

# Design Report of Safety Data Sheet

Report No. :HGNM21HN48

Issue date:2022.01.14

<b>Product Name:</b>	Butyl Acrylate
<b>Applicant:</b>	Taixing Jinjiang Chemical Industry Co., Ltd
<b>Supplier:</b>	Taixing Jinjiang Chemical Industry Co., Ltd
<b>Composition of the product:</b>	Butyl acrylate : $\geq 99.5\%$ ; Water : $\leq 0.5\%$ .
<b>Warranty of Design:</b>	GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS) Nine revised edition

**Design Result of SDS please see next page.**

Designer:

Auditor:

Approver:

常州合規思遠產品安全技術服務有限公司

Changzhou Hegui Siyuan Products Safety Technology Service Co., Ltd.

報告專用章

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2. Information from applicant is the key of this report, our company will not respond for the wrong of applicant.
3. If there is any change in the chemical information submitted by the client, this report will automatically become invalid.
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## Safety Data Sheet

# Butyl Acrylate

Version: V2.0.0.1

Report No.: HGNM21HN48

Creation Date: 2022/01/14

Revision Date: 2022/01/14

\*Prepared according to UN GHS (the 9th revised edition)

## 1 Identification

### Product identifier

Product Name	Butyl Acrylate
CAS No.	141-32-2
EC No.	205-480-7
Molecular Formula	C <sub>7</sub> H <sub>12</sub> O <sub>2</sub>

### 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

Applicant Name	Taixing Jinjiang Chemical Industry Co., Ltd
Applicant Address	No.16 Tongjiang Road, Economy Developing Area, Taixing City, Jiangsu Province, China
Applicant Post Code	225400
Applicant Telephone	0523-87672959
Applicant Fax	0523-87671768
Applicant E-mail	j1yj01@Yipschemical.com
Supplier Name	Taixing Jinjiang Chemical Industry Co., Ltd
Supplier Address	No.16 Tongjiang Road, Economy Developing Area, Taixing City, Jiangsu Province, China
Supplier Post Code	225400
Supplier Telephone	0523-87672959
Supplier Fax	0523-87671768
Supplier E-mail	j1yj01@Yipschemical.com



### Emergency phone number

Emergency phone number	0523-87676197
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## 2 Hazard(s) identification

### Hazard classification according to GHS

Flammable Liquids	Category 3
Skin Corrosion/Irritation	Category 2
Sensitization – Skin	Category 1
Serious Eye Damage/Irritation	Category 2
Specific Target Organ Toxicity	Category 3

(Single Exposure)	
<b>GHS Label elements</b>	
Hazard pictograms	 
Signal word	<b>Warning</b>

**Hazard statements**

H226	Flammable liquid and vapour
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H335	May cause respiratory irritation

**Precautionary statements**

## ◆ Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting] equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing gas/mist/vapour/spray.
P264	Wash hands and other parts of the body (if related) thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P264+P265	Wash hands and other parts of the body (if related) thoroughly after handling. Do not touch eyes.

## ◆ Response

P319	Get medical help if you feel unwell.
P321	Specific treatment (see related instructions on this label).
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P332+P317	If skin irritation occurs: Get medical help.
P333+P317	If skin irritation or rash occurs: Get medical help.
P337+P317	If eye irritation persists: Get medical help.
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use appropriate extinguishing media mentioned in Section 5 of the SDS to extinguish.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

## ◆ Storage

<b>P405</b>	Store locked up.
<b>P403+P233</b>	Store in a well-ventilated place. Keep container tightly closed.
<b>P403+P235</b>	Store in a well-ventilated place. Keep cool.

## ◆ Disposal

<b>P501</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
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## | Hazard description

## ◆ Physical and chemical hazards

	Flammable liquids, its vapor and air mixture can form explosive mixture.
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## ◆ Health hazards

<b>Inhaled</b>	Burning sensation. Cough. Shortness of breath. Sore throat.
<b>Ingestion</b>	Abdominal pain. Nausea. Vomiting. Diarrhoea.
<b>Skin Contact</b>	Redness. Pain.
<b>Eye</b>	Redness. Pain.

