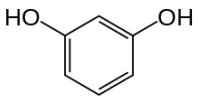
MATERIAL SAFETY DATA SHEET

Resorcinol

DAYU CHEMICAL
Dedication Around Your Utilizing

Section 1 :Identification of the substance/mixture and of the company/undertaking

1.Product identifiers

Product name	:	Resorcinol
Molecular formula	:	C6H4(OH)2
Resorcinol CAS umber.	:	108-46-3
Chemical structure	:	
Molecular weight	:	110.112
Appearance	:	Crystal or powder

Details of the supplier of the material safety data sheet

1.1Product and Company

Company	SHAANXI DAYU CHEMICAL CO., LTD.
Address	Building NO.8, XiShi Jiajun, , XiShi 2nd Road, Lianhu District, Xi'an, Shaanxi, China
Telephone	0086-29-88643345
Email	info@dayuchemical.com
Website	www.hidayuchemical.com

1.2 Identified uses:

PC 1: Adhesives, sealants

PC 21: Laboratory chemicals

PC 39: Cosmetics, personal care products

SU 0: Other: SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

SU 6a: Manufacture of wood and wood products

SU 8: Manufacture of bulk, large scale chemicals (including petroleum products)

SU 9: Manufacture of fine chemicals

SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

SU 11: Manufacture of rubber products

SU 12: Manufacture of plastics products, including compounding and conversion

SU 15: Manufacture of fabricated metal products, except machinery and equipment

SU 17: General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment

SU 20: Health services

SU 24: Scientific research and development

1.2.2 Uses advised against:

Not available

Section 2: Hazards Identification

2.1 Classification of the substance or mixture:

2.1.1 Classification:

The substance is classified as following according to REGULATION (EC) No 1272/2008:

REGULATION (EC) No 1272/2008	
Hazard classes/Hazard categories	Hazard statement
Acute Tox. 4 *	H302
Eye Damage 1	H318
Skin Irrit. 2	H315
Skin Sens. 1	H317
STOT Single Exp. 1	H370
STOT Single Exp. 2	H371
Aquatic Acute 1	H400
Aquatic Chronic 3	H412

For full text of H- phrases: see section 2.2.

2.2 label elements:

Signal Word(S): Danger

Hazard Statement: H302: Harmful if swallowed.
H318: Causes serious eye damage. H315:
Causes skin irritation.
H317: May cause an allergic skin reaction.
H370: Causes damage to organs (CNS effects and blood effects - methemoglobin via oral bolus dosing).

H371: May cause damage to organs (respiratory system, via oral bolus dosing).
H400: Very toxic to aquatic life.
H412: Harmful to aquatic life with long lasting effects.

Precautionary statement:

P260: Do not breathe dust/fume/gas/mist/vapours/spray.
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
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.
P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P311: IF exposed: Call a POISON CENTER or doctor/physician.
P310: Immediately call a POISON CENTER or doctor/physician.
P330: Rinse mouth.
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P362+P364: Take off contaminated clothing and wash before reuse.
P391: Collect spillage.
P501: Dispose of contents/container in according with local regulation.

2.3 Other hazards:

Not applicable.

Section 3 :Composition/information on ingredients

Substance/Mixture: Substance

Ingredient(s):

Chemical Name	Registration No.	CAS No.	EC No.	Concentration
Resorcinol	01-2119480136-40-XXXX	108-46-3	203-585-2	99.7%
Moisture	N/A	N/A	N/A	0.2%
Phenol	N/A	108-95-2	203-632-7	0.1%

Section 4 :First aid measures

4.1 Description of first aid measures:

In all cases of doubt, or when symptoms persist, seek medical attention.

4.1.1 In case of inhalation:

Remove from exposure. If breathing has stopped or is difficult, administer artificial respiration or oxygen as indicated. Seek

medical aid.

4.1.2 In case of skin contact:

Remove contaminated clothing. Wipe material from skin. Immediately flush area with large amounts of water for at least 15

minutes. In any irritation is present seek medical aid. Wash contaminated clothing before reuse.

