

# MATERIAL SAFETY DATA SHEET SPECTRUM ETHERS PRIVATE LTD

Preparation Date 12.01.2022

# PYMETROZINE TECHNICAL

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

1.1 Product identifier

Trade name

: PYMETROZINE TECHNICAL

Design code : CGA215944A

Substance name : pymetrozine

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the : Insecticide

Substance/Mixture

1.3 Details of the supplier of the safety data sheet

Spectrum Ethers Private Limited

Company : Rasegaon Village, Nashik (M.S.)

Contry: India, Pin-422202

Emergency Phone : 02557 – 228000

#### **SECTION 2: Hazards identification**

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Carcinogenicity, Category 2

H351: Suspected of causing cancer.

Chronic aquatic toxicity, Category 3 H412: Harmful to aquatic life with long lasting

effects.

#### 2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms

Signal word : Warning

Hazard statements : H351 Suspected of causing cancer.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been

read and understood.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye

protection/ face protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/

attention. Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

Hazardous components which must be listed on the label:

pymetrozine (ISO)

#### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. May form combustible dust concentrations in air.

# SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

### Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
pymetrozine (ISO)	123312-89-0 613-202-00-4	Carc. 2; H351 Aquatic Chronic 3; H412	>= 90 - <= 100
methanol	67-56-1 200-659-6 603-001-00-X 01-2119433307-44	Flam. Liq. 2; H225 Acute Tox. 3; H301 Acute Tox. 3; H331 Acute Tox. 3; H311 STOT SE 1; H370	>= 0.1 - < 1



For explanation of abbreviations see section 16.

#### **SECTION 4: First aid measures**

4.1 Description of 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 : Move the victim to fresh air.

If breathing is irregular or stopped, administer artificial

respiration.

Keep patient warm and at rest.

Call a physician or poison control centre 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.

Rinse immediately with plenty of water, also under the eyelids,

In case of eye contact : 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.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No symptoms known or expected.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : There is no specific antidote available.

Treat symptomatically.

#### **SECTION 5: Firefighting measures**

5.1 Extinguishing media

Suitable extinguishing media : Extinguishing media - small fires

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. Page 3 of 19



5.2 Special hazards arising from the substance or mixture

Specific hazards during

: Fire will spread by burning with a visible flame.

firefighting

As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products

of combustion (see section 10).

Exposure to decomposition products may be a hazard to

health.

5.3 Advice for firefighters

Special protective equipment: Wear full protective clothing and self-contained breathing for

firefighters

apparatus.

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.

#### SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions Refer to protective measures listed in sections 7 and 8.

Avoid dust formation.

6.2 Environmental precautions

Environmental precautions Do not flush into surface water or sanitary sewer system.

If the product contaminates rivers and lakes or drains inform

respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up Contain spillage, pick up with an electrically protected vacuum

> cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13). Do not create a powder cloud by using a brush or compressed

Clean contaminated surface thoroughly. Clean with detergents. Avoid solvents.

Retain and dispose of contaminated wash water.

6.4 Reference to other sections

For disposal considerations see section 13., Refer to protective measures listed in sections 7 and 8.

# **SECTION 7: Handling and storage**

# 7.1 Precautions for safe handling

Advice on safe handling

: This material is capable of forming flammable dust clouds in air, which, if ignited, can produce a dust cloud explosion. Flames, hot surfaces, mechanical sparks and electrostatic discharges can serve as ignition sources for this material. Electrical equipment should be compatible with the this version replaces all previous versions. flammability characteristics of this



material. The flammability characteristics will be made worse if the material contains traces of flammable solvents or is handled in the presence of

flammable solvents.

In general personnel handling this material and all conducting equipment should be electrically earthed or grounded. Consideration should be given to avoiding the use of insulating plastics.

Bulk bags (FIBC) used to contain this material should be Type C or Type D. Type C bags must be electrically grounded before powder is charged to or discharged from the bag. Bag filters used to scavenge dust from material handling processes should be conductive and electrically grounded during use. If metal or fibre drums are used to contain this product, make certain that the metal parts are bonded to the filling equipment and grounded.

This material can become readily charged in most operations.

Avoid contact with skin and eyes. When using do not eat, drink or smoke. For personal protection see section 8.

Dust explosion class : May form flammable dust-air mixture.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

: Keep containers tightly closed in a dry, cool and wellventilated place. Keep out of the reach of children. Keep away

from food, drink and animal feedingstuffs.

7.3 Specific end use(s)
Specific use(s)

: Refer to protective measures listed in sections 7 and 8.

# SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
pymetrozine (ISO)	123312-89- 0	TWA	0.8 mg/m3	Nantong Shizhuang
methanol	67-56-1	TWA	200 ppm 260 mg/m3	2006/15/EC
Further information	Identifies the	possibility of significant	uptake through the skin, Ir	ndicative
	67-56-1	STEL	800 ppm 1,040 mg/m3	CH SUVA
Further information	Toxic by skin resorption possible; absorbed through the skin, can give by additional skin resorption a substantial higher risk compared to only inhalation by the airways., National Institute for Occupational Safety and Health, Institut National de Recherche et de Sécurité			

	pour la prévention des accidents du travail et des maladies professionnelles, Harm to the unborn child is not to be expected when the OEL-value is respected			
	67-56-1	TWA	200 ppm 260 mg/m3	CH SUVA
Further information	loxic by skin resorption possible; Substances, which are easilyabsorbed through the skin, can give by additional skin resorption a substantial higher risk compared to only inhalation by the airways., National Institute for Occupational Safety and Health, Institut National de Recherche et de Sécurité pour la prévention des accidents du travail et des maladies professionnelles, Harm to the unborn child is not to be expected when the OEL-value is respected			

# Biological occupational exposure limits

Substance name methanol	CAS-No. 67-56-1	Control parameters Methanol: 30 mg/l (Urine)	Sampling time Immediately after exposition or after working hours, In case of long-term exposition: after more than one shift	Basis CH BAT
		Methanol: 936 micromol per litre (Urine)	Immediately after exposition or after working hours, In case of long-term exposition: after more than one shift	CH BAT

# Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
methanol	Workers	Dermal	Short-term exposure, Systemic effects	40 mg/kg
	Workers	Inhalation	Short-term exposure, Systemic effects	260 mg/m3
	Workers	Inhalation	Short-term exposure, Local effects	260 mg/m3
	Workers	Dermal	Long-term systemic effects	40 mg/kg
	Workers	Inhalation	Long-term systemic effects	260 mg/m3
	Workers	Inhalation	Long-term local effects	260 mg/m3
	Consumers	Dermal	Short-term exposure, Systemic effects	8 mg/kg
	Consumers	Inhalation	Short-term exposure, Systemic effects	50 mg/m3
	Consumers	Oral	Short-term exposure, Systemic effects	8 mg/kg
	Consumers	Inhalation	Long-term local effects	50 mg/m3
	Consumers	Oral	Long-term systemic effects	8 mg/kg

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Substance name	End Use	Exposure routes	Potential health effects	Value
	Consumers	Inhalation	Long-term systemic effects	50 mg/m3
	Consumers	Dermal	Long-term systemic effects	8 mg/kg
	Consumers	Inhalation	Short-term exposure, Local effects	50 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
methanol	Fresh water	154 mg/l
	Marine water	15.4 mg/l
	Soil	22.5 mg/kg
	Sewage treatment plant	100 mg/l

# 8.2 Exposure

controls Engineering

#### measures

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 standards. Where necessary, seek additional occupational hygiene advice.

Personal protective equipment

Eye protection : No special protective equipment required.

Hand protection

Material : Nitrile rubber
Break through time : > 480 min
Glove thickness : 0.5 mm

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 danger of cuts, abrasion, and the contact time. The break through time depends amongst other things on 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.

The selected protective gloves have to satisfy the specifications

of EU Directive 89/686/EEC and the standard

EN 374 derived from it.



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:

Dust impervious protective suit

Respiratory protection : No personal respiratory protective equipment normally

required.

When workers are facing concentrations above the exposure

limit they must use appropriate certified respirators.

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

9.1 Information on basic physical and chemical properties Appearance

: powder

Colour : white to light brown Odour : sweetish, weak

Odour Threshold : No data available

pH : 5.6 (25 °C)

Concentration: 1 % w/v

Melting point/range : 217 °C

Flash point : No data available

Evaporation rate No data available

Flammability (solid, gas) : May form combustible dust concentrations in air.

Burning number 5 (20 °C)

5 (100 °C)

Upper explosion limit / Upper

flammability limit

: No data available

Lower explosion limit / Lower

flammability limit

No data available

Relative vapour density : No data available

Density : 1.37 g/cm3 (21 °C)

1.36 g/cm3 (23 °C)

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Solubility(ies)

Solubility in other solvents

: 2,400 mg/l (25 °C)

Solvent: ethanol

34 mg/l (25 °C)

Solvent: toluene

450 mg/l (25 °C)

Solvent: n-octanol

1,200 mg/l (25 °C)

Solvent: dichloromethane

260 mg/l (25 °C)

Solvent: ethyl acetate

< 1 mg/l (25 °C)

Solvent: hexane

940 mg/l (25 °C)

Solvent: Acetone

Partition coefficient: n-

octanol/water

: No data available

Auto-ignition temperature

No data available

Decomposition temperature : No data available

Viscosity Viscosity, dynamic

: No data available

Explosive properties : Not explosive

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

9.2 Other information

Surface tension : 69.4 - 72.3 mN/m, 20 °C Page 9 of 19



Dust explosion class : May form flammable dust-air mixture.

