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

1.1. Product identifier

Name of product	Vinyl chloride Art-Nr(n).: 4100, 70410
Name of substance	vinyl chloride
Index No	602-023-00-7
EC No	200-831-0
REACH registration number	01-2119458772-30
CAS No	75-01-4

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

Identified uses

Sector of uses [SU]
SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
SU8 - Manufacture of bulk, large scale chemicals (including petroleum products)

Process categories [PROC]
PROC3 - Use in closed batch process (synthesis or formulation)
PROC15 - Use as laboratory reagent

Environmental release categories [ERC]
ERC6c - Industrial use of monomers for manufacture of thermoplastics

Uses advised against

Remark
Do not use as propellant for aerosols.

Recommended intended purpose(s)
Basic substance.

1.3. Details of the supplier of the safety data sheet

Manufacturer/distributor	GHC Gerling, Holz & Co. Handels GmbH Ruhrstraße 113, D-22761 Hamburg Phone +49 40 853 123-0, Fax +49 40 853 123-66 E-Mail hamburg@ghc.de Internet www.ghc.com
Advice	GHC Gerling, Holz & Co. Handels GmbH Phone +49 40 853 123-0 Fax +49 40 853 123-66 E-mail (competent person): msds@ghc.de

1.4. Emergency telephone number

Emergency advice	Giftinformationszentrum (Poison Control Centre) Mainz Phone +49 6131 19240

! SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

! Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]

Hazard classes and Hazard categories	Hazard Statements	Classification procedure
Flam. Gas 1	**H220**	
Chem. Unst. Gas B	**H231**	
Liquef. Gas	**H280**	
Carc. 1A	**H350**	

! Hazard statements for physical hazards

H220	**Extremely flammable gas.**
H231	**May react explosively even in the absence of air at elevated pressure and/or temperature.**
H280	**Contains gas under pressure; may explode if heated.**

Hazard statements for health hazards

H350	**May cause cancer.**

! Additional hints

Listed substance (Regulation (EC) No 1272/2008, Annex VI, part 3).

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]

GHS02

GHS08

! Signal word

Danger

! Hazard statements for physical hazards

H220	**Extremely flammable gas.**
H231	**May react explosively even in the absence of air at elevated pressure and/or temperature.**
H280	**Contains gas under pressure; may explode if heated.**

Hazard statements for health hazards

H350	**May cause cancer.**

Precautionary Statements

Prevention

P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response

P308 + P313	IF exposed or concerned: Get medical advice/attention.
P377	Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381	Eliminate all ignition sources if safe to do so.

Storage

P403	Store in a well-ventilated place.

Hazardous ingredients for labeling

vinyl chloride

Special rules for supplemental label elements for certain mixtures
Restricted to professional users.

2.3. Other hazards
! **Information pertaining to special dangers for human and environment**
In high concentrations may cause asphyxiation.
Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.
Contact with liquid may cause cold burns/frostbite.

Results of PBT and vPvB assessment
This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

! SECTION 3: Composition/ information on ingredients

3.1. Substances
Description
Content: > 99 %

CAS No 75-01-4 **vinyl chloride**
EC No 200-831-0
Index No 602-023-00-7
REACH registration number 01-2119458772-30

Additional advice
With stabilizer.

3.2. Mixtures
not applicable

! SECTION 4: First aid measures

4.1. Description of first aid measures
General information
Adhere to personal protective measures when giving first aid.
Seek medical advice immediately.

In case of inhalation
Remove the casualty into fresh air and keep him immobile.
In the event of pulmonary irritation treat initially with corticoid spray, e.g. Ventolair- or Pulmicort- metered-dose aerosol (Ventolair and Pulmicort are registrated trademarks).
Seek medical treatment immediately.
In case of respiratory standstill give artifical respiration by respiratory bag (Ambu bag) or respirator. Send for a doctor.

