Product name:
Nitromethane

Cat No:
N024

Synonyms:
Unlisted

CAS-No. :
75-52-5

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
Flammable liquids (Category 3)
Acute toxicity, Oral (Category 4)
Classification according to EU Directives 67/548/EEC or 1999/45/EC
Heating may cause an explosion. Flammable. Harmful if swallowed.
Label elements
Labelling according Regulation (EC) No 1272/2008 [CLP]
Pictogram
Signal word Warning
Hazard statement(s)
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
Precautionary statement(s) none
Supplemental Hazard
Statements
none
According to European Directive 67/548/EEC as amended.
Hazard symbol(s)
R-phrase(s)
R 5 Heating may cause an explosion.
R10 Flammable.
R22 Harmful if swallowed.
S-phrase(s)
S41 In case of fire and/or explosion do not breathe fumes.
Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula: CH_3NO_2
Molecular Weight: 61.04 g/mol
CAS-No.: 75-52-5

4. FIRST AID MEASURES

Description of first aid measures
General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact
Wash off with soap and plenty of water. Consult a physician.
In case of eye contact
Flush eyes with water as a precaution.
If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Most important symptoms and effects, both acute and delayed
Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer.
Indication of any immediate medical attention and special treatment needed
no data available

5. FIREFIGHTING MEASURES

Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special hazards arising from the substance or mixture
Carbon oxides, nitrogen oxides (NOx)
Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.
Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.
Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations.
Vapours can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Hygroscopic. Store under inert gas.

Specific end uses

no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components with workplace control parameters

Exposure controls

Appropriate engineering controls

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

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

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.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

a) Appearance Form: liquid
b) Odour: no data available
c) Odour Threshold: no data available
d) pH: 6.4 at 0.01 g/l at 20 °C
e) Melting point/freezing point
Melting point/range: -29 °C - lit.
f) Initial boiling point and boiling range: 101.2 °C - lit.
g) Flash point: 36 °C - closed cup
h) Evaporation rate: no data available
i) Flammability (solid, gas): no data available
j) Upper/lower flammability or explosive limits
Lower explosion limit: 7.3 %(V)
k) Vapour pressure 36.4 hPa at 20 °C
l) Vapour density: 2.11 - (Air = 1.0)
m) Relative density: 1.127 g/mL at 25 °C
n) Water solubility ca.100 g/l at 20 °C
o) Partition coefficient: noctanol/
water
log Pow: 0,17
p) Autoignition
temperature
no data available

q) Decomposition
temperature
no data available
r) Viscosity no data available
s) Explosive properties no data available
t) Oxidizing properties no data available
Other safety information
Surface tension 37 mN/m at 20 °C

10. STABILITY AND REACTIVITY

Reactivity
no data available
Chemical stability
no data available
Possibility of hazardous reactions
no data available
Conditions to avoid
Heat, flames and sparks.
Incompatible materials
Amines, Strong acids, Strong bases, Strong oxidizing agents, Strong reducing agents, Copper
Hazardous decomposition products
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity
LD50 Oral - rat - 940 mg/kg
Skin corrosion/irritation
no data available
Serious eye damage/eye irritation
no data available
Respiratory or skin sensitization
no data available
Germ cell mutagenicity
no data available
Carcinogenicity
Carcinogenicity - rat - Inhalation
Tumorigenic:Carcinogenic by RTECS criteria. Skin and Appendages: Other: Tumors.
Carcinogenicity - mouse - Inhalation

Tumorigenic:Carcinogenic by RTECS criteria. Sense Organs and Special Senses (Nose, Eye, Ear, and
Taste):Eye:Tumors. Liver:Tumors.
This product is or contains a component that has been reported to be possibly carcinogenic based on its
IARC, ACGIH, NTP, or EPA classification.
IARC: 2B - Group 2B: Possibly carcinogenic to humans (Nitromethane)

Reproductive toxicity
no data available

Specific target organ toxicity - single exposure
no data available

Specific target organ toxicity - repeated exposure
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion Harmful if swallowed.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Signs and Symptoms of Exposure
Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes
cyanosis. Onset may be delayed 2 to 4 hours or longer.

Additional Information
RTECS: PA9800000

12. ECOLOGICAL INFORMATION

Toxicity
Toxicity to fish LC50 - Danio rerio (zebra fish) - 460 mg/l - 48 h
Toxicity to daphnia and
other aquatic
invertebrates
EC50 - Daphnia magna (Water flea) - 450 mg/l - 24 h
Toxicity to algae IC50 - Desmodesmus subspicatus (green algae) - 36 mg/l - 72 h

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

Results of PBT and vPvB assessment
no data available
Other adverse effects
Harmful to aquatic life.
no data available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting
as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal
company.
Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

UN number
ADR/RID: 1261 IMDG: 1261 IATA: 1261
UN proper shipping name
ADR/RID: NITROMETHANE
IMDG: NITROMETHANE
IATA: Nitromethane
Passenger Aircraft: Not permitted for transport
Transport hazard class(es)
ADR/RID: 3 IMDG: 3 IATA: 3
Packaging group
ADR/RID: II IMDG: II IATA: II
Environmental hazards
ADR/RID: no IMDG Marine pollutant: no IATA: no
Special precautions for user
no data available

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available

Chemical Safety Assessment
no data available

16. OTHER INFORMATION

Further information

Specification manual - Nitromethane

CH_3NO_2 **MW: 61.04**

Product **: Nitromethane LR**
Description **: Clear liquid**
Cat No **: N024**
Cas No **: 75-52-5**
Prepared Date **: 07.03.2005**
Approved Date **: 07.03.2005**

REVISION HISTORY				
Issue/Rev	**Description of Change**		**Author**	**Effective Date**
01/00	*Initial Release*		*S. Paul Joshua*	*07.03.2005*
02/00	*Reviewed no changes*		*S. Paul Joshua*	*01.04.2011*
Next Review Due :	*02.04.2015*			
To be reviewed by :	Head-QC/QA			

Sl. No.	Tests	Specification
		LR
1	Assay (GC)	Min 98%
2	Water	0.05%
3	Boiling range	137 - 142°C
4	Sulphur compounds	0.0003%

Approved By: S.Paul Joshua,Head Quality Control and Quality Assurance

62/A2 1st Stage Yeshvanthpur Industrial Suburb ,Ashokpuram School Road Bangalore 560022 Karnataka ,INDIA.
Telefax:+91 080 23378354/23377126 Email:paul@leonidchemicals.net,
www.leonidchemicals.com