

正本/ORIGINAL

Design Report of Safety Data Sheet

★Product Name:	CIS-BUTENEDIOIC ANHYDUIDE
★Applicant:	Puyang Shengtongjuyuan New Material Co., Ltd.
Supplier:	Puyang Shengtongjuyuan New Material Co., Ltd.
★Composition of the product:	CIS-BUTENEDIOIC ANHYDUIDE(CAS: 108-31-6): ≥ 99.5%
Warranty of Design:	Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Tenth revised edition
★Information materials:	HGBZ25046F4《Application》、P141021《Declaration of consistency of components of the sample submitted for inspection》
Design Result of SDS please see next page. Designer: 王柳柳 Auditor: 江帆 Approver: 戎霄 常州合规思远产品安全技术服务有限公司 Changzhou Hegui Siyuan Products Safety Technology Service Co., Ltd. 检验检测专用章	

Notes: This SDS is valid before the implementation of the eleventh revised edition GHS.



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Safety Data Sheet

CIS-BUTENEDIOIC ANHYDUIDE

Version : V2.0.1.1

Report No. : HGBZ25046F42

Creation Date : 2025/04/09

Revision Date : -



*According to GHS (Tenth Revised Edition)

1 Identification

Product identifier

Product Name	CIS-BUTENEDIOIC ANHYDUIDE
CAS No.	108-31-6
EC No.	203-571-6
Molecular Formula	

Recommended use of the product and restrictions on use

Relevant identified uses	Manufacturing polymers, copolymers, also used in synthetic resins, coatings, pesticides, medicine, food and lubrication additives.
Uses advised against	Please consult manufacturer.

Details of the supplier

Applicant Name	Puyang Shengtongjuyuan New Material Co., Ltd.
Applicant Address	Puwang Industrial Park, Fanxian Industrial Cluster, Puyang City, Henan Province
Applicant Post Code	457500
Applicant Telephone	0393-5331070
Applicant Fax	0393-5331070
Applicant E-mail	stjytw@163.com
Supplier Name	Puyang Shengtongjuyuan New Material Co., Ltd.
Supplier Address	Puwang Industrial Park, Fanxian Industrial Cluster, Puyang City, Henan Province
Supplier Post Code	457500
Supplier Telephone	0393-5331070
Supplier Fax	0393-5331070
Supplier E-mail	stjytw@163.com

Emergency phone number

Emergency phone number	0393-5331070
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2 Hazard(s) identification

Hazard classification according to GHS

Acute Toxicity – Oral	Category 4
Acute Toxicity – Dermal	Category 5
Skin Corrosion/Irritation	Category 1
Sensitization – Skin	Category 1
Serious Eye Damage/Irritation	Category 1
Sensitization – Respiratory	Category 1

Specific Target Organ Toxicity (Single Exposure)	Category 1
Specific Target Organ Toxicity (Single Exposure)	Category 2
Specific Target Organ Toxicity (Repeated Exposure)	Category 1
Specific Target Organ Toxicity (Repeated Exposure)	Category 2
Hazardous To The Aquatic Environment – Short-Term (Acute) Hazard	Category 3



GHS Label elements

Hazard pictograms	
Signal word	Danger

Hazard statements

H302	Harmful if swallowed
H313	May be harmful in contact with skin
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H370	Causes damage to organs
H371	May cause damage to organs
H372	Causes damage to organs through prolonged or repeated exposure (inhalation, respiratory system)
H373	May cause damage to organs through prolonged or repeated exposure
H402	Harmful to aquatic life

Precautionary statements

◆ Prevention

P233	Keep container tightly closed.
P260	Do not breathe dust/fume.
P264	Wash hands and other parts of the body (if related) thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or with adequate ventilation.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P284	In case of inadequate ventilation wear respiratory protection.
P264+P265	Wash hands and other parts of the body (if related) thoroughly after handling. Do not touch eyes.

