

Safety Data Sheet according to Regulation (EC)

No. 1907/2006 (REACH)

Printed 30.11.2010

Revision 30.11.2010 (GB) Version 7.2

Vinyl chloride

4100



1. Identification of the substance/mixture and of the company/undertaking

Product identifier

Name of product Vinyl chloride
Art-Nr.: 4100
Name of substance Vinyl chloride
Index No 602-023-00-7
EC No 200-831-0
CAS No 75-01-4

Manufacturer/distributor

GHC Gerling, Holz & Co. Handels GmbH
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Advice

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Emergency advice

GHC Gerling, Holz & Co. Handels GmbH
Phone +49 (0) 40 853 123-0

Recommended intended purpose(s)

Basic substance.

2. Hazards identification

Classification according to 67/548/EEC or 1999/45/EC

F+; R12

Carc. Cat. 1; R45

R-phrases

45 May cause cancer.

12 Extremely flammable.

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

Hazard classes and Hazard categories	Hazard Statements	Classification procedure
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Flam. Gas 1	H220	On basis of test data.
Liquef. Gas	H280	
Carc. 1A	H350	

Hazard statements for physical hazards

H220 Extremely flammable gas.

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).

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



GHS02



GHS04



GHS08

Signal word

Danger

Hazard statements for physical hazards

H220 Extremely flammable gas.

H280 Contains gas under pressure; may explode if heated.

Hazard statements for health hazards

H350 May cause cancer.

Precautionary Statements

Prevention

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P281 Use personal protective equipment as required.

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.

P405 Store locked up.

Disposal

P501 Dispose of contents/container to ...

Hazardous ingredients for labeling

Vinyl chloride

Special rules for supplemental label elements for certain mixtures

Restricted to professional users.

Information pertaining to special dangers for human and environment

Contact with liquid may cause cold burns/frostbite.

3. Composition/information on ingredients

CAS No 75-01-4

EC No 200-831-0

Index No 602-023-00-7

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4. First aid measures

General information

Remove contaminated soaked clothing immediately.

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.

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Seek medical treatment immediately.

In case of respiratory standstill give artificial 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. Apply a sterile dressing. Obtain medical assistance.

Seek medical treatment immediately.

In case of eye contact

Rinse cautiously with water for several minutes. 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.

Physician's information / possible symptoms

Eye defects

Anaesthetic state

Headache

Treatment (Advice to doctor)

Treat symptoms.

In the event of pulmonary irritation treat initially with corticoid spray, e.g. Ventolair- or Pulmicort- metered-dose aerosol (Ventolair and Pulmicort are registered trademarks).

Monitor circulation.

5. Firefighting measures

Suitable extinguishing media

Foam

ABC powder

Carbon dioxide

Water spray jet

Extinguishing media which must not be used for safety reasons

Full water jet

Special hazards arising from the substance or mixture

Carbon monoxide (CO)

Hydrogen chloride (HCl)

Phosgene

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.

Only extinguish the fire if the gas flow can be interrupted.

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.

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6. Accidental release measures

Personal precautions

See chapter 8.

Remove persons to safety.

Evacuate area.

Keep people away and stay on the upwind side.

Environmental precautions

Do not discharge into the drains or bodies of water..

Collect contaminated water / firefighting water separately.

If possible, stop flow of product.

Eliminate ignition sources.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Suppress gases/vapours/mists with water spray jet

Do not discharge into the subsoil/soil.

Methods for cleaning up

Ensure adequate air ventilation.

Clean contaminated objects and floor thoroughly under consideration of environment regulations.

Additional Information

Informations for safe handling see chapter 7.

Informations for personal protective equipment see chapter 8.

No water on the leaks.

! 7. Handling and storage

! Advice on safe handling

Use only in thoroughly ventilated areas.

Transfer and handle only in enclosed 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.

No water to valves, flanges and other fittings.

Purging of pipes and valves with inert gases - to avoid: water, solvents.

Advice on protection against fire and explosion

The product is combustible.

Vapours can form an explosive mixture with air.

The vapours of product are heavier than air.

Take precautionary measures against static discharges (earthing (grounding) at pouring)

Do not use sparking tools.

Requirements for storage rooms and vessels

Ventilate store-rooms thoroughly.

Use transportable pressure equipment.

