

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

1.1 Product identifier

Product name: Swansolv

Other identification:

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

Specialist cleaning solvent

1.3 Details of the supplier of the safety data sheet

SwanTek

Mintsfeet Road South, Kendal, LA9 6ND, UK

Tel: +44 (0)1539 722247 Email: service@swantek.com Web: www.swantek.com

1.4 Emergency telephone number

As per section 1.3

Section 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC Regulation 1272/2008:

Skin Irrit. 2, H315 Causes skin irritation

Eye Irrit. 2, H319 Causes serious eye irritation

STOT SE 3, H335 May cause respiratory irritation

STOT SE 3, H336 May cause drowsiness or dizziness

Carc. Cat. 2, H351 Suspected of causing cancer

Repr. 1B, H360FD May damage fertility. May damage the unborn child

STOT RE 2, H373 May cause damage to the liver and the central nervous system through prolonged or repeated exposure

Aquatic Chronic 3, H412 Harmful to aquatic life with long lasting effects

2.2 Label elements

Hazard pictograms: CLP 07 Exclamation

CLP 08 Health

(none)

(none)



Signal word: Danger

Hazard statements:

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

H336 - May cause drowsiness or dizziness

H351 - Suspected of causing cancer

H360FD - May damage fertility. May damage the unborn child

H373 - May cause damage to the liver and the central nervous system through prolonged or repeated exposure

H412 - Harmful to aquatic life with long lasting effects

Precautionary statements: P260 - Do not breathe dust/fume/gas/mist/vapours/spray

P273 - Avoid release to the environment

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

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

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P312 - Call a POISON CENTER or doctor/physician if you feel unwell

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P501 - Dispose of contents/container in accordance with national and international regulations

Other label elements: Contains 1-bromopropane

2.3 Other hazards

Clear colourless liquid. Slight odour. Non-flammable. Spills of these organic liquids on hot fibrous insulations may lead to lowering of the auto-ignition temperatures possibly resulting in spontaneous combustion. Common sense precautions should be observed during handling and use.

Section 3: Composition / information on ingredients

3.1 Substances

3.2 Mixtures

n-Propyl Bromide (1-bromopropane, n-PB)

CAS No: 106-94-5, EINEC No: 203-445-0

Content: > 90%

Flam. Liq. 2, H225

Carc. Cat. 2, H351

Repr. 1B, H360FD

STOT RE 2, H373

Eye Irrit. 2, H319

STOT SE 3, H335

Skin Irrit. 2, H315

STOT SE 3, H336

Aquatic Chronic 3, H412

Butylene oxide (1,2-epoxy butane)

CAS No: 106-88-7, EINEC No: 203-438-2

Content: < 1%

Flam. Liq. 2, H225

Carc. Cat. 2, H351

Acute tox Inhale 4, H332

Acute tox Dermal 4, H312

Acute tox Oral 4, H302

Eye Irrit. 2, H319

STOT SE 3, H335

Skin Irrit. 2, H315

Aquatic chronic 3, H412

Components not listed here are either non-hazardous or present at levels below that requiring detailed disclosure.

Section 4: First aid measures

4.1 Description of first aid measures

General: If you feel unwell seek medical advice (show this information or the container label where possible). Do not give anything by mouth to unconscious person.

Inhalation: Remove to fresh air. If breathing is difficult, a trained person may administer oxygen. Apply artificial respiration only if the person is not breathing. Seek immediate medical attention.

Ingestion: If swallowed seek medical attention. Do not induce vomiting, unless instructed to do so by medical personnel. Rinse mouth with water but do not swallow.

Skin: Remove contaminated clothing and drench skin with water or wash off in flowing water or shower. Wash affected area with soap and water. Seek medical advice. Launder contaminated clothing before reuse.

Eye: Irrigate with flowing water immediately and continuously for at least 15 minutes. Consult medical personnel.

4.2 Most important symptoms and effects, both acute and delayed

General: Inhalation or ingestion may cause central nervous system effects, irregular pulse and systemic effects.

Inhalation: Vapours and aerosols may irritate the respiratory system. Harmful by inhalation.

Ingestion: Will cause burning sensation to mouth, throat and digestive tract.

Skin: Mildly irritating to skin. Prolonged or repeated contact will result in defatting leading to cracking and dermatitis.

Eye: May cause irritation to eyes.

4.3 Indication of any immediate medical attention and special treatment needed

Treat by observation and supportive measures as indicated by the patient's condition. No specific antidote.

Section 5: Firefighting measures

5.1 Extinguishing media

Water fog or fine spray. Carbon dioxide. Dry Chemical. Foam. Alcohol resistant foams (ATC type) are preferred if available. General-purpose synthetic foams (including AFFF) or protein foams may function but much less effectively.