◆ Response

P316	Get emergency medical help immediately.
P317	Get medical help.
P319	Get medical help if you feel unwell.
P321	Specific treatment (see related instructions on the label)
P330	Rinse mouth.
P363	Wash contaminated clothing before reuse.
P301+P317	IF SWALLOWED: Get medical help.
P302+P317	IF ON SKIN: Get medical help.
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P316	If exposed or concerned: Get emergency medical help immediately.
P333+P317	If skin irritation or rash occurs: Get medical help.
P342+P316	If experiencing respiratory symptoms: Get emergency medical help immediately.
P362+P364	Take off contaminated clothing and wash it before reuse.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P361+P354	IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.
P305+P354+P338	IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

◆ Storage

P403	Store in a well-ventilated place.
P405	Store locked up.

◆ Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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Hazard description

◆ Physical and chemical hazards

	No information available
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◆ Health hazards

Inhaled	Sore throat. Cough. Burning sensation. Shortness of breath.
Ingestion	Abdominal pain. Burning sensation.
Skin Contact	Redness. Pain.
Eye	Redness. Pain.

◆ Environmental hazards

	This product is harmful to aquatic life. Please refer to 12th chapter of SDS.
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3 Composition/information on ingredients

Substance/mixture

	Substance
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Component	CAS No.	EC No.	Concentration (weight percent, %)
CIS-BUTENEDIOIC ANHYDUIDE	108-31-6	203-571-6	≥ 99.5

4 First-aid measures

Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
Eye contact	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Skin contact	First rinse with plenty of water, then remove contaminated clothes and rinse again.
Ingestion	Rinse mouth. Do NOT induce vomiting. Give plenty of water to drink. Refer for medical attention.
Inhalation	Fresh air , rest. Half-upright position. Refer for medical attention.
Protecting of first-aiders	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 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

Suitable extinguishing media	Small fire: CO ₂ , dry chemical, dry sand, alcohol-resistant foam; Large fire: water spray, fog or alcohol-resistant foam; Fire involving tanks, rail tank cars or highway tanks: Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Do not get water inside containers.
Unsuitable extinguishing media	Large fire: avoid aiming straight or solid streams directly onto the product.

Specific hazards arising from the substance or mixture

1	Fire may produce irritating, poisonous or corrosive gases.
2	Development of hazardous combustion gases or vapor possible in the event of fire.
3	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	Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.
2	Do not touch or walk through spilled material.
3	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

4	Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
5	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
6	Use personal protective equipment, do not breathe dust/fume.



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	Isolation of contaminated areas and restrictions on access.
2	It is recommended that emergency personnel wear dust masks and wear anti-corrosion clothing.
3	Do not touch broken containers and spills before putting on appropriate protective clothing.
4	Cover the spill with a plastic sheet to reduce scattering.
5	Cut off the source of the leak as much as possible.
6	Keep leaks in a ventilated place.
7	It is recommended that emergency personnel wear dust masks.
8	Collect the spill with a clean shovel and place it in a clean, dry, loosely closed container and move the container away from the leak.
9	Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

7 Handling and storage

Precautions for safe handling

1	Handling is performed in a well ventilated place.
2	Wear suitable protective equipment.
3	Avoid contact with skin and eyes.
4	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 ³	ppm	mg/m ³
CIS-BUTENEDIOIC ANHYDUIDE	Australia	0.25	1	-	-
	Canada - Ontario	-	0.01	-	-
	Canada - Québec	-	0.01	-	-
	France	-	-	-	1
	Germany (AGS)	0.02	0.081	0.02	0.081

	Germany (DFG)	0.02	0.081	0.02	0.081
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◆ Biological limit values

Biological limit values	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 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 anti-corrosion goggles.
Hand protection	Must wear acid and alkali resistant chemical protective gloves.
Respiratory protection	Must wear appropriate personal respiratory protective equipment.
Skin and body protection	Must wear acid and alkali resistant chemical protective clothing.

9 Physical and chemical properties

Physical and chemical properties

Physical state	Transparent solid
Colour	White
Odor	No information available
Odor threshold	No information available
pH	No information available
Melting point/freezing point(°C)	52.5
Initial boiling point and boiling range(°C)	202
Flash point(Closed cup,°C)	102
Evaporation rate	Not applicable
Flammability	No information available
Upper/lower explosive limits[% (v/v)]	Upper limit : No information available ; Lower limit : No information available
Vapor pressure	Not applicable
Relative vapour density(Air = 1)	3.4
Relative density(Water=1)	1.29
Solubility	Soluble in water, acetone, benzene, chloroform and other organic solvents
n-octanol/water partition coefficient	No information available