Minimum ignition energy : 1 - 3 mJ

# **SECTION 10: Stability and reactivity**

10.1 Reactivity

None reasonably foreseeable.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions

: No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid : No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid : None known.

10.6 Hazardous decomposition products

Hazardous decomposition

products

No hazardous decomposition products are known.

# **SECTION 11: Toxicological information**

11.1 Information on toxicological effects

Acute toxicity

<u>Components:</u> pymetrozine (ISO): Acute oral toxicity

: LD50 (Rat, male and female): 5,820 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 1.8 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute

inhalation toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg

Assessment: The substance or mixture has no acute dermal

toxicity

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methanol:

Acute oral toxicity : Acute toxicity estimate: 102.04 mg/kg

Assessment: The

component/mixture is toxic after single ingestion.

Acute toxicity estimate: 50 - 300 mg/kg Method: Expert judgement

Acute inhalation toxicity : Acute toxicity estimate: 0.5 - 1 mg/l

Test atmosphere: dust/mist Method: Expert judgement

Assessment: The component/mixture is toxic after short term

inhalation.

Acute dermal toxicity : Acute toxicity estimate: 306.12 mg/kg

Assessment: The component/mixture is toxic after single

contact with skin.

Acute toxicity estimate: 200 - 1,000 mg/kg

Method: Expert judgement

Skin corrosion/irritation

Components:

pymetrozine (ISO): Species: Rabbit

Result: No skin irritation

methanol:

Result: No skin irritation

Serious eye damage/eye irritation

Components:

pymetrozine (ISO): Species: Rabbit

Result: No eye irritation

methanol:

Result: No eye irritation

Respiratory or skin sensitisation

Components:

pymetrozine (ISO):

Species: Guinea pig

Result: Did not cause sensitisation on laboratory animals.

methanol:

Result: Did not cause sensitisation on laboratory animals.

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Germ cell mutagenicity

Components:

pymetrozine (ISO):

Germ cell mutagenicity-

: Did not show mutagenic or teratogenic effects in animal

Assessment experiments.

methanol:

Germ cell mutagenicity-

Animal testing did not show any mutagenic effects.

Assessment

Carcinogenicity
Components:
pymetrozine (ISO):

Carcinogenicity - : Increased levels of liver tumours were observed at high doses
Assessment in rats and mice. The relevance of these findings to humans is

questionable.

,Limited evidence of carcinogenicity in animal studies

methanol:

Carcinogenicity - : No evidence of carcinogenicity in animal studies.

Assessment

Reproductive toxicity

<u>Components:</u> pymetrozine (ISO):

Reproductive toxicity - : No toxicity to reproduction

Assessment

methanol:

Reproductive toxicity - : No toxicity to reproduction

Assessment

STOT - single exposure

Components:

methanol:

Exposure routes: Ingestion

Assessment: The substance or mixture is classified as specific target organ toxicant, single

exposure, category 1.

Exposure routes: inhalation (gas)

Assessment: The substance or mixture is classified as specific target organ toxicant, single

exposure, category 1.

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12.1 Toxicity

Components: pymetrozine (ISO): Toxicity

to fish

: LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h

Toxicity to daphnia and other: EC50 (Daphnia magna (Water flea)): 87 mg/l

aquatic invertebrates Exposure time: 48 h

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 16.9

mg/l

Exposure time: 96 h

NOEC (Pseudokirchneriella subcapitata (green algae)): 6.28

mg/l

Exposure time: 96 h

Toxicity to microorganisms : EC50 (activated sludge): > 100 mg/l

Exposure time: 3 h

Toxicity to fish (Chronic

toxicity)

NOEC: 11.7 mg/l Exposure time: 90 d

Species: Oncorhynchus mykiss (rainbow trout)

Test Type: Early-life Stage

Toxicity to daphnia and other:

aquatic invertebrates

NOEC: 0.025 mg/l Exposure time: 21 d

(Chronic toxicity)

Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic

toxicity)

12.2 Persistence and degradability

Components:

pymetrozine (ISO):

Biodegradability

: Result: Not readily biodegradable.

Stability in water : Degradation half life: 4.8 - 6.3 d

Remarks: Product is not persistent.

12.3 Bioaccumulative potential

Components: pymetrozine (ISO):

Bioaccumulation

: Remarks: Low bioaccumulation potential.

Partition coefficient: n-

octanol/water

: log Pow: -0.18 (25 °C)



12.4 Mobility in soil

<u>Components:</u> pymetrozine (ISO):

Distribution among : Remarks: Slightly mobile in soils

environmental compartments

Stability in soil : Dissipation time: 7.9 - 30 d Percentage

dissipation: 50 % (DT50) Remarks:

Product is not persistent.

