
1. Identification**1.1 GHS Product identifier**

Product name 1,2,3-trimethylbenzene

1.2 Other means of identification

Product number AO475

Other names Hemimellitene

1.3 Recommended use of the chemical and restrictions on use

Identified uses For industry use only. Fuels and fuel additives

Uses advised against no data available

1.4 Supplier's details

Company Acros PharmaTech Limited

Address HongKong: Unit 3A-8,12/F,Kaiser Centre,No.18 Centre Street,Sai Ying Pun,HongKong
Mainland: Suite 920,Changwu Road 888,Changzhou,Jiangsu,China

Telephone 86(519)85265509

2. Hazard identification**2.1 Classification of the substance or mixture**

Flammable liquids, Category 3

Skin irritation, Category 2

Eye irritation, Category 2

2.2 GHS label elements, including precautionary statements**Pictogram(s)****Signal word**

Warning
H226 Flammable liquid and vapour

Hazard statement(s) H315 Causes skin irritation

H319 Causes serious eye irritation

Precautionary statement(s)

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

Prevention

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.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P264 Wash ... thoroughly after handling.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P370+P378 In case of fire: Use ... to extinguish.

P302+P352 IF ON SKIN: Wash with plenty of water/...

P321 Specific treatment (see ... on this label).

Response

P332+P313 If skin irritation occurs: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

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+P313 If eye irritation persists: Get medical advice/attention.

Storage

P403+P235 Store in a well-ventilated place. Keep cool.

Disposal

P501 Dispose of contents/container to ...

2.3 Other hazards which do not result in classification

none

3. Composition/information on ingredients**3.1 Substances**

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
1,2,3-trimethylbenzene	1,2,3-trimethylbenzene	526-73-8	none	≥98%

4. First-aid measures**4.1 Description of necessary first-aid measures****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

Fresh air, rest. Refer for medical attention.

In case of skin contact

Rinse skin with plenty of water or shower.

In case of eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

If swallowed

Rinse mouth. Do NOT induce vomiting. Refer for medical attention .

4.2 Most important symptoms/effects, acute and delayed

no data available

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand-valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR as necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. /Aromatic hydrocarbons and related compounds/

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

This chemical is a flammable liquid. Poisonous gases are produced in fire. Small fires: dry chemical, carbon dioxide, water spray, or alcohol-resistant foam. Large fires: water spray, fog, or alcohol foam. Move container from fire if you can do so without risk. Spray cooling water on containers that are exposed to flames until well after fire is out. For massive fire in cargo area, use unmanned hose holder or monitoring nozzles; if this is impossible, withdraw from area and let fire burn. Isolate for one-half mile in all directions if tank car or truck is involved in fire. Vapors are heavier than air and will collect in low areas. Vapors may travel long distances to ignition sources and flashback. Vapors in confined areas may explode when exposed to fire. Containers may explode in fire. Storage containers and parts of containers may rocket great distances, in many directions. If material or contaminated runoff enters waterways, notify downstream users of potentially contaminated waters. Notify local health and fire officials and pollution control agencies. From a secure, explosion-proof location, use water spray to cool exposed containers. If cooling streams are ineffective (venting sound increases in volume and pitch, tank discolors, or shows any signs of deforming), withdraw immediately to a secure position. If employees are expected to fight fires, they must be trained and equipped in OSHA 1910.156. /Trimethyl benzenes/

5.2 Specific hazards arising from the chemical

no data available

5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions

Collect leaking and spilled liquid in covered containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations. Do NOT wash away into sewer.

6.3 Methods and materials for containment and cleaning up

Evacuate and restrict persons not wearing protective equipment from area of spill or leak until cleanup is complete. Remove all ignition sources. Establish forced ventilation to keep levels below explosive limit. Absorb liquids in vermiculite, dry sand, earth, peat, carbon, or similar material and deposit in sealed containers. Keep this chemical out of a confined space ... because of the possibility of an explosion ... It may be necessary to contain and dispose of this chemical as a hazardous

waste. If material or contaminated runoff enters waterways, notify downstream users of potentially contaminated waters. Contact your Department of Environmental Protection or your regional office of the federal EPA for specific recommendations. If employees are required to clean up spills, they must be properly trained and equipped. OSHA 1910.120(q) may be applicable. /Trimethyl benzenes/

7. Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Fireproof. Well closed. Separated from oxidants. Prior to working with this chemical you should be trained on its proper handling and storage. Before entering a confined space where this chemical may be present, check to make sure that an explosive concentration does not exist. Trimethylbenzene must be stored to avoid contact with oxidizers (such as perchlorates, peroxides, permanganates, chlorates, and nitrates), and strong oxidizers (such as chlorine, bromine, and fluorine) since violent reactions occur. Store in tightly closed containers in a cool, well-ventilated area away from heat. Sources of ignition such as smoking and open flames are prohibited where this chemical is used, handled, or stored in a manner that could create a potential fire or explosion hazard. Metal containers involving the transfer of 5 gallons or more of this chemical should be grounded and bonded. Drums must be equipped with self-closing valves, pressure vacuum bungs, and flame arresters. Use only nonsparking tools and equipment, especially when opening and closing containers of this chemical. /Trimethyl benzenes/

8. Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

Recommended Exposure Limit: 10 Hr Time-Weighted Avg: 25 ppm (125 mg/cu m).

