

ETHYL ACETATE SAFETY DATA SHEET

This Safety Datasheet complies with the requirements of Regulation (EC) No 1907/2006

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

1.1 Product Identifier: Ethyl Acetate

900000, 901000, 903000

Synonyms, Trade Names: ETHYL ACETATE 98 - 100%, ACETIC ACID ETHYL ESTER, ACETOXYETHANE

REACH Registration Number: 01-2119475103-46-XXXX

CAS-No: 141-78-6

EU Index No: 607-022-00-5

EC No: 205-500-4

1.2 Relevant identified uses of the substance or mixture and uses advised against: laboratory chemical for the removal of fat from faecal samples.

1.3 Details of the supplier of the Safety Data Sheet: Apacor Limited, Unit 5 Sapphire Centre, Fishponds Road, Wokingham, Berkshire, RG41 2QL, United Kingdom
+44 (0) 118 979 5566

technical@apacor.com

1.4 Emergency telephone number:

+44 (0)118 979 5566

(Monday-Friday 0900-1700 excluding UK Public Holidays)

SECTION 2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Flam. Liq. 2 - H225

STOT SE 3 - H336

Eye Irrit. 2 - H319

See Section 16 for the full text of H-Statements mentioned in this Section.

2.2 Label elements

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



Pictogram

Signal word

Danger

Hazard Statements

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Precautionary Statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P261 Avoid breathing vapour/spray.

P303+361+353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P501 Dispose of contents/container in accordance with national regulations.

Supplemental Label Information

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards

Not classified as PBT/vPvB by current EU criteria.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Hazardous ingredients according to Regulation (EC) No 1272/2008

Product Name: ETHYL ACETATE

REACH Registration Number: 01-2119475103-46-XXXX

CAS-No: 141-78-6

EU Index No: 607-022-00-5

EC No: 205-500-4

Composition Comments: The data shown are in accordance with the latest EC Directives.

SECTION 4 FIRST AID MEASURES

4.1 Description of first aid measures

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled: Remove affected person from source of contamination. Get medical attention if any discomfort continues.

In case of skin contact: Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.

In case of eye contact: Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.

If swallowed: Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention if any discomfort continues.

4.2 Most important symptoms and effects, both acute and delayed

If inhaled: Central nervous system depression including narcotic effects such as drowsiness, narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.

In case of skin contact: Prolonged contact may cause redness, irritation and dry skin.

In case of eye contact: May cause temporary eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Notes for doctor: No specific recommendations. If in doubt, get medical attention promptly.

SECTION 5 FIRE FIGHTING MEASURES

5.1 Extinguishing Media: Suitable extinguishing media: alcohol-resistant foam, carbon dioxide, dry powder or water fog.

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5.2 Special Hazards Arising from the Substance or Mixture

Specific Hazards: Carbon oxides.

5.3 Advice for Fire-fighters

Protective Equipment for Fire-fighters: Positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Follow precautions for safe handling described in this safety data sheet. Take precautionary measures against static discharges. Avoid inhalation of vapours and contact with skin and eyes.

6.2 Environmental precautions

Spillages or uncontrolled discharges into watercourses must be immediately alerted to the Environmental Agency or other appropriate regulatory body.

6.3 Methods and material for containment and cleaning up

Absorb spillage with inert, damp, non-combustible material. Flush contaminated area with plenty of water. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13.

6.4 Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid spilling. Avoid contact with skin and eyes. Keep away from heat, sparks and open flame. Provide adequate ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Storage precautions: Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep away from heat, sparks and open flame.

Storage class: Flammable liquid storage.

7.3 Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Name	STD	TWA – 8 Hrs	STEL – 15 Min
Ethyl Acetate	WEL	200 ppm	400 ppm

WEL = Workplace Exposure Limit

Ingredient Comments

DNEL Industry Inhalation. 1468 mg/m³
 DNEL Consumer Inhalation. 734 mg/m³
 DNEL Industry Dermal Long Term 63mg/kg/day
 DNEL Industry Inhalation Long Term 734 mg/m³
 DNEL Consumer Dermal Long Term 37mg/kg/day
 DNEL Consumer Inhalation Long Term 367mg/m³
 PNEC Freshwater 0.26
 PNEC Soil 0.22mg/kg
 PNEC Sediment 0.34mg/kg
 PNEC STP 650mg/l

8.2 Exposure controls

8.2.1 Appropriate engineering controls

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

8.2.2 Personal protective equipment



(a) 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).