5.2 Special hazards arising from the substance or mixture

During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds. Hazardous combustion products may include and are not limited to: carbon monoxide, carbon dioxide, hydrogen halides. When tested according to ASTM D56 (TCC), ASTM D92 (COC) or ASTM D93 (TCC) the product does not exhibit a flash point.

5.3 Advice for firefighters

Keep people away. Isolate fire area and deny unnecessary entry. Smoke from fires is toxic; take precautions to protect personnel from exposure, wear positive-pressure self contained breathing apparatus (SCBA). Vapours are heavier than air and may travel considerable distances. Take care on the use of direct water stream, which may spread fire. In the event of an adjacent fire, cool containers with water spray.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear suitable protective clothing including eye/face protection and gloves and wear suitable respiratory protection. Evacuate the area and keep personnel upwind.

6.2 Environmental precautions

Keep out of sewers. If contamination of drainage systems or water courses is unavoidable, immediately inform appropriate authorities.

6.3 Methods and material for containment and cleaning up

Absorb with material such as earth or sand. If available, use foam to smother or suppress. Remove contaminated material to safe location for subsequent disposal.

6.4 Reference to other sections

For further information refer to sections 8 and 13.

Section 7: Handling and storage

7.1 Precautions for safe handling

Use only in well ventilated areas and avoid spills. Avoid skin and eye contact. Wear full protective clothing for prolonged exposure, and for high concentrations. Use approved respirator if air contamination is above acceptable levels. Containers, even those that have been emptied, can contain vapours. Do not breathe vapour. When using do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

Keep in original container and tightly closed when not in use. Store in a cool well-ventilated place and do not store in open sunshine. Keep away from heat sources. Any spillages should be prevented from entering drains or watercourses.

7.3 Specific end use(s)

No additional information available.

Section 8: Exposure controls / personal protection

8.1 Control parameters

nPB (CAS No: 106-94-5): UK HSE EH40 Not established

Note: The toxicology of n-Propyl Bromide is still under review by various regulatory authorities. In accordance with the recommendation of the US EPA, we would suggest the following as a manufacturers recommended Workplace Exposure Guide: 25ppm (131 mg/m³) 8 hour TWA.

8.2 Exposure controls

Good general ventilation should be sufficient for most conditions. In case of insufficient ventilation, wear suitable respiratory equipment. L.E.V. should be provided which maintain airbourne concentrations below the relevant guidelines and to restrict the exposure. Personal protective equipment to be used as a last resort. When using, do not eat, drink or smoke.

Eye/face protection: Use chemical goggles or face shield. Eyewash stations should be provisioned.

Skin protection: Use neoprene or nitrile gloves, boots, and aprons.

EPA recommended gloves: North - Silver Shield, North Viton F123, Ansell Edmont 4H 87-4000.

Respiratory protection: Wear approved respirator if exposure likely to exceed TLV, or OES. In poorly ventilated areas or confined spaces, use an airline respirator or self-contained breathing apparatus.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Clear colourless liquid
Odour	Slight sweet aroma
Viscosity	0.42 cP at 25°C
Vapour pressure	111 mmHg at 20°C
Vapour density	4.3 (air=1)
Melting point	-110°C
Boiling point	69°C
Density	1.28 g/cm ³ at 20°C
Solubility in water	2.4 g/L at 25°C
Flammability (Closed Cup)	None
Explosivity limits	LEL 3.8%; UEL 9.7%
Autoignition temperature	490°C
Thermal decomposition temperature	204°C

9.2 Other information

No other additional information available.

Section 10: Stability and reactivity

10.1 Reactivity

Stable.

10.2 Chemical stability

Stable under recommended storage conditions. Further information can be obtained from SwanTek.

10.3 Possibility of hazardous reactions

No additional information available.

10.4 Conditions to avoid

Avoid high temperatures.

10.5 Incompatible materials

Product is incompatible with strong oxidizing agents. Product is compatible with most metals except Calcium, finely powdered Aluminium and alkali metals.

10.6 Hazardous decomposition products

Does not normally decompose. Decomposition will normally only occur if product is involved in a fire.

Section 11: Toxicological information

11.1 Information on toxicological effects

Toxicological effects:

Components:

n-Propyl Bromide (1-bromopropane):

LD50 (Rat, Oral) >2000 mg/kg

LD50 (Rat, Dermal) >2000mg/kg

LC50 (Rat, Inhalation) 72,000 mg/m³

Butylene oxide (1,2-epoxy butane)

LD50 (Rat, Oral) 500 mg/kg

LD50 (Rabbit, Dermal) 1700 mg/kg

LC50 (Rabbit, Inhalation) 4000 mg/kg

Mixture: No significant health hazard when properly used for the application it was designed for. See section 4 for exposure symptoms.

