



Report No.: MND220040D\_CN(En)2/2  
Nomination No.: MCHTJ2200189-01

## Safety Data Sheet (SDS)

Product Name: Vinyl Chloride

Report Version: Prepared according to GB/T 17519-2013 and GB/T 16483-2008

Application Company Name: Tianjin Bohua Chemical Development Co.,Ltd.

Application Company Address: South Hongqi Road, East street 6, Nangang Industrial Zone, Tianjin, China

Contract Information: 022-89898105

**24 Hour Emergency Call: 022-89898111**

Report Edit time: 2022/03/7

SGS-CSTC Standards Technical Services(Qingdao) Co.,Ltd

Authorised Signatory  
2022-3-7



The report would be invalid without authorized signature. The report shall not be reproduced except in full, without written approval of the Company. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. Unless otherwise agreed in writing, this document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services(Qingdao) Co., Ltd  
Minerals Service

SGS Center, No.143, Zhuzhou Road, Laoshan District, Qingdao, Shandong, China  
中国·山东·青岛市崂山区株洲路143号通标中心

t(86-0532) 68999367 www.sgs.com.cn  
t(86-0532) 68999367 sgs.china@sgs.com

Member of the SGS Group (SGS SA)

## Safety Data Sheet

## Vinyl Chloride

Version: V2.0.0.1

Report No.: MND220040QD\_CN(En)2/2

Nomination No.: MCHTJ2200189-01

Creation Date: 2022/03/07

Revision Date: 2022/03/07

\*Prepared according to GB/T 17519-2013 and GB/T 16483-2008

## 1 Identification of the chemical and supplier

## Product identifier

Product Name	Vinyl Chloride
CAS No.	75-01-4
EC No.	200-831-0
Molecular Formula	C <sub>2</sub> H <sub>3</sub> Cl

## Recommended use of the product and restrictions on use

Relevant identified uses	Please consult manufacturer.
Uses advised against	Please consult manufacturer.

## Details of the supplier of the Safety Data Sheet

Name of the company	Tianjin Bohua Chemical Development Co.,Ltd.
Address of the company	South Hongqi Road, East street 6, Nangang Industrial Zone, Tianjin, China
Post code	—
Telephone number	022-89898105
Fax number	—
E-mail address	guozhiyi@bcig.cn

## Emergency phone number

Emergency phone number	022-89898111
------------------------	--------------

## 2 Hazard(s) identification

## Emergency overview

Gas. Extremely flammable, risk of explosion. Risk of explosion by shock, friction, fire or other sources of ignition. High pressure, may explode if heated.

## Hazard classification according to GHS

Flammable Gases	Category 1
Chemically Unstable Gases	Type B
Gases Under Pressure	Liquefied gas
Carcinogenicity	Category 1A

**GHS Label elements**

Hazard pictograms	
Signal word	<b>Danger</b>

**Hazard statements**

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
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, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
◆ Response	
P377	Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381	In case of leakage, eliminate all ignition sources.
P308+P313	IF exposed or concerned: Get medical advice/ attention.
◆ Storage	
P403	Store in a well-ventilated place.
P405	Store locked up.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
◆ Disposal	
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard description**

◆ Physical and chemical hazards	
	Extremely flammable gas, risk of explosion. Risk of explosion by shock, friction, fire or other sources of ignition. High pressure, may explode if heated.
◆ Health hazards	
Inhaled	Dizziness. Drowsiness. Headache. Unconsciousness.
Ingestion	Due to physical form of this product, considered an unlikely route of entry in commercial/industrial environments.
Skin Contact	ON CONTACT WITH LIQUID: FROSTBITE.
Eye	Redness. Pain.
◆ Environmental hazards	
	Please refer to 12th chapter of SDS.

