according to Regulation (EC) No. 1907/2006



# **TUBASSIST FIX 104 W**

Version Revision Date: Date of last issue: 17.07.2020 20.07.2020 Date of first issue: 18.12.2012 4.4

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

1.1 Product identifier

Trade name : TUBASSIST FIX 104 W

REACH Registration Number : 01-2119963929-15

: Reaction mass of 2-ethyl-2-[[3-(2-methylaziridin-1-Substance name

yl)propionyl]methyl]propane-1,3-diyl bis(2-methylaziridine-1-

propionate) and 2,2-bis({[3-(2-methylaziridin-1-

yl)propanoyl]oxy}methyl)butyl 3-[2,2-bis({[3-(2-methylaziridin-

1-yl)propanoyl]oxy}methyl)butoxy]propanoate

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

Use of the Sub-: Raw material for textile auxiliaries

stance/Mixture Leather auxiliary

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier

CHT Germany GmbH CHT Switzerland AG Bismarckstraße 102 Kriessernstrasse 20 72072 Tübingen 9462 Montlingen

Switzerland Germany

Tel.: +49 7071 154 0 Tel.: +41 71 763 88 11 info.switzerland@cht.com info@cht.com

**Importer** 

**Responsible Department** : CHT Germany GmbH

CHT Switzerland AG **Product Safety** 

sds.germany@cht.com

sds.switzerland@cht.com

1.4 Emergency telephone number

**Emergency telephone** +49 7071 154 0 (Germany, 24 hours)

number +41 71 763 88 11 (Switzerland, 24 hours)

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

#### 2.1 Classification of the substance or mixture

# Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4 H302: Harmful if swallowed.

Serious eye damage, Category 1 H318: Causes serious eye damage.

Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.

Germ cell mutagenicity, Category 2 H341: Suspected of causing genetic defects.

Specific target organ toxicity - repeated

exposure, Category 2

H373: May cause damage to organs through pro-

longed or repeated exposure.

Long-term (chronic) aquatic hazard, Cat-

egory 2

H411: Toxic to aquatic life with long lasting effects.

#### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :









Signal word : Danger

Hazard statements : H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.H318 Causes serious eye damage.

H341 Suspected of causing genetic defects.

H373 May cause damage to organs through prolonged or

repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

# Precautionary statements : Prevention:

P201 Obtain special instructions before use.

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection / for a protection

tion/ face protection.

# Response:

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediate-

ly call a POISON CENTER/ doctor.

P391 Collect spillage.

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#### 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.

# **SECTION 3: Composition/information on ingredients**

#### 3.1 Substances

Substance name : Reaction mass of 2-ethyl-2-[[3-(2-methylaziridin-1-

yl)propionyl]methyl]propane-1,3-diyl bis(2-methylaziridine-1-

propionate) and 2,2-bis({[3-(2-methylaziridin-1-

yl)propanoyl]oxy}methyl)butyl 3-[2,2-bis({[3-(2-methylaziridin-

1-yl)propanoyl]oxy}methyl)butoxy]propanoate

#### Components

Chemical name	CAS-No. EC-No.	Concentration (% w/w)
Reaction mass of 2-ethyl-2- [[3-(2-methylaziridin-1- yl)propionyl]methyl]propane -1,3-diyl bis(2- methylaziridine-1- propionate) and 2,2-bis({[3- (2-methylaziridin-1- yl)propanoyl]oxy}methyl)but yl 3-[2,2-bis({[3-(2- methylaziridin-1- yl)propanoyl]oxy}methyl)but oxy]propanoate	Not Assigned	>= 90 - <= 100

# **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

General advice : Take off all contaminated clothing immediately.

Show this safety data sheet to the doctor in attendance.

If inhaled : Move to fresh air.

If symptoms persist, call a physician.

In case of skin contact : Wash off immediately with soap and plenty of water.

If symptoms persist, call a physician.

In case of eye contact : In case of eye contact, remove contact lens and rinse imme-

diately with plenty of water, also under the eyelids, for at least

15 minutes.

Call a physician immediately.

If swallowed : Rinse mouth with water.

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> Do NOT induce vomiting. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Risks There may be reddening, swelling, overheating and pain on

contact.