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



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	No information available.
Conditions to avoid	Incompatible materials, heat, flame and spark.
Incompatible materials	Alkaline metals, alkaline earth metals, ammonia, ammonium ion, methylamine, dimethylamine, trimethylamine, lower aliphatic amines, pyridine or quinoline, alcohols and oxidants.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 Toxicological information

Acute toxicity

Component	LD ₅₀ (oral)	LD ₅₀ (dermal)	LC ₅₀ (inhalation,4h)
CIS-BUTENEDIOIC ANHYDUIDE	400mg/kg(Rat)	2620mg/kg(Rabbit)	No information available

Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP
CIS-BUTENEDIOIC ANHYDUIDE	Not Listed	Not Listed

Others

CIS-BUTENEDIOIC ANHYDUIDE(Component)	
Skin corrosion/irritation	Causes severe skin burns and eye damage(Category 1)
Serious eye damage/irritation	Causes serious eye damage(Category 1)
Skin sensitization	May cause an allergic skin reaction(Category 1)
Respiratory sensitization	May cause allergy or asthma symptoms or breathing difficulties if inhaled(Category 1)
Reproductive toxicity	Based on available data, the classification criteria are not met
STOT-single exposure	Causes damage to organs(Category 1)
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure(inhalation,respiratory system)(Category 1)
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

12 Ecological information

Acute aquatic toxicity

Component	Fish	Crustaceans	Algae
CIS-BUTENEDIOIC ANHYDUIDE	LC ₅₀ : 75mg/L (96h)(Fresh water fish)	EC ₅₀ : 37.9mg/L (48h)(Daphnia magna)	EC ₅₀ : 65.78mg/L (72h)(Freshwater algae)

Chronic aquatic toxicity

Chronic aquatic toxicity	No information available
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Persistence and degradability

Persistence and degradability	No information available
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Bioaccumulative potential

Bioaccumulative potential	No information available
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Mobility in soil

Mobility in soil	No information available
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Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
CIS-BUTENEDIOIC ANHYDUIDE	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**

Transporting Label	
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IMDG-CODE

UN number	2215
UN proper shipping name	MALEIC ANHYDRIDE
Transport hazard class	8
Transport subsidiary hazard class	None
Packing group	III
Marine pollutant (Yes or no)	No



ICAO/IATA-DGR

UN number	2215
UN proper shipping name	MALEIC ANHYDRIDE
Transport hazard class	8
Transport subsidiary hazard class	None
Packing group	III

UN-ADR

UN number	2215
UN proper shipping name	MALEIC ANHYDRIDE
Transport hazard class	8
Transport subsidiary hazard class	None
Packing group	III

Special precautions for user

	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.
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Transport in bulk according to IMO instruments

- ◆ Transport in bulk according to Annex II of MARPOL and the IBC code

	No information available
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- ◆ Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

	No information available
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- ◆ Transport in bulk in accordance with the IGC Code

	No information available
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15 Regulatory information

International chemical inventory

Component	EC inventory	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AIICS	ENCS
CIS-BUTENEDIOIC ANHYDUIDE	√	√	√	√	√	√	√	√	√

[EC inventory]	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
[AIICS]	Australian. Inventory of Industrial Chemical (AIICS)
[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	2025/04/09
Revision Date	-
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.chemportal.org/chemportal/>.
- [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-CODE	International Maritime Dangerous Goods CODE
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 ₅₀	Lethal Concentration 50%	NFPA	National Fire Protection Association
LD ₅₀	Lethal Dose 50%	NTP	National Toxicology Program
EC ₅₀	Effective Concentration 50%	PBT	Persistent, Bioaccumulative, Toxic
EC _x	Effective Concentration X%	vPvB	very Persistent, very Bioaccumulative
P _{ow}	Partition coefficient Octanol: Water	CMR	Carcinogens, mutagens or substances toxic to reproduction
BCF	Bioconcentration factor	RPE	Respiratory Protective Equipment
ED	Endocrine disruptor	G1	Carcinogenic to humans
G2A	Probably carcinogenic to humans	G2B	Possibly carcinogenic to humans
G3	Not yet classified as carcinogenic to humans	G4	Probably not carcinogenic to humans

Disclaimer

This Safety Data Sheet (SDS) was prepared according to UN GHS (the 10th 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.