### 3 Composition/information on ingredients

#### Substance/mixture

Substance
-----------

Component	CAS No.	EC No.	Concentration (wt, %)
Vinyl Chloride	75-01-4	200-831-0	99.99

### 4 First-aid measures

#### Description of first aid measures

<b>General advice</b>	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
<b>Eye contact</b>	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
<b>Skin contact</b>	ON FROSTBITE: rinse with plenty of water, do NOT remove clothes.
<b>Ingestion</b>	Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.
<b>Inhalation</b>	Fresh air, rest. Refer for medical attention.
<b>Protecting of first-aiders</b>	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

#### Most important symptoms, acute and delayed

- Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

#### Advice for protecting the rescuer

- Remove all sources of ignition and increase ventilation.
- Avoid contact with skin and eyes.
- Avoid inhalation of vapor or mist.
- Use personal protective equipment including respirator.

#### Special note to the doctor

- Treat symptomatically.
- Symptoms may be delayed.

### 5 Fire-fighting measures

#### Extinguishing media

<b>Suitable extinguishing media</b>	Small Fire: Dry chemical or CO <sub>2</sub> ; Large Fire: Water spray or fog.
<b>Unsuitable extinguishing media</b>	Don't use water spray directly in the leak or safety equipment, otherwise may cause icing.

#### Specific hazards arising from the substance or mixture

- Flammable: will be easily ignited by heat, sparks or flames.
- Will form explosive mixtures with air.
- Fire exposed containers may vent contents through pressure relief valves thereby increasing fire intensity and/or vapour concentration.
- Vapours may travel to source of ignition and flash back.

- 5 Development of hazardous combustion gases or vapor possible in the event of fire.
- 6 May expansion or decompose explosively when heated or involved in fire.

### **Fire precautions and protective measures**

- 1 As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
- 2 Fight fire from a safe distance, with adequate cover.
- 3 Prevent fire extinguishing water from contaminating surface water or the ground water system.

## **6 Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

- 1 Avoid breathing vapours and contacting with skin and eye.
- 2 Beware of vapours accumulating to form explosive concentrations.
- 3 Vapours can accumulate in low areas.
- 4 Emergency personnel wear positive pressure self-contained breathing apparatus. Wear protective and anti-static clothing. Wear chemical impermeable gloves.
- 5 Use personal protective equipment, do not breathe gas.
- 6 Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
- 7 Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### **Environmental precautions**

- 1 Prevent further leakage or spillage if safe to do so.
- 2 Discharge into the environment must be avoided.

### **Methods and materials for containment and cleaning up**

- 1 All equipment used in the work should be grounded.
- 2 Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.
- 3 Spray water inhibits vapor or changes the direction of vapor cloud flow.
- 4 Do not allow spills to come into contact with combustible materials such as wood, paper, oil, etc.
- 5 Do not touch or cross spills.
- 6 Isolate the leak area until the gas is exhausted.
- 7 Cut off the source of the leak as much as possible.
- 8 Keep leaks in a ventilated place.
- 9 Do not use water directly to impact spills or sources of leakage.
- 10 Wear a cold suit when the liquefied gas leaks.
- 11 It is recommended that emergency personnel wear a positive pressure self-contained breathing apparatus and wear general work clothes.
- 12 A large number of leaks: The warning zone is delineated according to the area affected by the gas, and the unrelated personnel are evacuated from the crosswind and the upwind to the safe zone.
- 13 Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
- 14 Prevent gas from diffusing through sewers, ventilation systems, and confined spaces.

## **7 Handling and storage**

### **Handling**

- 1 Avoid inhalation of vapors.
- 2 Use only non-sparking tools.
- 3 To prevent fire caused by electrostatic discharge steam, equipment on all metal parts should be grounded.
- 4 Use explosion proof equipment.
- 5 Handling is performed in a well ventilated place.
- 6 Wear suitable protective equipment.
- 7 Avoid contact with skin and eyes.
- 8 Keep away from heat/sparks/open flames/ hot surfaces.

### Storage

- 1 Keep containers tightly closed.
- 2 Keep containers in a dry, cool and well-ventilated place.
- 3 Keep away from heat/sparks/open flames/hot surfaces.
- 4 Store away from incompatible materials and foodstuff containers.

