: 3 d End point: Growth

Species: Lactuca sativa (lettuce)

Analytical monitoring: no

Method: Other GLP: no

Sediment toxicity : Remarks: Not applicable

Toxicity to terrestrial

organisms

Remarks: Not applicable

Persistence and degradability

Product:

Biodegradability : Inoculum: activated sludge, non-adapted

Biodegradation: 75 % Exposure time: 28 d

Method: OECD Test Guideline 301B

Remarks: Information refers to the main component. Readily biodegradable, according to appropriate OECD test.

By analogy with a product of similar composition

Components:

Propan-2-ol:

Biodegradability : aerobic

Inoculum: activated sludge

Biochemical Oxygen Demand (BOD) Result: Readily biodegradable.

Biodegradation: 53 % Exposure time: 5 d

Method: Directive 67/548/EEC, Annex V, C.5

GLP: no

Stability in water : Remarks: Not applicable

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: The bioaccumulation potential of the main

component of the mixture is expected to be low.



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Components:

Propan-2-ol:

Bioaccumulation : Remarks: Not applicable

Partition coefficient: n-

octanol/water

log Pow: 0,05

pH: 25

Method: No information available.

Mobility in soil

Product:

Distribution among

environmental compartments

Remarks: not tested.

Components:

Propan-2-ol:

Distribution among

environmental compartments

Remarks: Not applicable

Other adverse effects

Product:

Environmental fate and

pathways

Remarks: no data available

Additional ecological

information

By analogy with a product of similar composition

Components:

Propan-2-ol:

Results of PBT and vPvB

assessment

This substance is not considered to be persistent,

bioaccumulating and toxic (PBT).

Additional ecological

information

: slightly hazardous to water

Do not allow to enter ground water, waterways or waste

water.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : In accordance with local authority regulations, take to special

waste incineration plant

Contaminated packaging : Packaging that cannot be cleaned should be disposed of as

product waste



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14. TRANSPORT INFORMATION

IATA not restricted IMDG not restricted

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Apart from the data/regulations specified in this chapter, no further information is available concerning safety, health and environmental protection.

Minister of Industry Regulation No. 23/M-IND/PER/4/2013 concerning the Revision of Minister of Industry Regulation No. 87/M-IND/PER/9/2009 concerning Globally Harmonized System of Classification and Labelling of Chemicals.

Regulation of the Minister of Health No. 472 of 1996 on the Safeguarding of Substances Hazardous to Health

Hazardous substances that must be registered : Not applicable

Government Regulation No. 74 of 2001 on the Management of Hazardous and Toxic Substances

Hazardous substances approved for use : Propan-2-ol

Prohibited substances : Not applicable

Restricted substances : Not applicable

Regulation of the Minister of Trade No. 44 of 2009 on Procurement, Distribution and Supervision of Hazardous Materials

Types of Hazardous Materials governed by Import : Not applicable

Regulations

Types of Hazardous Materials of which the Distribution : Not applicable

and Supervision is Regulated

16. OTHER INFORMATION

Further information

Other information : Observe national and local legal requirements

Date format : yyyy/mm/dd

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)
ID OEL : Indonesia. Occupational Exposure Limits



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ACGIH / TWA : 8-hour, time-weighted average ACGIH / STEL : Short-term exposure limit ID OEL / NAB : Long term exposure limit ID OEL / PSD : Short term exposure limit

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

This information corresponds to the present state of our knowledge and is intended as a general description of our products and their possible applications. Clariant makes no warranties, express or implied, as to the information's accuracy, adequacy, sufficiency or freedom from defect and assumes no liability in connection with any use of this information. Any user of this product is responsible for determining the suitability of Clariant's products for its particular application. Nothing included in this information waives any of Clariant's General Terms and Conditions of Sale, which control unless it agrees otherwise in writing. Any existing intellectual/industrial property rights must be observed. Due to possible changes in our products and applicable national and international regulations and laws, the status of our products could change. Material Safety Data Sheets providing safety precautions, that should be observed when handling or storing Clariant products, are available upon request and are provided in compliance with applicable law. You should obtain and review the applicable Material Safety Data Sheet information before handling any of these products. For additional information, please contact Clariant.

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