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编号: TCH20004783  
No: TCH20004783  
日期: 2020-12-17  
Date: 2020-12-17

ZAIQ-RF(HH)-01-19

# Safety Data Sheet



**Applicant name:** ZHEJIANG SATELLITE PETROCHEMICAL CO., LTD

**Product Name:** ACRYLIC ACID

**Edit date:** 2020-12-17

**Edit institution:** Technology Center of Hangzhou Customs District

**Approver:**



1. Unless other wise stated, this test report is only responsible for the sample(s).
2. This test report can not be reproduced,except in full,without prior written permission of the lab.

**1. Identification of substance**

Product Name	ACRYLIC ACID
Other Name	ACRYLIC ACID
Chemical Name	ACRYLIC ACID
Recommended Use	Used for resin manufacture, synthetic rubber latex, etc.
Manufacturer Name	ZHEJIANG SATELLITE PETROCHEMICAL CO., LTD
Address	BUJIAO ROAD JIAXING INDUSTRIAL PARK JIAXING CITY ZEJIANG PRIVENCE, CHINA/314000
Phone Number	+86-573-83285531
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**2. Hazards identification**

GHS classification	Flammable liquids 3 Acute toxicity-oral 4 Acute toxicity-dermal 4 Acute toxicity- inhalation 4 Serious eye damage/eye irritation 1A Serious eye damage/eye irritation 1 Hazardous to the aquatic environment, acute hazard 1
GHS Pictograms	
Signal words	Danger
Hazard statements	H226: Flammable liquid and vapour H302: Harmful if swallowed H312: Harmful in contact with skin H314: Causes severe skin burns and eye damage H318: Causes serious eye damage H332: Harmful if inhaled H400: Very toxic to aquatic life
Precautionary Statement 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 only non-sparking tools. P243:Take action to prevent static discharges. ✓ P260:Do not breathe dust/fume/gas/mist/vapours/spray. P261:Avoid breathing dust/fume/gas/mist/vapours/spray.

	P264:Wash hands thoroughly after handling. P270:Do not eat, drink or smoke when using this product. P271:Use only outdoors or in a well-ventilated area. P273:Avoid release to the environment. P280:Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. ✓
Precautionary Statement Response ✓	P301+P317:IF SWALLOWED: Get medical help. ✓ P301+P330+P331:IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P302+P352:IF ON SKIN: Wash with plenty of water/... ✓ P302+P361+P354:IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes. ✓ P303+P361+P353:IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water[or shower]. P304+P340:IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P354+P338:IF IN EYES:Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. ✓ P316:Get emergency medical help immediately. P317:Get medical help. P321:Specific treatment (see the supplemental first aid instruction). P330:Rinse mouth. P362+P364:Take off immediately contaminated clothing and wash it before reuse. P363:Wash contaminated clothing before reuse P370+P378:In case of fire: Use extinguisher to extinguish P391:Collect spillage.
Precautionary Statement Storage	P403+P235:Store in a well-ventilated place. Keep cool. P405:Store locked up.
Precautionary Statement Disposal	P501: Dispose of contents/container in according with local regulation.
Other hazards which do not result in classification	Not available.

3. Composition/information on ingredients

**Substances**

**Mixtures**

**Component Information**

Component	CAS number	EINECS number	Mass(%)
ACRYLIC ACID	79-10-7	201-177-9	99.5%wt

Note:1. Unless a component presents a severe hazard, it does not need to be considered in the SDS if the concentration is less than 1%

**4. First-aid measures**

NOTE TO PHYSICIAN	In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
After inhalation	Move to fresh air. Oxygen or artificial respiration if needed. Get immediate medical attention.
After skin contact	Immediately flush skin with plenty of water. Remove and isolate contaminated clothing and shoes. If irritation persists, get medical attention immediately. For minor skin contact, avoid spreading material on unaffected skin.
After eye contact	Wash clothing separately before reuse. Immediately flush eyes with plenty of water for at least 15 minutes. Assure adequate flushing of the eyes by separating the eyelids with fingers. Get medical attention immediately.
After ingestion	Do not induce vomiting without medical advice. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Loosen tight clothing such as a collar, tie, belt or waistband. Do not use mouth-to-mouth method if victim ingested the substance. Seek immediate medical attention.
Most important symptoms/effects, acute and delayed	Harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage. Causes serious eye damage. Harmful if inhaled.

