

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

1.1 Product identifiers

Product name : Formothion 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 Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Flammable liquids (Category 3)

Acute toxicity, Oral (Category 4)

Acute toxicity, Dermal (Category 4)

Skin irritation (Category 2)

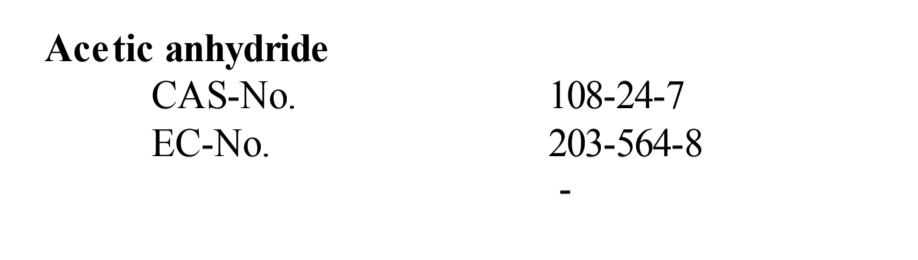
Eye irritation (Category 2)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Flammable. Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes and skin.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]



Signal word : Warning

Hazard statement(s)

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statement(s)

P280 Wear protective gloves/ protective clothing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Statements

According to European Directive 67/548/EEC as amended.

Hazard symbol(s) :

R-phrase(s)

R10 Flammable.

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R36/38 Irritating to eyes and skin.

S-phrase(s)

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.

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Synonyms : S-[2-(Formylmethylamino)-2-oxoethyl] O,O-dimethyl dithiophosphate

Formula : C6H12NO4PS2

Component	Classification	Concentration
Xylene CAS-No. 1330-20-7 EC-No. 215-535-7	Flam. Liq. 3; Acute Tox. 4; Skin Irrit. 2; H226, H312, H315, H332 Xn, R10 - R20/21 - R38	>= 20 - < 40 %
Acetic anhydride CAS-No. 108-24-7 EC-No. 203-564-8	Flam. Liq. 3; Acute Tox. 4; Skin Corr. 1B; H226, H302, H314, H332 C, R10 - R20/22 - R34	3%
Formothion CAS-No. 2540-82-1 EC-No. 219-818-6	Acute Tox. 4; H302, H312 Xn, R21/22	68 %
Acetic acid CAS-No. 64-19-7 EC-No. 200-580-7	Flam. Liq. 3; Skin Corr. 1A; H314, H226 C, R10 - R35	-

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

4.1 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. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

Cholinesterase inhibitors can cause heavy salivation and secretion in the lungs, lachrymation, blurred vision, involuntary defecation, diarrhea, tremor, ataxia, sweating, hypothermia, lowered heart rate, and/or a fall in blood pressure as a result of their action at cholinergic nerve sites., Central nervous system depression,

Dermatitis, Anorexia., Shortness of breath, Bronchitis., Tremors, Blurred vision, Incoordination., Headache, Dizziness

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

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides (NOx), Sulphur oxides, Oxides of phosphorus

5.3 Precautions for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.2 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.

6.3 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).

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 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.

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

7.3 Specific end uses

no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). 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 respirators are 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

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 no data available

f) Initial boiling point and 136 - 140 °C at 1.013 hPa

g) Flash point 25 °C - closed cup

h) Evaporation rate no data available

i) Flammability (solid, gas) no data available

j) Upper/lower explosive limit Upper explosion limit: 7 1% (V)

explosive limits Lower explosion limit: 1, 1% (V)

k) Vapour pressure 24 hPa at 37, 7 °C

l) Vapour density 20,8 g at 37, 7

m) Relative density 0,865 g/m³

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

o) Autoignition temperature 464 °C

p) Decomposition no data available

q) Viscosity no data available

r) Explosive properties no data available

s) Oxidizing properties no data available

t) Toxicity no data available

u) Persistence and degradability no data available

v) Bioaccumulative potential no data available

w) Mobility in soil no data available

x) Results of PBT and vPvB assessment no data available

y) Specific end uses no data available

z) Other information no data available

9.2 Other safety information

Contains the following stabiliser(s):

Acetic acid (%): 3 (6)

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

Powdered metals, Strong oxidizing agents, Reducing agents, Alcohols, acids

10.6 Hazardous decomposition products

no data available

11. TOXICOLOGICAL INFORMATION