! **In case of skin contact**
In case of contact with skin wash off immediately with plenty of water.
In case of frostbite rinse with plenty of water. Don`t remove clothing.
In case of frostbite spray with lukewarm (not hot) water for at least 15 minutes. Do not remove clothing frozen to the skin. Thaw it with lukewarm water. Apply a sterile dressing. Obtain medical assistance.
Seek medical treatment immediately.

In case of eye contact
Rinse cautiously with water for several minuts. Remove contact lenses, if present and easy to do. Continue rinsing.
Call for a doctor immediately.

In case of ingestion
Ingestion is not considered a potential route of exposure.

4.2. Most important symptoms and effects, both acute and delayed
Physician's information / possible symptoms
Eye defects
Anaesthetic state
Headache

4.3. Indication of any immediate medical attention and special treatment needed
Treatment (Advice to doctor)
Treat symptoms.
Do not give any preparations of the adrenalin-ephedrine group.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media
Foam
Dry powder
Carbon dioxide
Water spray jet

Unsuitable extinguishing media
Full water jet

5.2. Special hazards arising from the substance or mixture
Carbon monoxide (CO)
Hydrogen chloride (HCl)
Phosgene

5.3. Advice for firefighters
Special protective equipment for fire-fighters
Use breathing apparatus with independent air supply (isolated).
Wear full protective clothing.

Additional information
Cool endangered containers with water spray jet.
Exposure to fire may cause containers to rupture / explode.
Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous/explosive re-ignition may occur.
Extinguish any other fire.
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.
Collect contaminated firefighting water separately, must not be discharged into the drains.

! SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
For non-emergency personnel
See section 8.
Evacuate area.
Keep people away and stay on the upwind side.
Keep away sources of ignition.

For emergency responders
Remove persons to safety.
Personal protection by wearing close-fitting protective clothing and breathing apparatus.
Eliminate all ignition sources if safe to do so.

6.2. Environmental precautions
Do not discharge into the drains or bodies of water..
Collect contaminated water / firefighting water separately.
If possible, stop flow of product.
If necessary, secure leaky pressure receptacles in a salvage packaging.
Do not discharge into the subsoil/soil.

6.3. Methods and material for containment and cleaning up
Ensure adequate air ventilation.
Clean contaminated objects and floor thoroughly under consideration of environment regulations.
Dispose of contaminated material in accordance with regulations.

Additional Information
No water on the leaks.

6.4. Reference to other sections
Safe handling: see section 7
Disposal: see section 13
Personal protection equipment: see section 8

! SECTION 7: Handling and storage

7.1. Precautions for safe handling
Advice on safe handling
Use only in thoroughly ventilated areas.
Transfer and handle only in enclosed systems.
Containers' temperature may not be increased above 50 °C.
Do not heat with open flames.
The working pressure in the receptacle must not exceed the saturation vapour pressure of the pure product resulting at a temperature of 50 °C.
Take measures against electrostatically charging.
Barrels and installations thoroughly earthing (grounding).
Use antistatic tools.
Treatment only in suitable rooms and systems.
Provide good room ventilation even at ground level (vapours are heavier than air).
Prevent cylinders from falling over.
Ensure valve protection device is correctly fitted.
Ensure valve outlet cap nut or plug (where provided) is correctly fitted.
Open valve slowly to avoid pressure shock.
Use only properly specified equipment which is suitable for this product, its supply pressure and temperature.
Do not allow backfeed into the container.
Suck back of water into the container must be prevented.
Keep valves and fittings free from oil and grease.
No water to valves, flanges and other fittings.
Purging of pipes and valves with inert gases - to avoid: water, solvents.

General protective measures
Do not inhale gases/vapours/aerosols.

Hygiene measures
At work do not eat, drink, smoke or take drugs.
Wash hands before breaks and after work.

Advice on protection against fire and explosion
The product is combustible.
Because of risk of explosion avoid vapours getting into cellar, sewage system and holes.
Take precautionary measures against static discharges (earthing (grounding) at pouring)
Formation of explosive gas mixtures in air.
Pay attention to general rules of internal fire prevention.
Use explosion-proof equipment / fittings and non-sparking tools.

7.2. Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels
Keep in closed original container.
Ventilate store-rooms thoroughly.
Use transportable pressure equipment.

Suitable materials: Normalised carbon steel, tempered alloy steel, austenitic stainless steels.
Valve: Suitable materials: Brass, copper alloys, carbon steels, austenitic stainless steels.
Other material details see ISO 11114.
All regulations and local requirements for the storage of containers have to be respected.

Advice on storage compatibility
Do not store with spontaneously flammable materials.
Do not store together with combustible liquids or combustible solids.
Do not store together with animal feedstuffs.
Do not store together with explosives.
Do not store together with infectious substances.
Do not store together with radioactive material.
Do not store together with toxic liquids or toxic solids.
Do not store together with food.
Do not store together with oxidizing liquids or oxidizing solids.

Further information on storage conditions
Ensure valve protection device is correctly fitted.
Store closed container at cool and aired place.
Store only in original container at temperature of 50 °C maximum (=122 °F).
Prevent cylinders from falling over.
Protect from heat/overheating.

7.3. Specific end use(s)
! **Recommendation(s) for intended use**
Exposure scenarios (ES) see annex to this safety data sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Ingredients with occupational exposure limits to be monitored

CAS No	Name	Code	[mg/m3]	[ppm]	Remark
75-01-4	vinyl chloride	WEL, 8 hours		3	EH40, 2007, UK
75-01-4	vinyl chloride	8 hours	7,77	3	RL 2004/37/EG

DNEL-/PNEC-values
DNEL worker

CAS No	Substance name	Value	Code	Remark
75-01-4	vinyl chloride	7,8 mg/m3	DNEL long-term inhalative (systemic)	Carcinogenic.

DNEL Consumer

CAS No	Substance name	Value	Code	Remark
75-01-4	vinyl chloride	0,002 mg/m3	DNEL long-term inhalative (systemic)	Carcinogenic.
		0,0014 µg/kg bw/day	DNEL long-term oral (repeated)	Carcinogenic.

PNEC

CAS No	Substance name	Value	Code	Remark
75-01-4	vinyl chloride	0,071 mg/kg dw	PNEC sediment, marine water	

DNEL-/PNEC-values (continued)

CAS No	Substance name	Value	Code	Remark
		0,077 mg/l	PNEC aquatic, freshwater	Assessment factor 1000
		0,77 mg/l	PNEC aquatic, intermittent release	
		43,3 µg/kg	PNEC Secondary Poisoning	Assessment factor 30
		0,103 mg/kg dw	PNEC soil	
		0,008 mg/l	PNEC aquatic, marine water	Assessment factor 10000
		0,4 mg/l	PNEC sewage treatment plant (STP)	Assessment factor 100
		0,708 mg/kg dw	PNEC sediment, freshwater	

8.2. Exposure controls

Respiratory protection
Breathing apparatus in the event of high concentrations.
Keep self contained breathing apparatus readily available for emergency use.
In case of low concentrations in the breathing air: short term: filter apparatus, filter AX.

Hand protection
Leather gloves
Chemical-resistant protective gloves complying with EN 374.
NBR gloves
FKM gloves

Eye protection
Safety goggles complying with EN 166, in case of increased risk add protective face shield

Other protection measures
Safety shoes with steel toe.
Body covering work clothing, or chemical resistant suit at increased risk.

Appropriate engineering controls
Transfer and handle only in enclosed systems.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance
compressed liquified gas

Colour
colourless

Odour
sweetish

Odour threshold
not determined

Important health, safety and environmental information

	Value	Temperature	at	Method	Remark
pH value	not applicable				

	Value	Temperature	at	Method	Remark
boiling point	-13,4 °C		1013 hPa		
melting point	-154 °C				
Flash point	-78 °C			DIN 51755	
Vapourisation rate	not determined				
Flammable (solid)	not applicable				
Flammability (gas)					flammable.
Ignition temperature	472 °C			DIN 51794	
Self ignition temperature	no				
Lower explosion limit	3,8 Vol-%				
Upper explosion limit	29,3 Vol-%				
Vapour pressure	3330 hPa	20 °C			
Relative density	0,911 g/cm3	20 °C		DIN 51757	liquid phase
Vapour density	2,16				air = 1
Solubility in water	2,72 g/l	20 °C			
Solubility/other					soluble in organic solvent
Partition coefficient n-octanol/water (log P O/W)	1,58	22 °C			
Decomposition temperature	not determined				
Viscosity dynamic	0,18 mPa*s	20 °C			liquid phase

Oxidising properties
no

Explosive properties
Explosive

9.2. Other information
Vapours are heavier than air.

! SECTION 10: Stability and reactivity

10.1. Reactivity
See section "Possibility of hazardous reactions".

10.2. Chemical stability
Stable under recommended conditions of use and storage (see section 7).
Risk of polymerisation.

10.3. Possibility of hazardous reactions
Reactions with oxidising agents.
Reactions with oxygen.
Reactions with alkali metals.
Reactions with earth alkali metals.
Reactions with peroxides.
polymerisation

10.4. Conditions to avoid
Heat sources / heat - risk of bursting.
Sources of ignition.

10.5. Incompatible materials
! **Substances to avoid**
Peroxide
Oxygen
Oxidising agent
Hydrogen sulfide
Alkali metals.
Earth alkali metals.
Aluminium / Aluminium alloys.

10.6. Hazardous decomposition products
Carbon monoxide
Hydrogen chloride (HCl)
Phosgene

Thermal decomposition

Remark No decomposition if used as directed.

Additional information
Unstable product may polymerize spontaneously.

! SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity/Irritation/Sensitization

	Value/Validation	Species	Method	Remark
LD50 acute oral	> 4000 mg/kg	rat	OECD	
LC50 acute inhalation	390 mg/l (2 h)	rat		
Skin irritation	not determined			

	Value/Validation	Species	Method	Remark
Eye irritation	not determined			
Skin sensitization	not determined			
Sensitization respiratory system	not determined			

Subacute Toxicity - Carcinogenicity

	Value	Species	Method	Validation
Chronic Toxicity	LOAEC 50 mg/l Inhalation 6 h/d, 5 d/w	Mouse	OECD 452	Target organs: liver, lung (mouse). Increased DNA synthesis in liver (male mouse). Increased incidence of bronchiole-alveolar adenomas.
Mutagenicity			OECD 471 / 474 / 476 / 478	Information on genotoxicity in vivo and in vitro available.
Reproduction-Toxicity	NOAEC 1100 mg/l	Rat	OECD 414 / 416	Indications of toxic effects are available from reproduction studies in animals.
Carcinogenicity	LOAEC ca. 50 mg/l (6 h)	Rat	OECD 453	Indications of carcinogenic effects are available from long-term trials.

! **Specific target organ toxicity (single exposure)**
May cause narcotic effects in low concentrations. Symptoms may include: dizziness, headache, nausea and incoordination.

Aspiration hazard
not applicable

Experiences made from practice
May cause frostbite.
Liver and renal damage is possible.
Gases have a suffocating effect.
Inhalation causes narcotic effect/intoxication.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicological effects

	Value	Species	Method	Validation
Fish	LC50 210 mg/l (96 h)	Danio rerio	OECD 203	

	Value	Species	Method	Validation
Algae	EC0 105 mg/l (48 h)	Anacystis aeruginosa		

12.2. Persistence and degradability

	Elimination rate	Method of analysis	Method	Validation
Biological degradability	16 % (28 d)			not readily degradable
Biological eliminability				Readily eliminable from water

12.3. Bioaccumulative potential
Bioaccumulative potential improbable. BCF (experimental) <= 100.

12.4. Mobility in soil
Because of its high volatility, it is unlikely that the product soil, water caused.
Study not feasible for scientific reasons.