## 8 Exposure controls/personal protection

### Control parameters

- ◆ Occupational Exposure limit values (Chemical Harmful Factors)

Component	Standard	OELs	Standard value mg/m <sup>3</sup>	Critical adverse health effects	Remark
Vinyl Chloride	GBZ 2.1-2019	PC-TWA	10	Lung cancer, liver damage	G1
		PC-STEL	-		
		MAC	-		

- ◆ Biological limit values

**Biological limit values** | No relevant regulations

- ◆ Monitoring methods

- 1 EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
- 2 GBZ/T 300 series standard Determination of toxic substances in workplace air.

### Engineering controls

- 1 Ensure adequate ventilation, especially in confined areas.
- 2 Ensure that eyewash stations and safety showers are close to the workstation location.
- 3 Use explosion-proof electrical/ventilating/lighting/equipment.
- 4 Set up emergency exit and necessary risk-elimination area.

### Personal protection equipment

#### General requirement



**Eye protection** | Must wear appropriate safety goggles.

**Hand protection** | Must wear anti static chemical protective gloves.

<b>Respiratory protection</b>	Appropriate respiratory protective equipment must be worn. When the oxygen concentration is unknown, a self-contained atmosphere-supplying respiratory protective apparatus must be worn.
<b>Skin and body protection</b>	Must wear anti static chemical protective clothing.

## 9 Physical and chemical properties

### Physical and chemical properties

<b>Appearance</b>	Colorless transparent liquefied gas
<b>Odor</b>	No information available
<b>Odor threshold</b>	No information available
<b>pH</b>	Not applicable
<b>Melting point/freezing point(°C)</b>	-154
<b>Initial boiling point and boiling range(°C)</b>	-13
<b>Flash point(Closed cup,°C)</b>	-78
<b>Evaporation rate</b>	Not applicable
<b>Flammability</b>	No information available
<b>Upper/lower explosive limits[%(v/v)]</b>	Upper limit: 33; Lower limit: 3.6
<b>Vapor pressure</b>	343.5kPa
<b>Vapor density(Air = 1)</b>	2.2
<b>Relative density(Water=1)</b>	0.912
<b>Solubility</b>	Insoluble in water
<b>n-octanol/water partition coefficient</b>	0.6
<b>Auto-ignition temperature(°C)</b>	472
<b>Decomposition temperature(°C)</b>	No information available
<b>Viscosity</b>	Not applicable

## 10 Stability and reactivity

### Stability and reactivity

<b>Reactivity</b>	Contact with incompatible substances can cause decomposition or other chemical reactions.
<b>Chemical stability</b>	Stable under proper operation and storage conditions.
<b>Possibility of hazardous reactions</b>	Reactions with metals form metal organic compounds.
<b>Conditions to avoid</b>	Incompatible materials, heat, flame and spark.
<b>Incompatible materials</b>	Metal, oxidantss and alkali.
<b>Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11 Toxicological information

### Acute toxicity

Component	LD <sub>50</sub> (oral)	LD <sub>50</sub> (dermal)	LC <sub>50</sub> (inhalation,4h)
Vinyl Chloride	500mg/kg(Rat)	No information available	No information available

**Carcinogenicity**

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP
Vinyl Chloride	Category 1	Category K

**Others**

	Vinyl Chloride(Component)
Skin corrosion/irritation	Based on available data, the classification criteria are not met
Serious eye damage/irritation	Based on available data, the classification criteria are not met
Skin sensitization	Based on available data, the classification criteria are not met
Respiratory sensitization	Based on available data, the classification criteria are not met
Reproductive toxicity	Based on available data, the classification criteria are not met
STOT-single exposure	Based on available data, the classification criteria are not met
STOT-repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Based on available data, the classification criteria are not met
Reproductive toxicity(additional)	Based on available data, the classification criteria are not met

**12 Ecological information****Acute aquatic toxicity**

Acute aquatic toxicity	No information available
------------------------	--------------------------

**Chronic aquatic toxicity**

Chronic aquatic toxicity	No information available
--------------------------	--------------------------

**Persistence and degradability**

Persistence and degradability	No information available
-------------------------------	--------------------------

**Bioaccumulative potential**

Bioaccumulative potential	No information available
---------------------------	--------------------------

**Mobility in soil**

Mobility in soil	No information available
------------------	--------------------------

**Results of PBT and vPvB assessment**

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
Vinyl Chloride	Not PBT/vPvB

**13 Disposal considerations****Disposal considerations**

Waste chemicals	Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.
Contaminated packaging	Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.

