Nonene

Safety Data Sheet

according to US HazCom 2024

Issue date: 27 May 2015 Revision date: 22 May 2026 Supersedes: 26 November 2025 Version: 8.0

SECTION 1 Identification

1.1. Product identifier

Product form	:	Substance
Trade name	:	Nonene
CAS-No.	:	27215-95-8
Formula	:	C9H18
Product code	:	P501

1.2. Other means of identification

Synonyms	:	Nonene / Nonene (all isomers) / nonene (mixed isomers)
EC-No.	:	248-339-5

1.3. Recommended use of the chemical and restrictions on use

Recommended use	:	Distribution of substance,Industrial use,Manufacture of other chemical products,Surfactants
Restrictions on use	:	No additional information available

1.4. Supplier's details

Braskem America, Inc.
1735 Market Street
Philadelphia, PA 19103-7583
Tel: (800) 396 - 5251
productsafety@braskem.com

1.5. Emergency phone number

Emergency number	:	CHEMTREC: +1-703-527-3887 (INTERNATIONAL) 1-800-424-9300 (NORTH AMERICA)

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquid, Category 2	Highly flammable liquid and vapor.
Aspiration hazard, Category 1	May be fatal if swallowed and enters airways.

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US)	:	Danger
Hazard statements (GHS US)	:	Highly flammable liquid and vapor May be fatal if swallowed and enters airways
Precautionary statements (GHS US)	:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical, lighting, ventilating equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear eye protection, protective clothing, protective gloves. If swallowed: Immediately call a doctor, a POISON CENTER. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Do NOT induce vomiting.
In case of fire: Use dry extinguishing powder, alcohol resistant foam to extinguish.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container to comply with applicable local, national and international regulation..

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

Other hazards which do not result in classification : Very toxic to aquatic life with long lasting effects.

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Substance type : UVCB

Name	Product identifier	%	GHS US classification
n-Nonenes (Main constituent)	CAS-No.: 27215-95-8	100	Flam. Liq. 2, H225 Asp. Tox. 1, H304

3.2. Mixtures

Not applicable

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures after inhalation : Remove victim to fresh air. In case of irregular breathing or respiratory arrest provide artificial respiration. Immediately get medical attention.
First-aid measures after skin contact : Rinse immediately with plenty of water for 15 minutes. Remove contaminated clothing and shoes. Immediately get medical attention.
First-aid measures after eye contact : Rinse immediately with plenty of water for 15 minutes. Immediately get medical attention.
First-aid measures after ingestion : Do not induce vomiting. If necessary, drain stomach by gastric lavage ONLY under qualified medical supervision. Immediately get medical attention.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : Aspiration of this material may cause chemical pneumonia.
Symptoms/effects after skin contact : Frequently or prolonged contact with skin may cause dermal irritation. Prolonged or repeated contact with the skin may cause dermatitis.
Symptoms/effects after eye contact : May cause eye irritation.
Symptoms/effects after ingestion : May be fatal if swallowed and enters airways. Ingestion may cause nausea and vomiting.

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

Note to physician : : If necessary, drain stomach by gastric lavage ONLY under qualified medical supervision.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : For large fire : Foam. For small fire: Dry extinguishing powder. Water mist. Carbon dioxide (CO2).

Unsuitable extinguishing media : Do not use a water jet since it may cause the fire to spread.

5.2. Specific hazards arising from the chemical

Fire hazard : Highly flammable liquid and vapor. Material can accumulate some static charge during transfer.

Explosion hazard : May form flammable/explosive vapor-air mixture. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors.

Hazardous decomposition products in case of fire : Thermal decomposition can lead to the release of irritating gases and vapors. Carbon oxides (CO, CO2). Hydrocarbons.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Cool down the containers exposed to heat with a water spray.

Protection during firefighting : For large fire : Use self-contained breathing apparatus and chemically protective clothing. For small fire: Fight fire from safe distance and protected location. For further information refer to section 8: "Exposure controls/personal protection".

Other information : Flammable liquid and vapor. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors. Exposure to fire may cause containers to rupture/explode.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use only antistatically equipped (spark-free) tools. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Stop leak if safe to do so. If spilled, may cause the floor to be slippery. Avoid breathing mist, spray, vapors.

For non-emergency personnel

Protective equipment : Wear suitable protective clothing, gloves and eye or face protection. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Use only antistatically equipped (spark-free) tools. Eliminate every possible source of ignition.

For emergency responders

Protective equipment : Wear suitable protective clothing. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection.