12.5. Results of PBT and vPvB assessment
This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6. Other adverse effects
Not known.

Behaviour in sewage plant
When discharged into biological sewage treatment plants, interference with the degradation activity of activated sludge is possible, depending on the local conditions and concentrations involved.

Additional ecological information

	Value	Method	Remark
AOX	The product contains organically halogen, it can contribute to the adsorbable organic halogen value.		

General regulation
Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste code No.	**Name of waste**
16 05 04*	gases in pressure containers (including halons) containing hazardous substances

Wastes marked with an asterisk are considered to be hazardous waste pursuant to Directive 2008/98/EC on hazardous waste.

Recommendations for the product
Dispose of as hazardous waste.

Recommendations for packaging
Transportable pressure equipment (empty, residual pressure): Return to supplier / manufacturer.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA-DGR
14.1. UN number	1086	1086	1086
14.2. UN proper shipping name	VINYL CHLORIDE, STABILIZED	VINYL CHLORIDE, STABILIZED	Vinyl chloride, stabilized
14.3. Transport hazard class(es)	2.1	2.1	2.1
14.4. Packing group	-	-	-
14.5. Environmental hazards	No	No	No

14.6. Special precautions for user
The protective measures listed in Sections 6, 7 and 8 of the Safety Data Sheet have to be considered.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not applicable
No transport as bulk according IBC - Code.

Land and inland navigation transport ADR/RID
Hazard label(s) 2.1
tunnel restriction code B/D
Classification code 2F

Marine transport IMDG
Ems: F-D, S-U

Air transport ICAO/IATA-DGR
Cargo aircraft only: Package max. 150 kg.

! SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
! **Other regulations (EU)**
Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex XVII No 28 - 30.
Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex XVII No 2.
Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex XVII No 40.
Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances.

VOC standard
VOC content >99 % 20 °C 3330 hPa

15.2. Chemical Safety Assessment
For this substance a chemical safety assessment has been carried out.
Exposure scenarios (ES) see annex to this safety data sheet.

SECTION 16: Other information

Recommended uses and restrictions
National and local regulations concerning chemicals shall be observed.

Further information
All declarations of safety-data-sheet refer to pure substance.
The information contained herein is based on the state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Indication of changes: "!" = Data changed compared with the previous version. Previous version: 7.9

Sources of key data used
For the preparation of this safety data sheet, information from our suppliers as well as data from the "database of registered substances" of the European Chemicals Agency (ECHA) were used.

Annex: Exposure scenarios

ES1	PVC production; industrial

1. Processes and activities covered by this description

This exposure scenario covers the production of PVC using different techniques like suspension polymerization (S-PVC), mass polymerization (M-PVC) or emulsion polymerization (E-PVC). The conditions of this exposure scenario are also applicable for the handling as chemical intermediate in the synthesis of other chemicals under strictly controlled conditions (SCC).

Relevant use descriptors for this scenario:

SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
ERC6c: Industrial use of monomers for manufacture of thermoplastics
PROC3: Use in closed batch process (synthesis or formulation); **PROC15:** Use as laboratory reagent
SU8: Manufacture of bulk, large scale chemicals (including petroleum products)

Concentration of substance in preparation/mixture or article:

The exposure scenario is based on the following ingredients:
Vinyl chloride

Relevant substance concentrations are given in the contributing scenarios. Unless otherwise stated, values in the exposure scenarios are related to the following substances, and not to the complete product.

2. Exposure scenarios

2.1 Contributing scenario controlling environmental exposure:
ERC6c

Concentration of substance in preparation/mixture or article:

<=100% Vinyl chloride

Amounts used:

Annual amount per site ..... : 400000 t/a

Amount per site..... : 1110 t/d

Duration and frequency of use:

Environment..... : 365 days/year

Environment factors not influenced by risk management:

Receiving Surface Water (Flow Rate): 18.000 m³/day
Dilution factor (river)..... : 40
Dilution factor (coastal areas) ..... : 100

Risk management measures related to the environment:

Air ..... : The concentration of the substance in the reaction product has to be reduced as much as possible by appropriate design of the stripping column. The condensate is transferred to a water stripper or other facilities, to recover contained substance.