4.3 Indication of any immediate medical attention and special treatment needed

**Treatment** : Treat symptomatically.

**SECTION 5: Firefighting measures** 

5.1 Extinguishing media

Suitable extinguishing media Carbon dioxide (CO2)

> Dry powder Foam Water spray

Unsuitable extinguishing

media

High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-

fighting

Hazardous decomposition products formed under fire condi-

tions.

Can be released in case of fire:

Carbon oxides

Nitrogen oxides (NOx)

5.3 Advice for firefighters

for firefighters

Special protective equipment : In the event of fire, wear self-contained breathing apparatus.

Further information In case of fire do not inhale smoke, conflagration gases and

Fire residues and contaminated fire extinguishing water must

be disposed of in accordance with local regulations. Use water spray to cool unopened containers.

**SECTION 6: Accidental release measures** 

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.

Avoid formation of aerosol.

6.2 Environmental precautions

Environmental precautions The product should not be allowed to enter drains, water

courses or the soil.

according to Regulation (EC) No. 1907/2006

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If the product contaminates rivers and lakes or drains inform

respective authorities.

Pay attention to local or official regulations.

# 6.3 Methods and material for containment and cleaning up

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

acid binder, universal binder, sawdust). Clean contaminated surface thoroughly.

Dispose of in accordance with local regulations.

#### 6.4 Reference to other sections

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 : Provide sufficient air exchange and/or exhaust in work rooms.

Avoid formation of aerosol.

Advice on protection against :

fire and explosion

Keep away from heat and sources of ignition.

Keep away from direct sunlight.

Use water spray to cool unopened containers.

Hygiene measures : Avoid contact with skin, eyes and clothing.

Do not breathe vapours, aerosols.

Take off all contaminated clothing immediately.

Handle in accordance with good industrial hygiene and safety

practice.

#### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage

areas and containers

: Do always store in containers which correspond to the original

ones

Keep container tightly closed.

Further information on stor-

age conditions

Store container in a well ventilated position.

Protect from moisture.

Protect from temperatures below + 5 °C. Protect from temperatures over + 25 °C. Keep away from heat and direct sunlight.

Advice on common storage : Do not store together with:

Oxidizing agents Strong bases Strong acids

7.3 Specific end use(s)

Specific use(s) : Consult the technical guidelines for the use of this sub-

stance/mixture.

according to Regulation (EC) No. 1907/2006



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# **SECTION 8: Exposure controls/personal protection**

# 8.1 Control parameters

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Reaction mass of 2-ethyl-2-[[3-(2-methylaziridin-1-yl)propionyl]methyl]pr opane-1,3-diyl bis(2-methylaziridine-1-propionate) and 2,2-bis({[3-(2-methylaziridin-1-yl)propanoyl]oxy}meth yl)butyl 3-[2,2-bis({[3-(2-methylaziridin-1-yl)propanoyl]oxy}meth yl)butoxy]propanoate	Workers	Inhalation	Long-term systemic effects	1,62 mg/m3
	Workers	Inhalation	Acute systemic effects	8,4 mg/m3
	Workers	Inhalation	Long-term local ef- fects	11,1 mg/m3
	Workers	Skin contact	Long-term systemic effects	0,023 mg/kg
	Workers	Skin contact	Acute systemic ef- fects	0,417 mg/cm2
	Consumers	Inhalation	Long-term systemic effects	0,972 mg/m3
	Consumers	Inhalation	Acute systemic effects	5,04 mg/m3
	Consumers	Inhalation	Long-term local ef- fects	6,67 mg/m3
	Consumers	Skin contact	Long-term systemic effects	0,014 mg/kg bw/day
	Consumers	Skin contact	Long-term local ef- fects	0,250 mg/cm2
	Consumers	Ingestion	Long-term systemic effects	0,278 mg/kg bw/day

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

Cubatanaa nama	Environmental Comportment	Value
Substance name	Environmental Compartment	value
Reaction mass of 2-ethyl-2-[[3-	Fresh water	5,5 µg/l
(2-methylaziridin-1-		, 19
yl)propionyl]methyl]propane-1,3-		
diyl bis(2-methylaziridine-1-		
propionate) and 2,2-bis({[3-(2-		
methylaziridin-1-		
yl)propanoyl]oxy}methyl)butyl 3-		
[2,2-bis({[3-(2-methylaziridin-1-		

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yl)propanoyl]oxy}methyl)butoxy]p ropanoate		
	Marine water	0,55 μg/l
	Intermittent use/release	55 μg/l
	STP	10 mg/l
	Fresh water sediment	0,66 mg/kg
	Marine sediment	0,003 mg/kg
	Soil	3,15 µg/kg

#### 8.2 Exposure controls

#### **Engineering measures**

Solids with occupational exposure limits in liquid preparations do not cause an exposure in the workplace, because they are not present in a respirable form. Exposure can occur in the form of aerosols or after drying of the liquid the solids remain, possibly in a finely dispersed form. Provide sufficient air exchange and/or exhaust in work rooms.