Carcinogenicity: NTP: YES; IARC: No; OSHA: No; ACGIC: Yes.
nPB included in the NTP 13th Report on Carcinogens; ACGIH 2014 book 1 - A3 cat
Mutagenicity: Ames test results gave a negative indication for mutagenicity.
Teratogenicity: Not teratogenic, NOEL (inhalation, rat) is 100ppm for maternal and fetal toxicity and is 996 ppm (inhalation, rat, 6h/day, gestation day 6-19)
Sensitization: No known skin or respiratory sensitization effects.
Irritating to skin and mucous membranes - Eye irritation (Rabbit) - Irritant. Dermal irritation (Rabbit) - Irritant. NOAEC (rat, inhalation): 1000 mg/m³
Reproductive Toxicity (NOAEC) (inhalation, rat) 503 mg/m³
Sub chronic Toxicity (NOEL) (13 weeks, inhalation, rat): 1mg/l/day
Chronic toxicity: Prolonged exposure may affect liver and central nervous system.
Route of exposure: Dermal and eye contact. Ingestion or inhalation.

Section 12: Ecological information

12.1 Toxicity

N-propyl bromide
EC50 (Daphnia magna, 48h): 99 mg/L
LC50 (rainbow trout, 96h): 24.3 mg/L

12.2 Persistence and degradability

Not readily biodegradable. Possesses a low atmospheric lifetime. Large volumes may penetrate soil and contaminate groundwater.

12.3 Bioaccumulative potential

Sinks in water. Bio-concentration potential is low. Log Kow (n-octanol/water) = 2.10
Ozone depletion potential is between 0.006 and 0.026 dependant on latitude of emission based upon 2d modeling and a figure of 0.018 for North America and Europe based on the latest 3d model.

12.4 Mobility in soil

No additional information available.

12.5 Results of PBT and vPvB assessment

Does not contain any PBT or vPvB substance.

12.6 Other adverse effects

No additional information available.

Section 13: Disposal considerations

13.1 Waste treatment methods

Do not discharge into sewers, on the ground or into any body of water. All disposal methods must be in compliance with local laws and regulations. (Regulations may vary in different locations).

For unused and uncontaminated product, the preferred disposal options include sending to a licensed, permitted recycler or reclaimer. Incineration or other thermal destruction device should be used to dispose of unwanted/contaminated product.

Packaging containers are recyclable. Rinse out well with water and send for recycling or dispose of in accordance with local authority requirements.

Section 14: Transport information

General

14.1 UN Number

UN No: 2344. Special provision A3 (air), 223 (sea) and section 2.1.2.5 (ADR-road) applies.

14.2 UN proper shipping name

Bromopropanes

14.3 Transport hazard class(es)

Not regulated for transport. Label for supply: none

14.4 Packing group

III

14.5 Environmental hazards

No additional information available.

14.6 Special precautions for user

No additional information available.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC code

No additional information available.

Section 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety data sheet is provided in compliance with the European REACH Directive (1907/2006/EC) and is in agreement with the GHS (Globally Harmonised System) for the classification and labelling of Dangerous Chemicals. This safety data sheet is distributed solely for the purpose of the Health & Safety at Work Act 1974; included under this heading is article 10 of Directive 88/379/EEC.

All components that make up this product are registered, or are not required to be listed, with: EUROPEAN INVENTORY OF NEW AND EXISTANT CHEMICAL SUBSTANCES (EINECS), and TOXIC SUBSTANCES OF CONTROL ACT (TSCA).

REACH: Regulation 1907/2006/EC - The raw materials used in this preparation have been pre-registered in accord with the requirements of REACH.

Regulatory References:

UN Globally Harmonised System for Classification & Labelling GHS ST-SG-AC10-30

UK HSE Occupational Exposure Limits Guidance Note EH40

15.2 Chemical safety assessment

No additional information available.

Section 16: Other information

Full text of H- and EUH phrases:

H225 - Highly flammable liquid and vapour

H302 - Harmful if swallowed

H312 - Harmful in contact with skin

H332 - Harmful if inhaled

NTP: National Toxicology Programme (US)

IARC: International Agency for Research on Cancer

EINECS: European Inventory of New & Existent Chemical Substances

OSHA: Occupational safety & Health Administration (US)

OECD: Organisation for Economic Co-operation and Development

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Number

STOT SE Specific Target Organ Toxicity - Single Exposure

STOT RE Specific Target Organ Toxicity - Repeated Exposure

PBT: Persistent, Bio-accumulative

vPvB: very persistent and very bio-accumulative

OES: Occupational Exposure Standard

TLV: Threshold Limit Value

TWA: Time Weighted Average

LTEL: Long term Exposure Limit

STEL: Short Term Exposure Limit

HSE: Health & Safety Executive (UK)

LEV: Local Exhaust Ventilation

The responsibility to ensure safe working conditions within the workplace remains with the user. The information on this SDS is given as a guide to the precautions required to maintain a safe work environment. This product is for professional use only. Not for sale or resale to the general public. Use in applications other than those described above may give rise to risks not covered by the information on this SDS. The physical and chemical properties on this SDS are typical properties and are not a specification. Please report any errors.