Suitable materials: Normalised steel and carbon steel, tempered steel, stainless steel.

Valve: Suitable materials: Brass, copper alloys, carbon steels, stainless steel.

Advice on storage compatibility

Do not store together with animal feedstuffs.

Do not store together with food.

Do not store together with oxidizing agents.

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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.

8. Exposure controls/personal protection

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

Respiratory protection

Breathing apparatus in the event of high concentrations.

Keep self contained breathing apparatus readily available for emergency use.

Hand protection

Leather gloves

NBR gloves

FKM gloves

Eye protection

safety goggles, in case of increased risk add protective face shield

Skin protection

protective clothing

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.

9. Physical and chemical properties

Form	Colour	Odour
compressed liquified gas	colourless	sweetish

Important health, safety and environmental information

	Value	Temperature	at	Method	Remark
pH value in delivery state	not applicable				
boiling point	-13,4 °C		1013 hPa		
melting point	154 °C				
Flash point	-78 °C			DIN 51755	
Ignition temperature	410 °C			DIN 51794	

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	Value	Temperature	at	Method	Remark
Lower explosion limit	3,6 Vol-%				
Upper explosion limit	33 Vol-%				
Vapour pressure	3330 hPa	20 °C			
Density	0,911 g/cm ³	20 °C		DIN 51757	liquid phase
Rel. vapour density	2,16				air = 1
Solubility in water	2,72 g/l	20 °C			
Partition coefficient (log p_{OW})	1,58	22 °C			
Viscosity dynamic	0,18 mPa*s	20 °C			liquid phase

Additional information

Vapours are heavier than air.

10. Stability and reactivity**Conditions to avoid**

Heat sources / heat - risk of bursting.

Sources of ignition.

Materials to avoid

Reactions with oxidising agents.

Reactions with oxygen.

Reactions with peroxides.

Reactions with numerous chemical compounds.

Hazardous decomposition products

Carbon monoxide

Hydrogen chloride (HCl)

Phosgene

Additional information

Unstable product may polymerize spontaneously.

11. Toxicological information**Acute toxicity/Irritability/Sensitization**

	Value/Validation	Species	Method	Remark
LD50 acute oral	500 mg/kg	rat		
LC50 acute inhalation	390 mg/l (2 h)	rat		
Skin sensitization		not determined		
Sensitization respiratory system		not determined		

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Subacute Toxicity - Carcinogenicity

Value	Species	Method	Validation
Mutagenicity			Information on genotoxicity in vitro available.
Reproduction-Toxicity			Indications of toxic effects are available from reproduction studies in animals.
Carcinogenicity			Indications of carcinogenic effects are available from long-term trials.
Experiences made from practice Liver and renal damage is possible.			
Additional information The product is a substance of Carc. Cat. 1			

12. Ecological information

Data on elimination (persistence and degradability)

Elimination rate	Method of analysis	Method	Validation
Biological eliminability	The product is biodegradable.		

Ecotoxicological effects

Value	Species	Method	Validation
Fish	LC50 210 mg/l (96 h)	Brachidanio rerio	OECD 203
Algae	EC0 105 mg/l (48 h)	Anacystis aeruginosa	

Behaviour in sewage plant

When low concentrations are discharged correctly into adapted biological sewage treatment plants, interference with the degradation activity of activated sludge is not likely.

Additional ecological information

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

General regulation

Do not allow uncontrolled leakage of product into the environment.

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13. Disposal considerations

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

Wastes marked with an asterisk are considered to be hazardous waste pursuant to Directive 91/689/EEC 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.

14. Transport information

Land and inland navigation transport ADR/RID

UN 1086 VINYL CHLORIDE, STABILIZED, 2.1, (B/D), Classification code: 2F

Marine transport IMDG

UN 1086 VINYL CHLORIDE, STABILIZED, 2.1, Marine Pollutant: No

Ems: F-D, S-U

Air transport ICAO/IATA-DGR

UN 1086 Vinyl chloride, stabilized, 2.1

Cargo aircraft only: Package max. 150 kg.

15. Regulatory information

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

16. Other information

Recommend 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.

Wording of the R/H-phrases specified in chapter 3 (not the classification of the mixture!)

R 12 Extremely flammable.

R 45 May cause cancer.

H220 Extremely flammable gas.

H280 Contains gas under pressure; may explode if heated.

H350 May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).