Acetaldehyde, 2-(2,4-dinitrophenyl)hydrazone (cas 1019-57-4) MSDS

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers
Product name: Acetaldehyde-2,4-DNPH solution

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Laboratory chemicals, Manufacture of substances

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to EU Directives 67/548/EEC or 1999/45/EC
Highly flammable. Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes.

2.2 Label elements

Hazard symbol(s)
R-phrase(s)
R11 Highly flammable.
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R36 Irritating to eyes.

S-phrase(s)
S16 Keep away from sources of ignition - No smoking.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37 Wear suitable protective clothing and gloves.

Sensitising components:
acetaldehyde 2,4-dinitrophenylhydrazone
May produce an allergic reaction.

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures
Synonyms: Acetaldehyde-2,4-dinitrophenylhydrazone solution

Formula: C8H8N4O4C8H8N4O4

Component | Classification | Concentration
--- | --- | ---
acetonitrile | Flam. Liq. 2; Acute Tox. 4; Eye >= 99 - <= 100 | %
| Int. 2; H225, H319, H312, H313, H332 | %
| F, Xn, R11 - R20/21/22 - R36 |%

Acetaldehyde 2,4-dinitrophenylhydrazone
CAS-No. 1019-57-4

Acute Tox. 4; Skin Irrit. 2; Eye
| Int. 2; Skin Sens. 1; STOT SE 3; H302, H315, H317, H319, H335 | <= 0.1 %
4. FIRST AID MEASURES

4.1 Description of first aid measures

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact
Wash off with soap and plenty of water.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water.

4.2 Most important symptoms and effects, both acute and delayed
Treat as cyanide poisoning. Always have on hand a cyanide first-aid kit, together with proper instructions.
The onset of symptoms is generally delayed pending conversion to cyanide. Headache, Dizziness, Rash, Cyanosis, excitement, depression, Drowsiness

4.3 Indication of immediate medical attention and special treatment needed
no data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, nitrogen oxides (NOx)

5.3 Precautions for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information
no data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Avoid breathing vapors, mist or gas.

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Normal measures for preventive fire protection.

7.2 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.
Recommended storage temperature: 2 - 8 °C
Handle and store under inert gas.

7.3 Specific end uses
8. EXPOSURE CONTROLS/PERSOAL PROTECTION

8.1 Control parameters
Components with workplace control parameters

8.2 Exposure controls
Appropriate engineering controls
General industrial hygiene practice.

Personal protective equipment

Eye/face protection
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
Impervious 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
Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance
   Form: liquid

b) Odour
   no data available

c) Odour Threshold
   no data available

d) pH
   no data available

e) Melting/freezing point
   Melting point/range: -46 °C

f) Initial boiling point and boiling range
   80 °C at 1.013 hPa

g) Flash point
   7 °C

h) Evaporation rate
   5.79

i) Flammability (solid, gas)
   no data available

j) Upper/lower flammability or explosive limits
   Upper explosion limit: 16 % (V)
   Lower explosion limit: 4.3 % (V)

k) Vapour pressure
   97.1 hPa at 20 °C

l) Vapour density
   no data available

m) Relative density
   0.787 g/cm³

n) Water solubility
   no data available

o) Partition coefficient: n-octanol/water
   no data available

p) Autoignition
   no data available
9.2 Other safety information
no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
no data available

10.2 Chemical stability
no data available

10.3 Possibility of hazardous reactions
no data available

10.4 Conditions to avoid
no data available

10.5 Incompatible materials
Bases, Oxidizing agents, Alkali metals, Reducing agents, acids

10.6 Hazardous decomposition products
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

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
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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 May be 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
Treat as cyanide poisoning. Always have on hand a cyanide first-aid kit, together with proper instructions. The onset of symptoms is generally delayed pending conversion to cyanide. Headache, Dizziness, Rash, Cyanosis, excitement, depression, Drowsiness.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
no data available

12.2 Persistence and degradability
no data available

12.3 Bioaccumulative potential
no data available

12.4 Mobility in soil
no data available

12.5 Results of PBT and vPvB assessment
no data available

12.6 Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN-Number
ADR/RID: 1648
IMDG: 1648
IATA: 1648

14.2 UN proper shipping name
ADR/RID: ACETONITRILE, SOLUTION
IMDG: ACETONITRILE, SOLUTION
IATA: Acetonitrile, SOLUTION

14.3 Transport hazard class(es)
ADR/RID: 3
IMDG: 3
IATA: 3

14.4 Packaging group
ADR/RID: II
IMDG: II
IATA: II

14.5 Environmental hazards
ADR/RID: no
IMDG Marine pollutant: no
IATA: no

14.6 Special precautions for users
no data available

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available

15.2 Chemical Safety Assessment
no data available

16. OTHER INFORMATION

Text of H-code(s) and R-phrase(s) mentioned in Section 3

Acute Tox. Acute toxicity
Eye Irrit. Eye irritation
Flam. Liq.  Flammable liquids
H225    Highly flammable liquid and vapour.
H302    Harmful if swallowed.
H312    Harmful in contact with skin.
H315    Causes skin irritation.
H317    May cause an allergic skin reaction.
H319    Causes serious eye irritation.
H322    Harmful if inhaled.
H335    May cause respiratory irritation.
Skin Irrit.  Skin irritation
Skin Sens.  Skin sensitization
STOT SE    Specific target organ toxicity - single exposure
F        Highly flammable
Xn       Harmful
R11     Highly flammable.
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R22     Harmful if swallowed.

R36      Irritating to eyes.
R36/37/38 Irritating to eyes, respiratory system and skin.
R43      May cause sensitization by skin contact.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information this document is based on the resent state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. guidechem shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.