#### 12.5 Results of PBT and vPvB assessment

Product: Assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative

(vPvB) at levels of 0.1% or higher..

Components: pymetrozine (ISO):

Assessment

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very

bioaccumulating (vPvB)..

methanol:

Assessment

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very

Liver and lating ( D. D.)

bioaccumulating (vPvB)..

12.6 Other adverse effects

No data available

#### **SECTION 13: Disposal considerations**

13.1 Waste treatment methods

Product : Where possible recycling is preferred to disposal or

incineration.

It must undergo special treatment, e.g. at suitable disposal

site, to comply with local regulations.

Contaminated packaging : Dispose of as unused product.



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# **SECTION 14: Transport information**

14.1 UN number

ADN : UN 3077
ADR : UN 3077
RID : UN 3077
IMDG : UN 3077
IATA : UN 3077

14.2 UN proper shipping name

ADN : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,

N.O.S.

(PYMETROZINE)

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,

N.O.S.

(PYMETROZINE)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,

N.O.S.

(PYMETROZINE)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,

N.O.S.

(PYMETROZINE)

IATA : Environmentally hazardous substance, solid, n.o.s.

(PYMETROZINE)

14.3 Transport hazard class(es)

ADN : 9
ADR : 9
RID : 9
IMDG : 9
IATA : 9

14.4 Packing group

ADN

Packing group : III
Classification Code : M7
Hazard Identification Number : 90
Labels : 9

ADR

Packing group : III



Classification Code : M7
Hazard Identification Number : 90
Labels : 9
Tunnel restriction code : (-)

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RID

Packing group : III
Classification Code : M7

Hazard Identification Number : 90 Labels : 9

**IMDG** 

Packing group : III Labels : 9

EmS Code : F-A, S-F

IATA (Cargo)

Packing instruction (cargo : 956

aircraft)

Packing instruction (LQ) : Y956
Packing group : III

Labels : Miscellaneous

IATA (Passenger)

Packing instruction : 956

(passenger aircraft)

Packing instruction (LQ) : Y956
Packing group : III

Labels : Miscellaneous

14.5 Environmental hazards

ADN

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

**IMDG** 

Marine pollutant : yes

IATA (Passenger)

Marine pollutant : yes

IATA (Cargo)

Marine pollutant : yes

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable for product as supplied.

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#### **SECTION 15: Regulatory information**

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

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals

: Not applicable

REACH - Candidate List of Substances of Very High: Not applicable Concern for Authorisation (Article 59).

Regulation (EC) No 1005/2009 on substances that

: Not applicable

deplete the ozone layer

Regulation (EC) No 850/2004 on persistent organic

Not applicable

pollutants

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Not applicable

Other regulations:

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

Article 13 Maternity ordinance (SR 822.111.52): Expectant and nursing mothers are only permitted to come into contact with this product during the course of their work if, based on a risk assessment carried out in accordance with Article 63 of Ordinance 1 on the Employment Act (ArGV 1) (SR 822.111), the chemicals in question have been found not to cause any specific harm to mothers or children or if such harm can be ruled out by taking appropriate protective measures.

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

Article 4 para. 4 of the Ordinance on the protection of young people in the workplace (SR 822.115) and Article 1 lit. f of the EAER regulation on hazardous work and young people (SR 822.115.2): Young people undergoing basic vocational training may only work with this product if the relevant training ordinance makes provision for them to do so with a view to enabling them to achieve their training objectives and if the preconditions for the training plan have been met and the applicable age restrictions have been complied with. Young people who are not completing any basic vocational training are not permitted to work with this product.

Employees of either sex who are under 18 years old are classed as young people.

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.



# **SECTION 16: Other information**

Full text of H-Statements

: Highly flammable liquid and vapour. H225

H301 : Toxic if swallowed.

H311 : Toxic in contact with skin.

H331 : Toxic if inhaled.

H351 : Suspected of causing cancer. H370 : Causes damage to organs.

H412 : Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity

Aquatic Chronic : Chronic aquatic toxicity : Carcinogenicity Carc. Flam. Lig. : Flammable liquids

STOT SE : Specific target organ toxicity - single exposure 2006/15/EC : Europe. Indicative occupational exposure limit values

CH BAT Switzerland. List of BAT-values

CH SUVA : Switzerland. Limit values at the work place

2006/15/EC / TWA Limit Value - eight hours CH SUVA / TWA Time Weighted Average CH SUVA / STEL Short Term Exposure Limit

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA -European Chemicals Agency; EC-Number - European Community number; 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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL -No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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: RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self- Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent



# MATERIAL SAFETY DATA SHEET SPECTRUM ETHERS PRIVATE LTD

Preparation Date 12.01.2022

and Very Bioaccumulative Further information

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.