Biological limit values

no data available

8.2 Appropriate engineering controls

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

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

Wear dust mask when handling large quantities.

Thermal hazards

no data available

9. Physical and chemical properties

Physical state	colourless liquid
Colour	Colorless liquid
Odour	Distinctive, aromatic odor
Melting point/ freezing point	271°C(lit.)
Boiling point or initial boiling point and boiling range	176°C
Flammability	Flammable LiquidFlammable.
Lower and upper explosion limit / flammability limit	Lower flammable limit: 0.8% by volume; Upper flammable limit: 6.6% by volume
Flash point	44°C(lit.)
Auto-ignition temperature	878 deg F (470°C)
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	Miscible with ethanol, ether, acetone, benzene, petroleum ether, carbon tetrachloride
Partition coefficient n-octanol/water (log value)	log Kow = 3.66
Vapour pressure	3.4 mm Hg (37.7 °C)
Density and/or relative density	0.894
Relative vapour density	4.15 (vs air)
Particle characteristics	no data available

10. Stability and reactivity**10.1 Reactivity**

no data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Oxidizers (perchlorates, peroxides, permanganates, chlorates, nitrates), strong oxidizers (chlorine, bromine, fluorine), and nitric acid. /Trimethyl benzenes/

10.6 Hazardous decomposition products

no data available

11. Toxicological information

Acute toxicity

- Oral: no data available
- Inhalation: no data available
- Dermal: no data available

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

STOT-single exposure

no data available

STOT-repeated exposure

no data available

Aspiration hazard

no data available

12. Ecological information**12.1 Toxicity**

- Toxicity to fish: no data available
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available

12.2 Persistence and degradability

AEROBIC: 1,2,3-Trimethylbenzene, present at 100 mg/L, reached 0% of its theoretical BOD in 2 weeks using an activated sludge inoculum at 30 mg/L and the Japanese MITI test(1). 1,2,3-Trimethylbenzene had a 99(2) and 100%(3) removal in acclimated sludge and activated sludge, respectively. The concentration of 1,2,3-trimethylbenzene was reduced from 4.24 mg/L to 0.0 mg/L in 25 days at 30°C using a sewage inoculum(4). Biodegradation of 1,2,3-trimethylbenzene was classified as moderate in a marine environment(5). 1,2,3-Trimethylbenzene was reduced to zero in 23 days in sewage using a natural microbial flora with aeration and was reduced without aeration(6).

12.3 Bioaccumulative potential

The BCF of 1,2,3-trimethylbenzene was 133-217 at a concentration of 150 ppb and 136-259 at a concentration of 15 ppb using carp (*Cyprinus carpio*) which were exposed over an 8-week period(1). According to a classification scheme(2), these BCFs suggest bioconcentration in aquatic organisms is high(SRC).

12.4 Mobility in soil

1,2,3-Trimethylbenzene has measured log Koc values of 3.04(1) and 2.80(2-5). These values correspond to Koc values of 1,096 and 630. 1,2,3-Trimethylbenzene also has a reported log Kom value of 2.80(6-7). According to a classification scheme(8), these Koc values suggest that 1,2,3-trimethylbenzene is expected to have low mobility in soil(SRC).

12.5 Other adverse effects

no data available

13. Disposal considerations

13.1 Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

14. Transport information

14.1 UN Number

ADR/RID: UN3295 IMDG: UN3295 IATA: UN3295

14.2 UN Proper Shipping Name

ADR/RID: HYDROCARBONS, LIQUID, N.O.S.

IMDG: HYDROCARBONS, LIQUID, N.O.S.

IATA: HYDROCARBONS, LIQUID, N.O.S.

14.3 Transport hazard class(es)

ADR/RID: 3 IMDG: 3 IATA: 3

14.4 Packing group, if applicable

ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards

ADR/RID: no IMDG: no IATA: no

14.6 Special precautions for user

no data available

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

no data available

15. Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
1,2,3-trimethylbenzene	1,2,3-trimethylbenzene	526-73-8	none
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
EC Inventory			Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Listed.
China Catalog of Hazardous chemicals 2015			Listed.
New Zealand Inventory of Chemicals (NZIoC)			Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Listed.
Vietnam National Chemical Inventory			Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Listed.

16. Other information

Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

References

- IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>
- HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en
- CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

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