**5. Fire-fighting measures**

Suitable extinguishing agents	Water spray, foam, CO <sub>2</sub> , dry chemical powder, sandy soil.
Special hazards caused by the material, its products of combustion or flue gases	Can be released in case of fire: CO <sub>x</sub> .
Protective equipment for fire-fighters	Wear self-contained breathing apparatus, a chemical safety goggles, antistatic work clothes, rubber gloves.

**6. Accidental release measures**

Person-related safety precautions	Ensure adequate ventilation. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Ventilate closed spaces before entering. Keep unnecessary personnel away.
Measures for environmental protection	Prevent further leakage or spillage if safe to do so. Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting	Contain spillage, and then collect with non-combustible absorbent material (e.g. sand, earth, diatomaceous earth, vermiculite) and place in suitable container. Clean contaminated surface thoroughly.
Additional information	See Section 7 for information on safe handling See section 8 for information on personal protection equipment. See Section 13 for information on disposal.

**7. Handling and storage**

**Handling**

Information for safe handling	Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin, eyes, mucous membranes and clothing. In case of insufficient ventilation, wear suitable respiratory equipment if ingested.
Information about protection against explosions and fires	Keep away from heat/sparks/open flames/hot surfaces.-No smoking. Take measures to prevent the build up of electrostatic charge. Vapours may form explosive mixture with air.

**STORAGE**

Requirements to be met by storerooms and containers	Keep in a cool, dry, well-ventilated place. Keep tightly closed until used.
Information about storage in one common storage facility	Store away from incompatible substances such as strong oxidizing agents, strong bases, oxygen, polymerizing initiators, peroxides, etc.
Further information about storage conditions	No data.

**8. Exposure controls/personal protection**

Limit Values for Exposure Component	CAS number	ACGIH	ACGIH	NIOSH	NIOSH
		TLV-TWA	TLV-STEL	PEL-TWA	PEL-STEL
ACRYLIC ACID	79-10-7	2 ppm	N.E.	N.E.	N.E.
Appropriate engineering controls	Use adequate ventilation to keep airborne concentrations low. Provide safety shower and eyewash facility.				
General protective and hygienic measures	Do not get this material in contact with eyes. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.				
Personal protective equipment	Splash goggles, gloves, apron and a vapor respirator				
Breathing equipment	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.				
Protection of hands	Wear appropriate chemical resistant gloves.				

Eye/Face protection	Use safety glasses with side shields or safety goggles as mechanical barrier for prolonged exposure.
Body protection	Full set of anti chemical reagent overalls, flame retardant antistatic protective clothing, choose body protection according to the amount and concentration of the dangerous substance at the work place.

Note: 1. N.E. means not established.

**9. Physical and chemical properties**

Physical state	Colorless liquid
Colour	Not applicable
Odour	Stench
Melting point/freezing point	13 °C - lit
Boiling point or initial boiling point and boiling range	139 °C - lit
Flammability	Flammable
Lower and upper explosion limit/ flammability limit	13.7%(V)/2%(V)
Flash point	46 °C-closed up
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable
pH	1.0 - 2 at 500 g/L
Kinematic viscosity	No data available
Solubility	Completely miscible with water
Partition coefficient: n-octanol/water(log value)	0.46
Vapour pressure	5 hPa at 20 °C, 53 hPa at 60 °C
Density and/or relative density	1.051 g/cm <sup>3</sup> at 25 °C
Relative vapour density (air=1.0)	2.49
Particle characteristics	Not applicable

**10. Stability and reactivity**

Reactivity	No data available
Chemical stability	Stable under recommended storage and handling conditions.
Possibility of hazardous reactions	Reacts violently in contact with acids, amines, driers, polymerisation accelerators and easily oxidized materials. Polymerisation can occur.
Conditions to avoid (e.g. static discharge, shock or vibration)	Heat and flame and spark. The extreme temperatures and direct sunlight. Antistatic.

Incompatible materials	Avoid contact with strong oxidizing agents, strong bases, oxygen, polymerizing initiators, peroxides, etc.
Hazardous decomposition products	May include carbon oxides.

**11. Toxicological information**

Routes of Entry: Dermal contact, eye contact, inhalation, ingestion.