Environmental precautions : Do not allow to enter into soil/subsoil. Prevent entry to sewers and public waters. Do not discharge into drains or the environment. Do not discharge into surface water.

6.2. Methods and materials for containment and cleaning up

For containment : Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Methods for cleaning up : Take up large spills with pump or vacuum. Use only antistatically equipped (spark-free) tools. Absorb remaining liquid with sand or inert absorbent and remove to safe place. Consult the appropriate authorities about waste disposal.

For further information refer to section 8: "Exposure controls/personal protection"

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Highly flammable liquid and vapor. Avoid ignition sources. Ground/bond container and receiving equipment. Carry out operations in the open/under local exhaust/ventilation or with respiratory protection. Never use pressure to empty container. Handle in accordance with good industrial hygiene and safety procedures.

Hygiene measures	:	Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
Additional hazards when processed	:	Handle empty containers with care because residual vapors are flammable.

7.2. Conditions for safe storage, including incompatibilities

Technical measures	:	Ground equipment electrically. Keep away from sources of ignition - No smoking. Avoid static electricity discharges. Provide adequate ventilation. Use explosion-proof ventilating equipment. Use only non-sparking tools.
Storage conditions	:	Keep away from ignition sources (including static discharges). Store tightly closed in a dry, cool and well-ventilated place. Keep container tightly closed. Store locked up.
Incompatible materials	:	Strong oxidizing agents. Chlorine. Fluorine. magnesium perchlorate.
Packaging materials	:	Carbon steel. Stainless steel.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls	:	Ensure adequate ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Proper grounding procedures to avoid static electricity should be followed. Use only non-sparking tools. Use explosion-proof electrical, lighting, ventilating equipment.
Environmental exposure controls	:	Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Hand protection:
Protective gloves made of PVC. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Eye protection:
Chemical goggles or face shield with safety glasses. ISO 16321-1

Skin and body protection:
Wear suitable protective clothing.

Respiratory protection:
Respirator equipped with cartridges for organic fume for concentration up to 1000 ppm and open system

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Color	:	Colorless
Odor	:	characteristic
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	< -20 °C
Freezing point	:	No data available
Boiling point	:	135 – 140 °C (at 1 atm)
Flash point	:	20 °C (closed cup)
Flammability (solid, gas)	:	No data available
Vapor pressure	:	53.32 – 66.66 hPa (at 50 °C)
Relative vapor density at 20°C	:	4.35

Relative density	:	0.734 – 0.745 g/cm³
Density	:	0.74 – 0.747 g/cm³ (at 15 °C)
Molecular mass	:	126.23 g/mol
Solubility	:	Soluble in benzene. Water: Insoluble Ethanol: Soluble
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	245 – 420 °C
Decomposition temperature	:	No data available
Viscosity, kinematic	:	0.7 mm²/s (at 40 °C)
Explosion limits	:	0.8 – 3.9 vol %
Particle characteristics	:	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapor. Heavier than air, vapors may travel long distances along ground, ignite and flash back to source.

10.2. Chemical stability

Stable at room temperature.

10.3. Possibility of hazardous reactions

Flammable or explosive vapor/air mixtures may be formed.

10.4. Conditions to avoid

Avoid ignition sources. Keep away from heat. Avoid static electricity discharges.

10.5. Incompatible materials

Strong oxidizing agents. Chlorine. Fluorine. magnesium perchlorate.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO2). hydrocarbons.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	:	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	:	Not classified (Based on available data, the classification criteria are not met)

Nonene (27215-95-8)	
LD50 oral rat	2100 mg/kg (Source: NLM_CIP)
LD50 dermal rabbit	5000 mg/kg (Source: NLM_CIP)
ATE US (oral)	2100 mg/kg body weight
ATE US (dermal)	5000 mg/kg body weight

Skin corrosion/irritation	:	Not classified (Based on available data, the classification criteria are not met)
Serious eye damage/irritation	:	Not classified (Based on available data, the classification criteria are not met)
Respiratory or skin sensitization	:	Not classified (Based on available data, the classification criteria are not met)

Germ cell mutagenicity	:	Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	:	Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	:	Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	:	Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	:	Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	:	May be fatal if swallowed and enters airways.

