

SAFETY DATA SHEET

Creation Date 09-Nov-2010

Revision Date 14-Feb-2020

Revision Number 2

1. Identification

Product Name Pyrrole

Cat No. : A12616

CAS-No 109-97-7
Synonyms No information available

Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.
Details of the supplier of the safety data sheet

Company

Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Emergency Telephone Number

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660.
After normal business hours, call Carechem 24 at (866) 928-0789.

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 3
Acute oral toxicity	Category 3
Acute Inhalation Toxicity - Vapors	Category 4
Serious Eye Damage/Eye Irritation	Category 1

Label Elements

Signal Word

Danger

Hazard Statements

Flammable liquid and vapor
Toxic if swallowed
Causes serious eye damage
Harmful if inhaled



Precautionary Statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Use only outdoors or in a well-ventilated area
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment
 Use explosion-proof electrical/ventilating/lighting/equipment
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Wear protective gloves/protective clothing/eye protection/face protection
 Use only non-sparking tools
 Take precautionary measures against static discharge

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Call a POISON CENTER or doctor/physician if you feel unwell

Skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a POISON CENTER or doctor/physician

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
 Rinse mouth

Fire

In case of fire: Use CO₂, dry chemical, or foam for extinction

Storage

Store locked up
 Store in a well-ventilated place. Keep cool

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
1H-Pyrrole	109-97-7	>95

4. First-aid measures

General Advice

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately.
Most important symptoms and effects	Difficulty in breathing. Causes eye burns. Causes severe eye damage. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Water spray, carbon dioxide (CO ₂), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.
Unsuitable Extinguishing Media	No information available
Flash Point	36 °C / 96.8 °F
Method -	No information available
Autoignition Temperature	550 °C / 1022 °F
Explosion Limits	
Upper	14.80 vol %
Lower	3.10 vol %
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical

Flammable. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition. Vapors may form explosive mixtures with air.

Hazardous Combustion Products

Nitrogen oxides (NO_x). Carbon monoxide (CO). Carbon dioxide (CO₂).

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health 3	Flammability 2	Instability 1	Physical hazards N/A
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6. Accidental release measures

Personal Precautions	Ensure adequate ventilation. Use personal protective equipment as required. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges.
Environmental Precautions	Should not be released into the environment. See Section 12 for additional Ecological Information.
Methods for Containment and Clean Up	Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7. Handling and storage

Handling	Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Take precautionary measures against static discharges.
Storage	Keep away from heat, sparks and flame. Protect from direct sunlight. Do not store in aluminum containers. Refrigerator/flammables. Material darkens in color during storage. Keep under nitrogen. Keep container tightly closed in a dry and well-ventilated place.

8. Exposure controls / personal protection

Exposure Guidelines	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Engineering Measures	Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.
Personal Protective Equipment	
Eye/face Protection	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin and body protection	Wear appropriate protective gloves and clothing to prevent skin exposure.
Respiratory Protection	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Liquid
Appearance	Brown
Odor	pungent
Odor Threshold	No information available
pH	6 1% aq. solution
Melting Point/Range	-23 °C / -9.4 °F
Boiling Point/Range	129 - 131 °C / 264.2 - 267.8 °F
Flash Point	36 °C / 96.8 °F
Evaporation Rate	No information available
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	14.80 vol %
Lower	3.10 vol %
Vapor Pressure	8.7 mbar @ 20 °C
Vapor Density	2.31
Specific Gravity	0.960
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	550 °C / 1022 °F
Decomposition Temperature	No information available
Viscosity	1.317 mPa.s at 20 °C

Molecular Formula C4 H5 N
Molecular Weight 67.09

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Light sensitive. Air sensitive.

Conditions to Avoid Keep away from open flames, hot surfaces and sources of ignition. Incompatible products. Excess heat. Exposure to light. Exposure to air.

Incompatible Materials Acids, Acid anhydrides, Acid chlorides

Hazardous Decomposition Products Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO₂)

Hazardous Polymerization Polymerization can occur.

Hazardous Reactions None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information
Component Information
Toxicologically Synergistic Products

No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Severe eye irritant

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
1H-Pyrrole	109-97-7	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
1H-Pyrrole	Not listed	LC50: 197 - 224 mg/L, 96h flow-through (Pimephales promelas)	Not listed	Not listed

Persistence and Degradability Persistence is unlikely

Bioaccumulation/ Accumulation No information available.

Mobility . Will likely be mobile in the environment due to its water solubility.

Component	log Pow
1H-Pyrrole	0.75

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN-No UN1992
Proper Shipping Name Flammable liquid, toxic, n.o.s.
Technical Name (PYRROLE)
Hazard Class 3
Subsidiary Hazard Class 6.1
Packing Group III

TDG

UN-No UN1992
Proper Shipping Name Flammable liquid, toxic, n.o.s.
Hazard Class 3
Subsidiary Hazard Class 6.1
Packing Group III

IATA

UN-No UN1992
Proper Shipping Name FLAMMABLE LIQUID, TOXIC, N.O.S.*
Hazard Class 3
Subsidiary Hazard Class 6.1
Packing Group III

IMDG/IMO

UN-No UN1992
Proper Shipping Name Flammable liquid, toxic, n.o.s.
Hazard Class 3
Subsidiary Hazard Class 6.1
Packing Group III

15. Regulatory information

United States of America Inventory

Component	CAS-No	TSCA	TSCA Inventory notification - Active/Inactive	TSCA - EPA Regulatory Flags
1H-Pyrrole	109-97-7	X	ACTIVE	-

Legend:

TSCA - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

Component	CAS-No	DSL	NDSL	EINECS	PICCS	ENCS	AICS	IECSC	KECL
1H-Pyrrole	109-97-7	X	-	203-724-7	X	X	X	X	KE-29973

U.S. Federal Regulations

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
1H-Pyrrole	X	-	X	-	-

U.S. Department of Transportation

Reportable Quantity (RQ): N
 DOT Marine Pollutant N
 DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

16. Other information

Prepared By Health, Safety and Environmental Department
 Email: tech@alfa.com
 www.alfa.com

Creation Date 09-Nov-2010
Revision Date 14-Feb-2020
Print Date 14-Feb-2020
Revision Summary SDS authoring systems update, replaces ChemGes SDS No. 109-97-7/3.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information

relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS