ChemicalBook

Chemical Safety Data Sheet MSDS / SDS

ISOAMYL NITRATE

Revision Date:2026-05-31 Revision Number:1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product name	: ISOAMYL NITRATE
CBnumber	: CB3341522
CAS	: 543-87-3
EINECS Number	: 208-852-7
Synonyms	: isoamyl nitrate,isopentyl nitrate

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	: For R&D use only. Not for medicinal, household or other use.
Uses advised against	: none

Company Identification

Company	: Chemicalbook
Address	: Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing
Telephone	: 010-86108875

SECTION 2: Hazards identification

GHS Label elements, including precautionary statements

Symbol(GHS)

Signal word Warning

Precautionary statements

P501 Dispose of contents/container to.....

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

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

P264 Wash skin thouroughly after handling.

P240 Ground/bond container and receiving equipment.

P233 Keep container tightly closed.

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

Hazard statements

H319 Causes serious eye irritation

H315 Causes skin irritation

H226 Flammable liquid and vapour

SECTION 3: Composition/information on ingredients

Substance

Product name	: ISOAMYL NITRATE
Synonyms	: isoamyl nitrate,isopentyl nitrate
CAS	: 543-87-3
EC number	: 208-852-7
MF	: C5H11NO3
MW	: 133.15

SECTION 4: First aid measures

If inhaled

Remove person to fresh air and keep comfortable for breathing. Get medical advice/ attention if you feel unwell.

In case of skin contact

Take off all contaminated clothing immediately. If on skin, rinse well with water. If skin irritation occurs: Get medical advice/ attention.

In case of eye contact

Rinse with plenty of water. If easy to do, remove contact lens, if worn. If eye irritation persists: Get medical advice/ attention.

If swallowed

Get medical advice/ attention. Rinse mouth.

Most important symptoms and effects, both acute and delayed

None known.

SECTION 5: Firefighting measures

Suitable extinguishing media

Dry powder, Foam, Water spray, Carbon dioxide (CO2)

Specific hazards during fire fighting

May explode in fire.

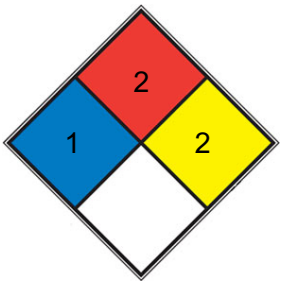
Specific extinguishing methods

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Immediately evacuate personnel to safe areas. Cool closed containers exposed to fire with water spray. Remove undamaged containers from fire area if it is safe to do so.

Special protective equipment for fire-fighters

Use personal protective equipment.

NFPA 704



■	HEALTH	1	Exposure would cause irritation with only minor residual injury (e.g. acetone, sodium bromate, potassium chloride)
■	FIRE	2	Must be moderately heated or exposed to relatively high ambient temperature before ignition can occur and multiple finely divided suspended solids that do not require heating before ignition can occur. Flash point between 37.8 and 93.3 °C (100 and 200 °F). (e.g. diesel fuel, sulfur)
■	REACT	2	Undergoes violent chemical change at elevated temperatures and pressures, reacts violently with water, or may form explosive mixtures with water (e.g. white phosphorus, potassium, sodium)
□	SPEC. HAZ.		

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear suitable protective equipment. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.

Environmental precautions

Prevent product from entering drains.

Methods and materials for containment and cleaning up

Collect as much of the spill as possible with a suitable absorbent material.

SECTION 7: Handling and storage

Handling

Technical measures

Prevent generation of vapor or mist. Take precautionary measures against static discharge. Use explosion-proof equipment.

Local/Total ventilation

Ensure adequate ventilation. Use a local exhaust ventilation.

Advice on safe handling

Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not subject to grinding, shock or friction. Wash hands and face thoroughly after handling.

Avoidance of contact

Oxidizing agents, Reducing agents, Strong acids

Storage

Conditions for safe storage

Keep container tightly closed. Store in a cool and shaded area. Keep in a well-ventilated place. Use explosion-proof equipment. Keep under inert gas. Avoid shock and friction. Avoid exposure to light.

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures

Install a closed system or local exhaust.

Also install safety shower and eye bath.

Personal protective equipment

Respiratory protection

Gas mask

Eye/face protection

Safety glasses

Face-shield

Skin and body protection

Protective suit

Hand protection

Protective gloves *Use personal protective equipment(PPE) approved under appropriate government standards and follow local and national regulations.