## ◆ Environmental hazards

	Please refer to 12th chapter of SDS.
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## 3 Composition/information on ingredients

## | Substance/mixture

	Mixture
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Component	CAS No.	EC No.	Concentration (wt, %)
<b>Butyl acrylate</b>	141-32-2	205-480-7	≥ 99.5
<b>Water</b>	7732-18-5	231-791-2	≤ 0.5

This product contains a very small amount of stabilizer: hydroquinone monomethyl ether

## 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>	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
<b>Ingestion</b>	Rinse mouth. Do NOT induce vomiting. Give one or two glasses of water to drink. Refer for medical attention.
<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/effects, acute and delayed

1	Substance accumulation, in the human body, may occur and may cause some concern following repeated or
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	long-term occupational exposure.
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### Indication of any immediate medical attention and special treatment needed

1	Treat symptomatically.
2	Symptoms may be delayed.

## 5 Fire-fighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	Small Fire: Dry chemical, CO <sub>2</sub> , water spray or alcohol-resistant foam; Large Fire: Water spray, fog or alcohol-resistant foam.
<b>Unsuitable extinguishing media</b>	Do not use a solid water stream as it may scatter or spread fire.

### Specific hazards arising from the substance or mixture

1	Will form explosive mixtures with air.
2	Fire exposed containers may vent contents through pressure relief valves thereby increasing fire intensity and/or vapour concentration.
3	Vapours may travel to source of ignition and flash back.
4	Liquid and vapour are flammable.
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.

### Special protective equipment and precautions for fire-fighters

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/mist/vapour/spray.
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	It is recommended that emergency personnel wear positive pressure self-contained breathing apparatus and wear anti-static clothing.
2	In case of small amount of spillage, use clean non sparking tools to collect absorption materials.

3	In case of large amount of spillage, construct cofferdam or dig a hole to collect the spillage. Use foam cover to reduce evaporation. Water spray mist can reduce evaporation, but can not reduce the flammability of the leakage in the restricted space.
4	Collect absorbent material using a clean, non-sparking tool.
5	Cover with anti-solvent foam to reduce evaporation.
6	Cover with DRY earth, DRY sand or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.
7	Water spray reduces evaporation but does not reduce the flammability of spills in confined spaces.
8	Cut off the source of the leak as much as possible.
9	Keep leaks in a ventilated place.
10	Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding.
11	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.
12	Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container.
13	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

## 7 Handling and storage

### Precautions for safe 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.

### Conditions for safe storage, including any incompatibilities

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

Component	Country/Region	Limit value - Eight hours		Limit value - Short term	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Butyl acrylate	USA - NIOSH	10	55	-	-
	South Korea	2	11	10	55
	Ireland	2	11	10	53
	Germany (AGS)	2	11	4	22
	Denmark	2	11	4	22

	Australia	1	5	5	26
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◆ Biological limit values

<b>Biological limit values</b>	No relevant regulations
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◆ 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 300.1~GBZ/T 300.160-2017; GBZ/T 300.161~GBZ/T 300.164-2018 Determination of toxic substances in workplace air (Series standard).

### 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

<b>General requirement</b>	
<b>Eye protection</b>	Must wear appropriate safety goggles.
<b>Hand protection</b>	Must wear anti static chemical protective gloves.
<b>Respiratory protection</b>	Must wear appropriate personal respiratory protective equipment.
<b>Skin and body protection</b>	Must wear anti static chemical protective clothing and anti static shoes.

## 9 Physical and chemical properties and safety characteristics

### Physical and chemical properties

<b>Physical state</b>	Liquid
<b>Colour</b>	Colorless
<b>Odor</b>	No information available
<b>Odor threshold</b>	No information available
<b>pH</b>	No information available
<b>Melting point/freezing point(°C)</b>	-64
<b>Initial boiling point and boiling range(°C)</b>	145~149
<b>Flash point(Closed cup,°C)</b>	36
<b>Evaporation rate</b>	No information available
<b>Flammability</b>	Flammable
<b>Upper/lower explosive limits[%(v/v)]</b>	Upper limit: 9.9; Lower limit: 1.3
<b>Vapor pressure</b>	0.43kPa (20°C)
<b>Relative vapour density(Air = 1)</b>	4.42
<b>Relative density(Water=1)</b>	0.90
<b>Solubility</b>	Insoluble in water
<b>n-octanol/water partition</b>	2.38



coefficient	
Auto-ignition temperature(°C)	267
Decomposition temperature(°C)	No information available
Kinematic viscosity	No information available
Particle characteristics	Not applicable

