



MATERIAL SAFETY DATA SHEET

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N-Nonane 88739

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: N-Nonane

Catalog Numbers:

N/3900

Synonyms:

Nonane

Company Identification: Fisher Scientific UK

Bishop Meadow Road
Loughborough, Leicestershire
LE11 5RG, UK

For information, call: 01509 231166

For emergencies, call: 01509 231166

SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	:	111-84-2
Chemical Name	:	Nonane
%	:	100
EINECS#	:	203-913-4
Haz Symbols	:	F
Risk Phrases	:	10

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Flammable.

Potential Health Effects

Eye:

Causes eye irritation. May cause chemical conjunctivitis and corneal damage.

Skin:

Causes skin irritation. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis. May cause cyanosis of the extremities.

Ingestion:

Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.

Inhalation:

Causes respiratory tract irritation. Irritation may lead to chemical pneumonitis and pulmonary edema. Exposure produces central nervous system depression. Aspiration may lead to pulmonary edema. Vapors may cause dizziness or suffocation. May cause burning sensation in the chest.

Chronic:

Prolonged or repeated skin contact may cause defatting and dermatitis.

SECTION 4 - FIRST AID MEASURES

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin:

Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

Ingestion:

Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid.

Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician:

SECTION 5 - FIRE FIGHTING MEASURES

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Water may be ineffective. Material is lighter than water and a fire may be spread by the use of water. Containers may explode in the heat of a fire. Flammable liquid and vapor. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. May polymerize explosively when involved in a fire.

Extinguishing Media:

Use water spray to cool fire-exposed containers. Water may be ineffective. Water may spread fire. Do NOT use straight streams of water. For large fires, use water spray, fog or regular foam. For small fires, use dry chemical, carbon dioxide, water spray or regular foam.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. A vapor suppressing foam may be used to reduce vapors.

SECTION 7 - HANDLING and STORAGE

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep away from heat, sparks and flame. Do not get on skin or in eyes. Do not ingest or inhale. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage:

Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.
Flammables-area.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

Personal Protective Equipment

Eyes:

Not available.

Skin:

Wear impervious gloves.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Color: colorless
Odor: gasoline-like
pH: Not available.
Vapor Pressure: 10 mm Hg @38C
Viscosity: .711 cP @ 20C
Boiling Point: 150.7 deg C
Freezing/Melting Point: -53.7 deg C
Autoignition Temperature: Not applicable.
Flash Point: 31 deg C (87.80 deg F)
Explosion Limits, lower: 0.8
Explosion Limits, upper: 2.9
Decomposition Temperature: Not available.
Solubility in water: Insoluble in water.
Specific Gravity/Density: 0.72
Molecular Formula: CH₃(CH₂)₇CH₃
Molecular Weight: 128.14

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials, ignition sources, excess heat.

Incompatibilities with Other Materials:

Strong oxidizing agents.

Hazardous Decomposition Products:

Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: Has not been reported.

SECTION 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 111-84-2: RA6115000

LD50/LC50:

CAS# 111-84-2: Inhalation, rat: LC50 = 3200 ppm/4H; Inhalation, rat:
LC50 = 17000 mg/m³/4H.

Carcinogenicity:

Nonane -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

See actual entry in RTECS for complete information.

SECTION 12 - ECOLOGICAL INFORMATION

Other

No information available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Products which are considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local waste regulator for advice. Empty containers must be decontaminated before returning for recycling.

SECTION 14 - TRANSPORT INFORMATION

IATA

Shipping Name: NONANES

Hazard Class: 3

UN Number: 1920

Packing Group: III

IMO

Shipping Name: NONANES

Hazard Class: 3

UN Number: 1920

Packing Group: III

RID/ADR

Shipping Name: NONANES

Hazard Class: 3

UN Number: 1920

Packing group: III

SECTION 15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: F

Risk Phrases:

R 10 Flammable.

Safety Phrases:

S 9 Keep container in a well-ventilated place.

S 16 Keep away from sources of ignition - No smoking.

S 23 Do not inhale gas/fumes/vapour/spray.

S 33 Take precautionary measures against static discharges.

WGK (Water Danger/Protection)

CAS# 111-84-2: 1

United Kingdom Occupational Exposure Limits

United Kingdom Maximum Exposure Limits

Canada

CAS# 111-84-2 is listed on Canada's DSL List.

CAS# 111-84-2 is listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 111-84-2: OEL-DENMARK:TWA 200 ppm (1050 mg/m³)

OEL-FINLAND:TWA 200 ppm (1050 mg/m³);STEL 250 ppm (1315 mg/m³)

OEL-FRANCE:TWA 200 ppm (1050 mg/m³)

OEL-THE NETHERLANDS:TWA 200 ppm (1050 mg/m³) JAN9

OEL-SWITZERLAND:TWA 200 ppm (1050 mg/m³)

OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV

OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

US FEDERAL

TSCA

CAS# 111-84-2 is listed on the TSCA inventory.

SECTION 16 - ADDITIONAL INFORMATION

MSDS Creation Date: 6/23/2004 Revision #0 Date: Original.

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