Nonene (27215-95-8)	
Viscosity, kinematic	0.7 mm²/s (at 40 °C)

Symptoms/effects after inhalation	:	Aspiration of this material may cause chemical pneumonia.
Symptoms/effects after skin contact	:	Frequently or prolonged contact with skin may cause dermal irritation. Prolonged or repeated contact with the skin may cause dermatitis.
Symptoms/effects after eye contact	:	May cause eye irritation.
Symptoms/effects after ingestion	:	May be fatal if swallowed and enters airways. Ingestion may cause nausea and vomiting.

SECTION 12 Ecological information

12.1. Ecotoxicity

Hazardous to the aquatic environment, short–term (acute)	:	Not a OSHA HazCom 2024 hazard endpoint
Hazardous to the aquatic environment, long–term (chronic)	:	Not a OSHA HazCom 2024 hazard endpoint

12.2. Persistence and degradability

Nonene (27215-95-8)	
Persistence and degradability	expected to be biodegradable by soil organisms. May penetrate and reach the ground water. Partial evaporation of the product should occur and it is expected that it be biodegradable by aquatic organisms.

12.3. Bioaccumulative potential

Nonene (27215-95-8)	
BCF - Fish [1]	(low potential to bioaccumulate)
Bioaccumulative potential	Bioaccumulative potential.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone	:	Not a OSHA HazCom 2024 hazard endpoint
Fluorinated greenhouse gases	:	No

SECTION 13 Disposal considerations

Regional legislation (waste)	:	Dispose of this material and its container to hazardous or special waste collection point. Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	:	Dispose of this material and its container to hazardous or special waste collection point. Do not allow to enter into surface water or drains. Do not re-use empty containers. Consult the appropriate local waste disposal expert about waste disposal.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
UN2057	UN2057	2057	2057
14.2. Proper Shipping Name			
Tripropylene	TRIPROPYLENE	TRIPROPYLENE	Tripropylene
14.3. Transport hazard class(es)			
3	3	3	3
			
14.4. Packing group			
II	II	II	II
14.5. Environmental hazards			
Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes
No supplementary information available			

14.6. Transport in bulk

IBC code : Applicable.
IBC product name : Nonene (all isomers).
Ship type : Type 2
Pollutant category : Y

14.7. Special precautions for user

DOT

UN-No. (DOT) : UN2057
DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.
DOT Packaging Exceptions (49 CFR 173.xxx) : 150
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L

DOT Vessel Stowage Location	:	B - (i) The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) ‘‘On deck only’’ on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

TDG

UN-No. (TDG)	:	UN2057
Explosive Limit and Limited Quantity Index	:	1 L
Excepted quantities (TDG)	:	E2
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	:	5 L
Emergency Response Guide (ERG) Number	:	128

IMDG

Limited quantities (IMDG)	:	1 L
Excepted quantities (IMDG)	:	E2
Packing instructions (IMDG)	:	P001
IBC packing instructions (IMDG)	:	IBC02
Tank instructions (IMDG)	:	T4
Tank special provisions (IMDG)	:	TP1
EmS-No. (Fire)	:	F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage)	:	S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS
Stowage category (IMDG)	:	B
Properties and observations (IMDG)	:	Colorless liquid. Immiscible with water.

IATA

Special provision (IATA)	:	A3
PCA Excepted quantities (IATA)	:	E2
PCA Limited quantities (IATA)	:	Y341
PCA limited quantity max net quantity (IATA)	:	1L
PCA packing instructions (IATA)	:	353
PCA max net quantity (IATA)	:	5L
CAO packing instructions (IATA)	:	364
CAO max net quantity (IATA)	:	60L
ERG code (IATA)	:	3L

SECTION 15 Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

No additional information available

15.3. State regulations

Nonene (27215-95-8)	
State or local regulations	U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16 Other information

according to US HazCom 2024

Revision date : 22 May 2026

Issue date : 27 May 2015

Data sources : MSDS. CSR - Chemical Safety Report.

Abbreviations and acronyms	
ASTM	ASTM - American Society for Testing and Materials
CLP	CLP - Classification, Labelling and Packaging
CSR	CSR - Chemical Safety Report
EC	EC - European Community
GHS	GHS - Globally Harmonised System
EEC	EEC - European Economic Community
ADR	Overland transport (ADR)
PVC	PVC (Polyvinyl chloride).
REACH	REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals
SDS	SDS - Safety Data Sheet

Safety Data Sheet (SDS), USA - Braskem

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. It warns that the handling of any chemical substance requires the previous knowledge of its hazards for the user. It is up to the user of the product company providing this SDS to and promote the training of its employees about possible risks come upon of the product. The information contained herein is not absolute, but only general information on the use of the chemical and indication of safety and security measures.