#### Personal protective equipment

Eye protection : Goggles (EN 166)

Hand protection

Material : butyl-rubber

Break through time : > 120 min

Glove thickness : >= 0.5 mm

Protective index : Class 4

Remarks : 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.

The obtained break through times according to EN 374 Part III are not measured under normal operating conditions. Therefore a maximum usage time of 50% of the break

through time is recommended.

Skin and body protection : Wear suitable protective clothing (EN 14605).

Respiratory protection : In case the work place is not ventilated sufficiently and during

spray processing, it is necessary to wear respiratory protec-

tive equipment.

filter AX

# **SECTION 9: Physical and chemical properties**

# 9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : light yellow

according to Regulation (EC) No. 1907/2006



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Odour : amine-like

pH : 10,2

Concentration: 10 g/l

Melting point/range : < -20 °C

Boiling point/boiling range : 243 °C

Flash point : 200 °C

Method: closed cup

Evaporation rate : Not applicable

Upper explosion limit / Upper

flammability limit

Not applicable

Lower explosion limit / Lower

flammability limit

Not applicable

Vapour pressure : No data available

Relative vapour density : Not applicable

Density : ca. 1,07 g/cm3 (20 °C)

Method: OECD 109

Solubility(ies)

Water solubility : miscible

Partition coefficient: n-

octanol/water

log Pow: < 3

Ignition temperature : 330 °C (1 013 hPa)

Decomposition temperature : > 110 °C

Viscosity

Viscosity, dynamic : 311 mPa.s (20 °C)

Method: OECD 114

83 mPa.s (40 °C) Method: OECD 114

Oxidizing properties : Not applicable

9.2 Other information

Conductivity : Not determined

Self-ignition : not auto-flammable

according to Regulation (EC) No. 1907/2006

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# **SECTION 10: Stability and reactivity**

#### 10.1 Reactivity

No hazards to be specially mentioned.

#### 10.2 Chemical stability

Stable under recommended storage 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 : Protect from frost, heat and sunlight.

# 10.5 Incompatible materials

Materials to avoid : Strong acids and strong bases

Oxidizing agents

#### 10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

# **SECTION 11: Toxicological information**

#### 11.1 Information on toxicological effects

# **Acute toxicity**

#### **Product:**

Acute oral toxicity : Acute toxicity estimate: > 300 - 2 000 mg/kg

Method: Calculation method

Acute inhalation toxicity : Based on available data, the classification criteria are not met.

Acute dermal toxicity : Based on available data, the classification criteria are not met.

# **Components:**

Reaction mass of 2-ethyl-2-[[3-(2-methylaziridin-1-yl)propionyl]methyl]propane-1,3-diyl bis(2-methylaziridine-1-propionate) and 2,2-bis({[3-(2-methylaziridin-1-yl)propanoyl]oxy}methyl)butoxy]propanoate

:

Acute oral toxicity : LD50 (Rat): > 300 - 2 000 mg/kg

Method: OECD Test Guideline 423

Acute inhalation toxicity : LC50 (Rat): 252 mg/m³

Exposure time: 4 h

Test atmosphere: dust/mist Test substance: Aerosol

It was demonstrated that during intended and foreseen appli-

according to Regulation (EC) No. 1907/2006



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cations, no respirable aerosol is formed.