<b>Disposal recommendations</b>	Refer to section waste chemicals and contaminated packaging.
---------------------------------	--

## 14 Transport information

### Label and Mark

<b>Transporting Label</b>	
---------------------------	---



### IMDG-CODE

<b>UN number</b>	1086
<b>UN proper shipping name</b>	VINYL CHLORIDE, STABILIZED
<b>Transport hazard class</b>	2.1
<b>Transport subsidiary hazard class</b>	None
<b>Packing group</b>	Not applicable
<b>Marine pollutant (Yes or no)</b>	No

### IATA-DGR

<b>UN number</b>	1086
<b>UN proper shipping name</b>	VINYL CHLORIDE, STABILIZED
<b>Transport hazard class</b>	2.1
<b>Transport subsidiary hazard class</b>	None
<b>Packing group</b>	Not applicable

### UN-ADR

<b>UN number</b>	1086
<b>UN proper shipping name</b>	VINYL CHLORIDE, STABILIZED
<b>Transport hazard class</b>	2.1
<b>Transport subsidiary hazard class</b>	None
<b>Packing group</b>	Not applicable

### Others

<b>Methods of packing</b>	Steel cylinders and other pressure vessel. Packaging as recommended by manufacturer.
<b>Precautions for transport</b>	Shipment of the goods vehicle exhaust pipe must be equipped with fire retardant devices, prohibit using mechanical equipment and tools of which easy to produce sparks. Strictly prohibited shipping or transportation with oxidants, halogens etc. Height shall not exceed the vehicle fence board, and with a triangular wooden pad cards firmly to prevent rolling. Cylinders generally flat, and the bottles should be in the same direction, should not cross. A safety helmet must be fitted for cylinder transport. Transport vehicles should be equipped with the appropriate variety and quantity of fire equipment and emergency equipment leakage during transport. Before transport, should be preceded by checking whether container integrity, sealing. The transport unit must be placarded and marked in accordance with relevant transporting requirements.

## 15 Regulatory information

### International chemical inventory

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AIIC	ENCS
Vinyl Chloride	√	√	√	√	√	√	√	√	√

[EINECS]	European Inventory of Existing Commercial Chemical Substances
[TSCA]	United States Toxic Substances Control Act Inventory
[DSL]	Canadian Domestic Substances List
[IECSC]	China Inventory of Existing Chemical Substances
[NZIoC]	New Zealand Inventory of Chemicals
[PICCS]	Philippines Inventory of Chemicals and Chemical Substances
[KECI]	Korea Existing Chemicals Inventory
[AIIC]	Australia. Inventory of Industrial Chemicals (AIIC)
[ENCS]	Japan Inventory of Existing & New Chemical Substances

### Chinese chemical inventory

Component	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Vinyl Chloride	√	×	×	√	√	×	×	√	×	√	×	×	×	×	×