4.1.3 In case of eyes contact:

Remove contact lenses. Immediately flush eyes and surrounding areas with large amounts of lukewarm water for at least 15

minutes. Seek immediate medical aid.

4.1.4 In case of ingestion:

DO NOT ATTEMPT TO GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Remove any evidence of substance from patient's mouth. If victim is conscious and alert, give 8-12 ounces of water or milk. Immediately seek medical aid.

4.2 Most important symptoms and effects, both acute and delayed:

Harmful if swallowed; Causes serious eye damage; May cause an allergic skin reaction; Causes damage to organs (CNS and blood effects); May cause damage to organs (Respiratory effects); Causes skin irritation.

4.3 Indication of any immediate medical attention and special treatment needed:

If skin irritation or rash occurs, get medical advice/attention.

Section 5: Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media:	Use dry chemical, carbon dioxide, steam or water fog.
Unsuitable extinguishing media:	Not available.
5.2 Special hazards arising from the substance or mixture	Dust (powder) may form explosive mixture in air. Closed containers may explode or rupture when exposed to extreme heat (fire).
5.3 Advice for firefighters:	Solid or straight steam water may be "ineffective:, use spray or fog. Wear complete fire service protective equipment, including full-face MSHA/NIOSH approved self-contained breathing apparatus. Use water to cool fire-exposed container/structure/protect personnel.

Section 6 :Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1 For non-emergency personnel:	Eliminate all sources of ignition. Wear appropriate protective clothing. Keep unnecessary people away.
6.1.2 For emergency responders:	Wear an appropriate NIOSH/MSHA approved respirator if dust is generated.
6.2 Environmental Precautions:	Try to prevent the material from entering drains or water courses. Advise Authorities if spillage has entered water course or sewer or has contaminated soil or vegetation.
6.3 Methods and material for Containment and Cleaning up:	Stop spill/leak if no risk involved. Stay upwind. Shovel back into original dry container or waste receptacle. Flush area with water. Contain runoff from fire

control and dilution water.

6.4 Reference to other sections: See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

Section 7: Handling and storage

7.1 Precautions for safe handling:

7.1.1 Protective measures: Avoid contact with skin or eyes. Avoid prolonged or repeated breathing of dusts. Minimize generation of dust. Observe good personal hygiene practices and recommended procedures.

7.1.2 Advice on general occupational hygiene: Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities: Protect from physical damage. Store in a closed, properly labeled, well-ventilated area away from possible sources of ignition.

7.3 Specific end use(s): NOT applicable

Section 8 :Exposure Controls/Personal Protection

8.1 Control parameters:

8.1.1 Occupational exposure limits:

				Occupational Exposure Limit Value (8-hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		
Country	Substance	EINECS No.	CAS No.	ppm	mg/ m3	ppm	mg/ m3	Note
China	Resorcinol	203-585-2	108-46-3	10	45	20	90	

8.1.2 Additional exposure limits under the conditions of use: Not available.

8.1.3 DNEL/DMEL and PNEC-Values:

Workers - Hazard via inhalation route	Systemic effects-Long term exposure	DNEL=5.6 mg/m³
Workers - Hazard via dermal route	Systemic effects-Long term exposure	DNEL=40 mg/kg bw/day
General Population - Hazard via inhalation route	Systemic effects-Long term exposure	DNEL=1.4mg/m³
General Population - Hazard via dermal route	Systemic effects-Long term exposure	DNEL=20 mg/kg bw/day
General Population - Hazard via oral route	Systemic effects-Long term exposure	DNEL=0.4 mg/kg bw/day
Hazard for aquatic organisms	Freshwater	PNEC=0.017mg/L
Hazard for aquatic organisms	Marine water	PNEC=0.002mg/L
Hazard for aquatic organisms	STP	PNEC=0.79 mg/L
Hazard for aquatic organisms	Sediment (freshwater)	PNEC= 0.08mg/kg sediment dw
Hazard for aquatic organisms	Sediment (marine water)	PNEC= 0.008 mg/kg sediment dw
Hazard for terrestrial organisms	Soil	PNEC= 10mg/kg soil dw

8.2 Exposure controls:

8.2.1Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.2.2 Individual protection measures, such as personal protective equipment:

Eye/face protection: Safety glasses; chemical goggles; face shield, as necessary.