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

Method: OECD Test Guideline 402

#### Skin corrosion/irritation

#### **Components:**

Reaction mass of 2-ethyl-2-[[3-(2-methylaziridin-1-yl)propionyl]methyl]propane-1,3-diyl bis(2methylaziridine-1-propionate) and 2,2-bis({[3-(2-methylaziridin-1-yl)propanoyl]oxy}methyl)butyl 3-[2,2-bis({[3-(2-methylaziridin-1-yl)propanoyl]oxy}methyl)butoxy]propanoate

**Species** Rabbit

Method **OECD Test Guideline 404** 

Result No skin irritation

# Serious eye damage/eye irritation

#### **Components:**

Reaction mass of 2-ethyl-2-[[3-(2-methylaziridin-1-yl)propionyl]methyl]propane-1,3-diyl bis(2methylaziridine-1-propionate) and 2,2-bis({[3-(2-methylaziridin-1-yl)propanoyl]oxy}methyl)butyl 3-[2,2-bis({[3-(2-methylaziridin-1-yl)propanoyl]oxy}methyl)butoxy]propanoate

**Species** Rabbit

Method **OECD Test Guideline 405** Result Causes serious eye damage.

#### Respiratory or skin sensitisation

#### **Components:**

Reaction mass of 2-ethyl-2-[[3-(2-methylaziridin-1-yl)propionyl]methyl]propane-1,3-diyl bis(2methylaziridine-1-propionate) and 2,2-bis({[3-(2-methylaziridin-1-yl)propanoyl]oxy}methyl)butyl 3-[2,2-bis({[3-(2-methylaziridin-1-yl)propanoyl]oxy}methyl)butoxy]propanoate

Test Type Local lymph node assay (LLNA)

**Species** Mouse

Method OECD Test Guideline 429

Result The product is a skin sensitiser, sub-category 1A.

#### Germ cell mutagenicity

#### Product:

Germ cell mutagenicity- As- : Mutagenic cat. 2

sessment

according to Regulation (EC) No. 1907/2006



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#### **Components:**

Reaction mass of 2-ethyl-2-[[3-(2-methylaziridin-1-yl)propionyl]methyl]propane-1,3-diyl bis(2methylaziridine-1-propionate) and 2,2-bis({[3-(2-methylaziridin-1-yl)propanoyl]oxy}methyl)butyl 3-[2,2-bis({[3-(2-methylaziridin-1-yl)propanoyl]oxy}methyl)butoxy]propanoate

Germ cell mutagenicity- As- : In vitro tests showed mutagenic effects

sessment

# Carcinogenicity

**Product:** 

ment

Carcinogenicity - Assess-

: No data available

Reproductive toxicity

**Product:** 

Reproductive toxicity - As-

sessment

: No data available

STOT - single exposure

**Product:** 

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

STOT - repeated exposure

#### **Components:**

Reaction mass of 2-ethyl-2-[[3-(2-methylaziridin-1-yl)propionyl]methyl]propane-1,3-diyl bis(2methylaziridine-1-propionate) and 2,2-bis({[3-(2-methylaziridin-1-yl)propanoyl]oxy}methyl)butyl 3-[2,2-bis({[3-(2-methylaziridin-1-yl)propanoyl]oxy}methyl)butoxy]propanoate

May cause damage to organs through prolonged or repeated Assessment

exposure.

#### **Aspiration toxicity**

#### **Product:**

No data available

according to Regulation (EC) No. 1907/2006

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# **SECTION 12: Ecological information**

#### 12.1 Toxicity

# **Components:**

Reaction mass of 2-ethyl-2-[[3-(2-methylaziridin-1-yl)propionyl]methyl]propane-1,3-diyl bis(2methylaziridine-1-propionate) and 2,2-bis({[3-(2-methylaziridin-1-yl)propanoyl]oxy}methyl)butyl 3-[2,2-bis({[3-(2-methylaziridin-1-yl)propanoyl]oxy}methyl)butoxy]propanoate

Toxicity to fish LC50 (Fish): > 1 - 10 mg/l

Exposure time: 96 h

aquatic invertebrates

Toxicity to daphnia and other : EC50 (Daphnia (water flea)): > 1 - 10 mg/l

Exposure time: 48 h

Toxicity to algae EC50 (algae): > 1 - 10 mg/l

Exposure time: 72 h

Toxicity to microorganisms (activated sludge): > 1 000 mg/l

Exposure time: 3 h Test Type: static test

#### 12.2 Persistence and degradability

#### **Components:**

Reaction mass of 2-ethyl-2-[[3-(2-methylaziridin-1-yl)propionyl]methyl]propane-1,3-diyl bis(2methylaziridine-1-propionate) and 2,2-bis({[3-(2-methylaziridin-1-yl)propanoyl]oxy}methyl)butyl 3-[2,2-bis({[3-(2-methylaziridin-1-yl)propanoyl]oxy}methyl)butoxy]propanoate

Biodegradability Test Type: O2 measuring

Biodegradation: 16,1 % Exposure time: 28 d

Method: OECD 301 F (mineralisation)

# 12.3 Bioaccumulative potential

**Product:** 

Bioaccumulation : No bioaccumulation is to be expected (log Pow <= 4).