- [A] Catalog of Hazardous Chemicals(2015 Edition), Notice 5<sup>th</sup> 2015, the former China State Administration of Work Safety together with the Ministry of Industry and Information Technology, etc.
- [B] List of Toxic Chemicals Restricted in China, Notice 60<sup>th</sup> 2019, the Ministry of Ecology and Environment, Ministry of Commerce, General Administration of Customs.
- [C] List of Ozone Depletion Chemicals Controlled to be Imported/Exported in China (First to Sixth batches) , Notice from 2000 to 2012, the former Ministry of Environmental Protection of PRC.
- [D] Catalog of Hazardous Chemicals for Priority Management (First and Second batches) , Notice 95<sup>th</sup>, 2011, Notice 12<sup>th</sup> 2013, China State Administration of Work Safety.
- [E] Catalog of Hazardous Chemicals for Environmental Management, Notice 33<sup>th</sup> 2014, The former Ministry of Environmental Protection.
- [F] List of Various Monitoring Chemicals, 52<sup>th</sup> 2020, the Ministry of Industry and Information Technology.
- [G] List of Priority Controlled Chemicals (the First batch), 83<sup>th</sup> 2017, the former Ministry of Environmental Protection, Ministry of Industry and Information Technology, the former National Health And Family Planning Commission.
- [H] Catalog of Specially Controlled Hazardous Chemicals (First Edition), 1<sup>st</sup> 2020, the Ministry of Emergency Management, Ministry of Industry and Information Technology, Ministry of Public Security, Ministry of Transport.
- [I] List of Toxic and Harmful Water Pollutants (First batch), 28<sup>th</sup> 2019, the Ministry of Ecology and Environment, National Health Commission.
- [J] Catalog of Highly Toxic Chemicals, Notice 142<sup>th</sup> 2003, the former Ministry of Health of P.R.China.
- [K] Dangerous Chemicals Directory Used to Manufacture Exploder (2017 Edition), Notice 11<sup>th</sup> May. 2017, Ministry of Public Security of P.R.China.
- [L] Catalog of Stupeficient and Psychotropic Substances(2013 Edition), Notice 230<sup>th</sup> 2013, China Food and Drug Administration.
- [M] Catalog of Classification and Varieties of Precursor Chemicals, 120<sup>th</sup> 2017, series of announcements issued by the Ministry of Public Security and other ministries and commissions.
- [N] Catalog of Import and Export Management of Precursor Chemicals, 7<sup>th</sup> 2006, the Ministry of Commerce.
- [O] International Verification of Precursor Chemicals Management Catalog, 8<sup>th</sup> 2006, the Ministry of Commerce, Ministry of Public Security.

Note:

- “√” Indicates that the substance included in the regulations.  
 “×” No data or not included in the regulations.

## 16 Other information

### Information on revision

Creation Date | 2022/03/07

<b>Revision Date</b>	2022/03/07
<b>Reason for revision</b>	-

## Reference

- [1] IPCS: The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>.
- [2] IARC, website: <http://www.iarc.fr/>.
- [3] OECD: The Global Portal to Information on Chemical Substances, website: <https://www.echemportal.org/echemportal/substancesearch/index.action>.
- [4] CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>.
- [5] NLM: ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>.
- [6] EPA: Integrated Risk Information System, website: <http://cfpub.epa.gov/iris/>.
- [7] U.S. Department of Transportation: ERG, website: <http://www.phmsa.dot.gov/hazmat/library/erg>.
- [8] Germany GESTIS-database on hazard substance, website: <http://gestis-en.itrust.de/>.

## Abbreviations and acronyms

CAS	Chemical Abstracts Service	UN	The United Nations
PC-STEL	Short term exposure limit	OECD	Organization for Economic Co-operation and Development
PC-TWA	Time Weighted Average	IMDG	International Maritime Dangerous Goods
MAC	Maximum Allowable Concentration	IARC	International Agency for Research on Cancer
DNEL	Derived No Effect Level	ICAO	International Civil Aviation Organization
PNEC	Predicted No Effect Concentration	IATA	International Air Transportation Association
NOEC	No Observed Effect Concentration	ACGIH	American Conference of Governmental Industrial Hygienists
LC <sub>50</sub>	Lethal Concentration 50%	NFPA	National Fire Protection Association
LD <sub>50</sub>	Lethal Dose 50%	NTP	National Toxicology Program
EC <sub>50</sub>	Effective Concentration 50%	PBT	Persistent, Bioaccumulative, Toxic
EC <sub>x</sub>	Effective Concentration X%	vPvB	very Persistent, very Bioaccumulative
P <sub>OW</sub>	Partition coefficient Octanol: Water	CMR	Carcinogens, mutagens or substances toxic to reproduction
BCF	Bioconcentration factor	RPE	Respiratory Protective Equipment
ED	Endocrine disruptor		

## Disclaimer

This Safety Data Sheet (SDS) was prepared according to GB/T 16483 and GB/T 17519. The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.