Water ..... : As far as possible, water flows should be collected in closed collection systems to be processed in the water stripper, in order to remove residual substance.

Conditions and measures related to sewage treatment plant:

STP type ..... : default industrial size WWTP
STP effluent ..... : 2.000 m³/day
Sludge treatment..... : Recovery of sewage sludge is assumed.

Conditions and measures related to external treatment of waste for disposal:

Waste from reactor cleaning containing more than 0.1% of the substance have to be treated as hazardous waste and disposed of accordingly.

Annex: Exposure scenarios

2.2 Contributing scenario controlling worker exposure:
PROC3

Concentration of substance in preparation/mixture or article:

<=100% Vinyl chloride

Physical state during application:

gas

Vapour pressure ..... : 3330 hPa

Amounts used:

Not of relevance.

Duration and frequency of use:

Exposure time ..... : > 4 h

Other given operational conditions affecting worker exposure:

Temperature ..... : Operation is carried out at elevated temperature (> 20℃ above ambient temperature)

Risk management measures related to human health (worker):

Handle substance within a predominantly closed system provided with extract ventilation. Drain down and flush system prior to equipment break-in or maintenance.

Clear transfer lines prior to de-coupling. Drain or remove substance from equipment prior to break.in or maintenance.

Wear a full face respirator conforming to EN140 with Type AX filter or better. In case of long or strong exposure: Wear a self-contained, positive-pressure respirator with full facepiece and an APF of 2000.

2.3 Contributing scenario controlling worker exposure:
PROC15

Concentration of substance in preparation/mixture or article:

<=100% Vinyl chloride

Physical state during application:

gas

Vapour pressure ..... : 3330 hPa

Amounts used:

Not of relevance.

Duration and frequency of use:

Exposure time ..... : > 4 h

Risk management measures related to human health (worker):

Handle substance within a predominantly closed system provided with extract ventilation. Drain down and flush system prior to equipment break-in or maintenance.

Handle in a fume cupboard or under extract ventilation. Sample via closed loop or other system to avoid exposure.

Wear a full face respirator conforming to EN140 with Type AX filter or better. In case of long or strong exposure: Wear a self-contained, positive-pressure respirator with full facepiece and an APF of 2000.

Annex: Exposure scenarios

3. Exposure estimation and reference to its source

DNEL and PNEC values of relevant ingredients are given in section 8 of the main part of this document.
Small numeric values in the scenario may be rounded for technical reasons.
Unless otherwise specified in the scenario, default parameters of the methods and conditions have been used.
For each type of exposure usually only the most critical value is given, without differentiation between, e.g., short term and long term exposure.
For a complete exposure estimation, the values for different routes of exposure and activities may have to be summed up.
RCR = Risk Characterization Ratio

Exposure type	Specific conditions	Level of exposure	RCR	Method
freshwater	-	0,0365 mg/l	0,475	EUSES 2.1.1
marine water	-	0,00365 mg/l	0,475	EUSES 2.1.1
Sediment (freshwater)	-	0,336 mg/l	0,475	EUSES 2.1.1
Sediment (marine water)	-	0,0336 mg/l	0,475	EUSES 2.1.1
Soil	-	0,042 mg/l	0,408	EUSES 2.1.1
sewage treatment plant	-	0,365 mg/l	0,91	EUSES 2.1.1
by inhalation	PROC 3.	2,86 mg/m³	0,37	ECETOC TRA
by inhalation	PROC 15.	2,87 mg/m³	0,37	ECETOC TRA

4. Evaluation guidance to downstream user

no data available .

- End of Safety Data Sheet -