## 10 Stability and reactivity

### | Stability and reactivity

Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
Chemical stability	Stable under proper operation and storage conditions.
Possibility of hazardous reactions	In contact with inorganic acids and organic peroxides causes a severe polymerization. In contact with active metals (alkali metals, Na, Ca etc.) causes a reaction and release hydrogen.
Conditions to avoid	Incompatible materials, heat, flame and spark.
Incompatible materials	Inorganic acids, alkali and organic peroxides. Alkali, sodium, calcium, and other active metal, halogen, metal oxide, nonmetal oxide, acyl halide and metal phosphide.
Hazardous decomposition products	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)
Butyl acrylate	900mg/kg(Rat)	No information available	14.311mg/L(Rat)

### | Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP
Butyl acrylate	Category 3	Not Listed
Water	Not Listed	Not Listed

### | Others

Butyl Acrylate	
Skin corrosion/irritation	Causes skin irritation(Category 2)
Serious eye damage/irritation	Causes serious eye irritation(Category 2)
Skin sensitization	May cause an allergic skin reaction(Category 1)
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	May cause respiratory irritation(Category 3)
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	Based on available data, the classification criteria are not met

toxicity(additional)

## 12 Ecological information

### | Acute aquatic toxicity

Component	Fish	Crustaceans	Algae
Butyl acrylate	LC <sub>50</sub> : 2.4mg/L (96h)(Fish)	EC <sub>50</sub> : 5.2mg/L (48h)(Crustaceans)	ErC <sub>50</sub> : 1.7mg/L (72h)(Algae)

### | Chronic aquatic toxicity

Component	Fish	Crustaceans	Algae
Butyl acrylate	No information available	NOEC: 1.0mg/L(Crustaceans)	NOEC: 0.077mg/L(Algae)

### | Persistence and degradability

Component	Persistence (water/soil)	Persistence (air)
Water	Low	Low

### | Bioaccumulative potential

Component	Bioaccumulative potential	Comments
Water	Low	Log Kow=-1.38

### | Mobility in soil

Component	Mobility in soil	Soil Organic Carbon-Water Partitioning Coefficient (K <sub>oc</sub> )
Water	Low	14.3

### | Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
Butyl acrylate	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.
Disposal recommendations	Refer to section waste chemicals and contaminated packaging.

## 14 Transport information

### | Label and Mark

Transporting Label	
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### IMDG-CODE

UN number	2348
UN proper shipping name	BUTYL ACRYLATES,STABILIZED
Transport hazard class	3
Transport subsidiary hazard class	None
Packing group	III
Special provisions	-
Limited quantities	5L
Excepted quantities	E1
Marine pollutant (Yes or no)	No
EmS No.	F-E,S-D

### IATA-DGR

UN number	2348
UN proper shipping name	BUTYL ACRYLATES,STABILIZED
Transport hazard class	3
Transport subsidiary hazard class	None
Packing group	III
Excepted quantities	E1
Passenger and Cargo Aircraft Limited Quantity Packing Instructions	Y344
Passenger and Cargo Aircraft Limited Quantity Maximum net Quantity per Package	10 L
Passenger and Cargo Aircraft Packing Instructions	355
Passenger and Cargo Aircraft Maximum net Quantity per Package	60 L
Cargo Aircraft Packing Instructions	366
Cargo Aircraft Maximum net Quantity per Package	220 L
Special provisions	-
ERG code	3L

### UN-ADR

UN number	2348
UN proper shipping name	BUTYL ACRYLATES,STABILIZED
Transport hazard class	3

Transport subsidiary hazard class	None
Packing group	III
Special provisions	-
Limited quantities	5 L
Excepted quantities	E1
Packing instructions	P001 IBC03 LP01 R001
Special packing provisions	-
Mixed packing provisions	MP19
Portable tanks and bulk containers instructions	T2
Portable tanks and bulk containers special provisions	TP1
ADR tank code	LGBF
ADR tank special provisions	-
Vehicle for tank carriage	FL
Transport category(Tunnel restriction code)	3 (D/E)
Special provisions for carriage(Packages)	V12
Special provisions for carriage (Bulk)	-
Special provisions for carriage (Loading, unloading and handling)	-
Special provisions for carriage (Operation)	S2
Hazard identification No.	39
Notes	-

## 15 Regulatory information

### International chemical inventory

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AIIC	ENCS
Butyl acrylate	√	√	√	√	√	√	√	√	√
Water	√	√	√	√	√	√	√	√	√

[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

Note:

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

## 16 Other information

### Information on revision

Creation Date	2022/01/14
Revision Date	2022/01/14
Reason for revision	-

### 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 UN GHS (the 9th revised edition). 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.