Hand protection: In dusty areas wear necessary resistant protective apparel, including necessary head, hand and footwear protection.

Body protection: Thermal protective and/or rubber gloves as required.

Respiratory protection: If ventilation is inadequate to maintain personal inhalation exposures below TLV (PEL)(OEL), use appropriate MSHA/NIOSH approved respiratory protection to comply with current standards and manufacturer's "instructions"

	and "Warnings". If within OSHA protection factor, air purifying organic vapor cartridge/canister with particulate filter is acceptable.
Thermal hazards:	Wear suitable protective clothing to prevent heat.
8.2.3 Environmental exposure controls:	Avoid discharge into the environment. According to local regulations, Federal and official regulations.

Section 9 :Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance:	Solid
Colour:	Flakes
Odour:	White-slightly colored
Odour threshold:	Not available
pH:	4.5(10 vol%)
Melting point/range (°C):	110 °C
Boiling point/range (°C):	277.5 °C
Flash point (°C):	127 °C(closed cup)
Evaporation rate:	Not available
Flammability limit - lower (%):	Not available
Flammability (solid, gas):	Not available
Ignition temperature (°C):	Not available
Upper/lower explosive limits:	Not available
Vapour pressure (25°C):	0.001 hPa
Vapour density:	Not available
Density:	1.28 g/cm³(20 °C)
Bulk density (kg/m^3):	Not available
Water solubility (g/l):	717 g/L(25 °C)
n-Octanol/Water (log Po/w):	log Pow=0.8(20 °C)
Auto-ignition temperature:	>= 605 - <= 608 °C
Decomposition temperature:	Not available
Viscosity, dynamic (mPa.s):	38(140 °C)
Explosive properties:	Not explosive
Oxidising properties:	No oxidising properties
Molecular Formula:	C6H6O2
Molecular Weight:	110.11

9.2. Other information:

Fat solubility(solvent-oil to be specified)	Not available

etc:

Surface tension:	72 mN/m(20 °C)
Dissociation constant in water(pKa):	Acid-base constant: pKa = 9.81 at 25 °C
Oxidation-reduction Potential:	Not available

Section 10 :Stability and reactivity

10.1 Reactivity:	Acid/alkaline catalyzed reaction with formaldehyde is exothermic.
10.2 Chemical stability:	Stable at room temperature in closed containers under normal storage and handling conditions.
10.3 Possibility of hazardous reactions:	No dangerous reactions known.
10.4 Conditions to avoid:	Incompatible materials.
10.5 Incompatible materials:	Not available.
10.6 Hazardous decomposition products:	Oxides of carbon.

Section 11: Toxicological information

11.1 Information on toxicological effects:

Acute toxicity:	
LD50(Oral, Rat):	510 mg/kg bw
LD50(Dermal, Rabbit):	2 830 mg/kg bw male
LC50(Inhalation, Rat):	Not available
Skin corrosion/Irritation:	Causes skin irritation.
Serious eye damage/irritation:	Causes serious eye irritation.
Respiratory or skin sensitization:	May cause an allergic skin reaction
Germ cell mutagenicity:	Negative
Carcinogenicity:	Not classified
Reproductive toxicity:	Not classified
STOT- single exposure:	Causes damage to organs (CNS and blood effects) May cause damage to organs (Respiratory effects)
STOT-repeated exposure:	Not classified
Aspiration hazard:	Not classified

Section 12: Ecological information

12.1 Toxicity:

Acute (short-term) toxicity:	
LC50(96h, Fish):	Not available
LC50(48h, Crustacea):	Not available
EC50(72h, Algae/aquatic plants):	Not available
Chronic (long-term) toxicity:	
NOEC(Fish):	Not available
NOEC(Crustacea):	Not available
NOEC (Algae/aquatic plants):	47 mg/L
12.2 Persistence and degradability:	Readily biodegradable.
12.3 Bioaccumulative potential:	Resorcinol is not considered bioaccumulating.
12.4 Mobility in soil:	Koc=10.36
12.5 Results of PBT and vPvB assessment:	The substance is not PBT / vPvB.
12.6 Other adverse effects:	Very toxic to aquatic life.

Section 13: Disposal considerations

13.1 Waste treatment methods: Dispose of in accordance with all applicable local and national regulations.

Use recovery/recycling where feasible, otherwise incineration is the recommended method of disposal. Empty containers may contain hazardous residues. Do not cut, puncture or weld on or near to the container. Labels should not be removed from containers until they have been cleaned. Contaminated containers must not be treated as household waste. Containers should be cleaned by appropriate methods and then re-used or disposed of by landfill or incineration as appropriate. Do not incinerate closed containers.

Section 14: Transport information

	Land transport (ADR/RID)	Inland waterways (ADN)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN number	2876	2876	2876	2876
UN Proper shipping name	Resorcinol	Resorcinol	Resorcinol	Resorcinol
Transport hazard Class(es)	6.1	6.1	6.1	6.1
Packing group	III	III	III	III
Environmental hazards	Yes	Yes	Yes	Yes
Special precautions for user	See section 2.2	See section 2.2	See section 2.2	See section 2.2
Transport in bulk according to Annex II of Marpol and the IBC Code	IBC08	IBC08	IBC08	IBC08

Section 15 :Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Relevant information regarding authorization: Not applicable.

Relevant information regarding restriction: Not applicable.

Other EU regulations: Employment restrictions concerning young person must be observed. For use only by technically qualified individuals.

Other National regulations: Not applicable

15.2 Chemical safety assessment YES [X] NO [ ]

Section 16 :Other information

16.1 Indication of changes:

Version 1.0 Amended by (EU) 2015/830

16.2 Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods

by Road RID: Regulation for rail International transportation of Dangerous goods

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: Code international maritime dangerous goods code

ICAO-TI: International Civil Aviation Organization The International Civil Aviation

Covenant ICAO: International Civil Aviation Organization

IATA: International Air Transport

Association LC50: median lethal

concentration

EC50: The effective concentration of substance that causes 50% of the maximum

response. NOEC: No Observed Effect Concentration

DNEL: derived no-effect level

PNEC: predicted no-effect concentration

16.3 Key literature references and sources for data

ECHA Registered substances data

16.4 Classification and procedure used to derive the classification for mixtures according to

Classification according to Regulation (EC) No. 1272/2008		Classification procedure
Acute Tox. 4 *	H302	On basis of test data
Eye Damage 1	H318	On basis of test data
Skin Irrit. 2	H315	On basis of test data
Skin Sens. 1	H317	On basis of test data
STOT Single Exp. 1	H370	On basis of test data
STOT Single Exp. 2	H371	On basis of test data
Aquatic Acute 1	H400	On basis of test data
Aquatic Chronic 3	H412	On basis of test data

Regulation (EC)

16.5 1272/2008 [CLP]

16.6 Relevant H-statements (number and full text):

H302: Harmful if swallowed.

H318: Causes serious eye

damage. H315: Causes skin

irritation.

H317: May cause an allergic skin

reaction. H370: Causes damage

to organs.

H371: May cause damage to

organs. H400: Very toxic to

aquatic life.

H412: Harmful to aquatic life with long lasting effects.

16.7 Training instructions:

Not applicable.

16.8 Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended

for this product.

16.9 Notice to reader:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. SHAANXI DAYU CHEMICAL CO., LTD. shall not be held liable for any damage resulting from handling or from contact with the above product. Please see additional terms and conditions for reference.