Partition coefficient: n-

octanol/water

: log Pow: < 3

# **Components:**

Reaction mass of 2-ethyl-2-[[3-(2-methylaziridin-1-yl)propionyl]methyl]propane-1,3-diyl bis(2methylaziridine-1-propionate) and 2,2-bis({[3-(2-methylaziridin-1-yl)propanoyl]oxy}methyl)butyl 3-[2,2-bis({[3-(2-methylaziridin-1-yl)propanoyl]oxy}methyl)butoxy]propanoate

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Partition coefficient: n-

octanol/water

log Pow: < 3

12.4 Mobility in soil

**Product:** 

Mobility : No data available

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.

12.6 Other adverse effects

**Product:** 

Adsorbed organic bound

halogens (AOX)

: According to our state of knowledge, the product does not contain organically linked halogens. The product does not

increase the AOX-value of the waste water.

Additional ecological infor-

mation

According to our knowledge, the product does not contain

heavy metals and other compounds of EC directive 2000/60  $\,$ 

EC.

**SECTION 13: Disposal considerations** 

13.1 Waste treatment methods

Product : Pay attention to local or official regulations.

Contaminated packaging : Pay attention to local or official regulations.

**SECTION 14: Transport information** 

14.1 UN number

 ADR
 : UN 3082

 IMDG
 : UN 3082

 IATA
 : UN 3082

14.2 UN proper shipping name

**ADR** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(2-ethyl-2-[[3-(2-methylaziridin-1-yl)propionyl]methyl]propane-

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1,3-diyl b is(2-methylaziridine-1-propionate))

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(2-ethyl-2-[[3-(2-methylaziridin-1-yl)propionyl]methyl]propane-

1,3-diyl bis(2-methylaziridine-1-propionate))

**IATA** : Environmentally hazardous substance, liquid, n.o.s.

(2-ethyl-2-[[3-(2-methylaziridin-1-yl)propionyl]methyl]propane-

1,3-diyl bis(2-methylaziridine-1-propionate))

14.3 Transport hazard class(es)

 ADR
 : 9

 IMDG
 : 9

 IATA
 : 9

14.4 Packing group

**ADR** 

Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9

**IMDG** 

Packing group : III Labels : 9

EmS Code : F-A, S-F

Segregation group : -

IATA (Cargo)

Packing instruction (cargo : 964

aircraft)

Packing instruction (LQ) : Y964
Packing group : III

Labels : Class 9 - Miscellaneous dangerous substances and articles

IATA (Passenger)

Packing instruction (passen- : 964

ger aircraft)

Packing instruction (LQ) : Y964
Packing group : III

Labels : Class 9 - Miscellaneous dangerous substances and articles

14.5 Environmental hazards

**ADR** 

Environmentally hazardous : yes

**IMDG** 

Marine pollutant : yes

IATA (Passenger)

Environmentally hazardous : yes

IATA (Cargo)

Environmentally hazardous : yes

14.6 Special precautions for user

according to Regulation (EC) No. 1907/2006

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Remarks : see chapter 6 - 8

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.

#### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Remarks : Not applicable

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

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

#### Other regulations:

Currently no information available.

#### 15.2 Chemical safety assessment

not required

#### **SECTION 16: Other information**

#### Full text of other abbreviations

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

according to Regulation (EC) No. 1907/2006



# **TUBASSIST FIX 104 W**

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Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

#### **Further information**

Training advice : Based on the information in the safety data sheet and the

workplace conditions, employees must be regularly trained in the safe handling of the product. National rules for training employees in handling hazardous substances must be ob-

served.

Other information : The classification for dangerous physico-chemical properties,

health and environmental hazards has been derived from a combination of computational methods and, if available, test

data.

This data sheet contains changes from the previous version in

section(s):

6 7

11

16

Sources of key data used to compile the Safety Data

Sheet

Information from our suppliers, as well as data from the "Registered substances database" of the European Chemicals Agency (ECHA) has been used to compile this safety data

sheet.

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.

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.