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

liquid

Color

colorless

Odor

No data available

Odor Threshold

No data available

pH

No data available

Melting point/freezing point

No data available

Boiling point/boiling range

148 °C

Flash point

49℃

Evaporation rate

No data available

Flammability

No data available

Upper explosion limit / Upper flammability limit

No data available

Lower explosion limit / Lower flammability limit

No data available

Vapor pressure

0.4 kPa (20 °C)

Relative vapor density

4.6

Relative density

1.00

Solubility(ies)

Water solubility

slightly soluble

Solubility in other solvents

soluble Solvent: Ether soluble Solvent: Alcohol

Partition coefficient: n-octanol/water

No data available

Autoignition temperature

No data available

Decomposition temperature

No data available

Viscosity

Viscosity, dynamic

No data available

Viscosity, kinematic

No data available

Molecular weight

133.15 g/mol

Physical state

clear liquid

SECTION 10: Stability and reactivity

Reactivity

No data available

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

May explosively decompose on heating, shock, friction, etc.

Conditions to avoid

Heat. Electrical spark Open flame Electrostatic discharge Avoid shock and friction. Exposure to air. Exposure to light.

Incompatible materials

Oxidizing agents, Reducing agents, Strong acids

Hazardous decomposition products

Carbon monoxide, Carbon dioxide (CO2), Nitrogen oxides (NOx)

SECTION 11: Toxicological information

Acute toxicity

Components

Isoamyl Nitrate

Acute toxicity (other routes of administration)

LD50 (Mouse): 480 mg/kg Application Route: Intraperitoneal injection

Skin corrosion/irritation

Product

Result

Skin irritation

Components

Isoamyl Nitrate

Result

Skin irritation

Serious eye damage/eye irritation

Product

Result

Eye irritation

Components

Isoamyl Nitrate

Result

Eye irritation

Respiratory or skin sensitization

Classified based on available data. For more details, see section 2.

Germ cell mutagenicity

Classified based on available data. For more details, see section 2.

Carcinogenicity

Classified based on available data. For more details, see section 2.

Reproductive toxicity

Classified based on available data. For more details, see section 2.

STOT-single exposure

Classified based on available data. For more details, see section 2.

STOT-repeated exposure

Classified based on available data. For more details, see section 2.

Repeated dose toxicity

Classified based on available data. For more details, see section 2.

Aspiration toxicity

Classified based on available data. For more details, see section 2.

RTECS No.

NT0187000 (Isoamyl Nitrate)

SECTION 12: Ecological information

Ecotoxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13: Disposal considerations

Disposal methods

Waste from residues

Disposal in accordance with local and national regulations. Take precautions against ignition or explode. Entrust disposal to a licensed waste disposal company.

Contaminated packaging

Disposal in accordance with local and national regulations. Before disposal of used container, remove contents completely.

SECTION 14: Transport information

International Regulations

IATA-DGR

UN/ID No.

UN 1112

Proper shipping name

Amyl nitrate

Class

3

Packing group

III

IMDG-Code

UN number

UN 1112

Proper shipping name

AMYL NITRATE

Class

3

Packing group

III

EmS Code

F-E, S-D

Domestic regulation

GB 6944/12268

UN number

UN 1112

Proper shipping name

AMYL NITRATE

Class

3

Packing group

III

SECTION 15: Regulatory information

Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals

Listed

The ingredients of this product are reported in the following inventories

CH BAGREG

On the inventory, or in compliance with the inventory

TSCA

Substance(s) not active on TSCA inventory

AICS

Not in compliance with the inventory

DSL

None of the components of this product are on the Canadian DSL, but all are on the NDSL

Isoamyl Nitrate

ENCS

On the inventory, or in compliance with the inventory

ISHL

On the inventory, or in compliance with the inventory

KECI

On the inventory, or in compliance with the inventory

PICCS

Not in compliance with the inventory

IECSC

On the inventory, or in compliance with the inventory

NZIoC

Not in compliance with the inventory

SECTION 16: Other information

Abbreviations and acronyms

CAS: Chemical Abstracts Service

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

LD50: Lethal Dose 50%

LC50: Lethal Concentration 50%

EC50: Effective Concentration 50%

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

IMDG: International Maritime Dangerous Goods Code

IATA: International Air Transport Association

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

DOT: US Department of Transportation

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration