Safety (MSDS) data for glycerol

Click here for data on glycerol in student-friendly format, from the HSci project

General

Synonyms: glycerin, glycerol USP, glycerine, 1,2,3-propanetriol, propanetriol, 1,2,3-trihydroxypropane, bulbold, citifluor AF 2, cristal, emergy 916, glyrol, glycerol ophthalgan, glyciterol, glycyl alcohol, osmoglynn, pricerine 9091
Use: Widely used as a food additive (emulsifier, thickener, stabilizer), cosmetic agent, lubricating agent, antifreeze etc.
Molecular formula: C₃H₈O₃ [structural: CH₂OHCHOHCH₂OH]
CAS No: 56-81-5
EC No: 200-289-5

Physical data

Appearance: viscous colourless or pale yellow liquid
Melting point: 17.8 C
Boiling point: 290 C
Vapour density: 3.17 g/l
Vapour pressure: < 1mm Hg at 20 C
Specific gravity: 1.261
Flash point: 160 C (closed cup)
Explosion limits: lower 0.9%
Autoignition temperature: 370 C
Critical temperature: 492.2 C
Critical pressure: 42.5 atm

Stability

Stable. Incompatible with perchloric acid, lead oxide, acetic anhydride, nitrobenzene, chlorine, peroxides, strong acids, strong bases. Flammable.

Toxicology

Mist is a respiratory irritant at high concentrations. Repeated contact may cause dehydration of skin. Typical TLV 10 mg/m³ (nuisance). Not hazardous according to directive 67/548/EC.
Toxicity data
(The meaning of any abbreviations which appear in this section is given here.)
IPR-RAT LD50 8700 mg kg$^{-1}$
ORL-RAT LD50 12600 mg kg$^{-1}$
SCU-RAT LD50 100 mg kg$^{-1}$
ORL-MUS LD50 8700 mg kg$^{-1}$

Risk phrases
(The meaning of any risk phrases which appear in this section is given here.)
R36 R38.

Personal protection

Minimize contact.

Safety phrases
(The meaning of any safety phrases which appear in this section is given here.)
S26 S36.

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