**Acute Toxicity**

ACRYLIC ACID (CAS 79-10-7)

LD50 (Oral, rat) : 357 mg/kg  
 LD50 (Dermal, rabbit) : N/A  
 LC50 (Inhalation, rat) : >5.1 mg/l (4 h)

**Skin corrosion/Irritation**

Serious

Causes severe skin burns.  
 eye Causes serious eye damage.

damage/irritation

Respiratory or skin sensitization

No data available for this chemical.

Germ cell mutagenicity

No data available for this chemical.

Carcinogenicity

No data available for this chemical.

Reproductive toxicity

No data available for this chemical.

STOT-single exposure

No data available for this chemical.

STOT-repeated exposure

No data available for this chemical.

Aspiration hazard

No data available for this chemical.

Chronic Effects

No data available for this chemical.

Further Information

No data available for this chemical.

**12. Ecological information**

**Ecotoxicity**

Aquatic Toxicity

ACRYLIC ACID (CAS 79-10-7)

Test & Species

96 Hr LC50 fish: 27 mg/L

48 Hr EC50 Daphnia: 95 mg/L

72 Hr EC50 Algae: 0.205 mg/L

Persistence and degradability

Not available

Bioaccumulative potential

Not available

Mobility in soil

Not available

Additional Information

Very toxic to aquatic life.

**13. Disposal considerations**

**WASTE DISPOSAL INSTRUCTIONS**

Contact a qualified professional waste disposal service to dispose of this material.

Dispose of in accordance with local environmental regulations or local authority requirements.

**14. Transport information**

The Recommendation of Transport of Dangerous Goods(TDG)

UN Number	UN 2218
Proper Shipping Name	ACRYLIC ACID, STABILIZED
Class/Division	Class 8 Corrosive Substances
Package Group	PG II
Subsidiary risk	Class 3 Flammable Liquids
labelling pictogram	



Maritime transport IMDG/ Marine pollutant (Yes/No)	Being same with TDG/ No
Air transport ICAO-TI and IATA-DGR	Being same with TDG

15. Regulatory information

**European/International Regulations**

**OSHA:** Hazardous by definition of Hazard Communication Standard(29CFR 1910.1200).

**EINECS Status:** ACRYLIC ACID (CAS 79-10-7) is included in EINECS inventory.

**EPA TSCA Status:** ACRYLIC ACID (CAS 79-10-7) is included in TSCA inventory.

**Canadian DSL(Domestic Substances List):** ACRYLIC ACID (CAS 79-10-7) is included in DSL.

**HMIS(Hazardous Material Identification System Ratings):**  
 Health: 2  
 Flammability: 3  
 Physical hazard: 2  
 Personal protection: J  
 (4. Severe Hazard; 3. Serious Hazard; 2. Moderate Hazard; 1. Slight Hazard; 0. Minimal Hazard)  
 B3, D1A, E, F.

**WHMIS(Canadian Workplace Hazardous Material Identification System Ratings):**  
**GB 12268-2012 List of dangerous goods** This product is a dangerous goods on the GB 12268-2012 list of dangerous goods.

16. other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

This Material Safety Data Sheet was based on the "Globally Harmonized System of Classification and Labelling of Chemicals", "Recommendations on the TRANSPORT OF DANGEROUS GOODS Model Regulations", "INTERNATIONAL MARITIME DANGEROUS GOODS CODE", "International Air Transport Association Dangerous Goods Regulations", the National Standards and other related dangerous chemicals management laws, regulations and standards, which are periodically updated and changed. To make dangerous goods / hazardous chemicals comply with the relevant requirements of the latest management, regularly update is recommended.

This Material Safety Data Sheet has been compiled in both English and Chinese. For any discrepancies, the Chinese version shall prevail.

**Abbreviations and acronyms**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road  
RID: Regulations Concerning the International Transport of Dangerous Goods by Rail  
IMDG: International Maritime Code for Dangerous Goods  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
EINECS: European Inventory of Existing Commercial Chemical Substances  
CAS: Chemical Abstracts Service  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
EC50: Effective concentration, 50 percent

**Edit Date**

17.12.2020

**Update and Revise**

Second edition

**Edit Standard**

*Globally Harmonized System of Classification and Labelling for Chemicals* Part 1.5

**Revised Institution**

Technology Center of Hangzhou Customs District