(b) 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 should satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Butyl rubber gloves are recommended.

(c) Body Protection: Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Other Protection: Wear rubber apron. Wear rubber footwear.

(d) 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), fitted with type A2 gas filter cartridge.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) **Appearance Form:** colourless liquid

b) **Odour** Fruity

c) **Odour threshold** no data available

d) **pH** no data available

e) **Melting point / freezing point** -83.8°C

f) **Initial boiling point and boiling range** 76-77°C

g) **Flash point** -4°C closed cup

h) **Evaporation rate** 4.5 (diethyl ether=1)

i) **Flammability (solid, gas)** no data available

j) **Upper/lower flammability or explosive limits** 2.2% lower, 11.5% upper

k) **Vapour pressure** no data available

l) **Vapour density** 3.04

m) **Relative density** 0.899 – 0.903 @ 20°C

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- n) **Solubility (ies)** soluble in water
 o) **Partition coefficient: n-octanol/water** 0.68
 p) **Auto-ignition temperature** 427°C
 q) **Decomposition temperature** no data available
 r) **Viscosity** 0.4508 mPas @ 20°C
 s) **Explosive properties** no data available
 t) **Oxidising properties** no data available

9.2 Other information

Mol. Weight 88.11

SECTION 10 STABILITY AND REACTIVITY

10.1 Reactivity

No known reactivity hazards associated with this product.

10.2 Chemical stability

Stable under normal ambient temperature conditions and recommended use.

10.3 Possibility of hazardous reactions

Hazardous Polymerisation: Will not polymerise.

10.4 Conditions to avoid

Avoid excessive heat for prolonged periods of time. Avoid heat, flames and other sources of ignition.

10.5 Incompatible materials

Materials To Avoid: Strong oxidising substances.

10.6 Hazardous decomposition products

Oxides of: Carbon.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1 Information of toxicological effects

Acute toxicity: (Oral LD50): 4934 mg/kg Rabbit OECD 401

(Dermal LD50): > 20000 mg/kg Rabbit OECD 404

Skin corrosion/irritation: Repeated exposure may cause skin dryness or cracking.

Serious eye damage/eye irritation: Slightly irritating.

Respiratory or skin sensitisation: Irritating to respiratory system. Vapours have a narcotic effect and may cause headache, fatigue, dizziness, nausea and vomiting.

Germ cell mutagenicity: no data available

Carcinogenicity: no data available

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

Additional Information

Ingestion: May cause discomfort if swallowed. Narcotic effect.

SECTION 12 ECOLOGICAL INFORMATION

12.1 Toxicity

Ecotoxicity: The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

Toxicity to Fish

Ethyl Acetate	LC50 96 hours 230 mg/l Pimephales promelas (Fat-head Minnow)
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Toxicity to Daphnia and other Aquatic Invertebrates

Ethyl Acetate	NOEC 72 hours > 100 mg/l Daphnia magna
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12.2 Persistence and degradability

The product is readily biodegradable.

12.3 Bioaccumulative potential

No data available. Partition coefficient: 0.68

12.4 Mobility in soil

The product is soluble in water. Surface Tension: 24 mN/m 20.

12.5 Results of PBT and vPvB assessment

Not Classified as PBT/vPvB by current EU criteria.

12.6 Other adverse effects

Not determined.

SECTION 13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

General Information: Waste to be treated as controlled waste. Disposal to licensed waste disposal site in accordance with local Waste Disposal Authority. Do not puncture or incinerate even when empty. Dispose of waste and residues in accordance with local authority requirements.

SECTION 14 TRANSPORT INFORMATION

General: Wear protective clothing as described in Section 8 of this safety data sheet.

14.1 UN number (ADR/RID/IMDG/ICAO) 1173

14.2 UN proper shipping name Ethyl Acetate

14.3 Transport hazard class(es)

ADR/RID/IMDG/ICAO Class: 3

ADR Label No: 3

IMDG Class: 3

ICAO Class/Division: 3

Transport label:



14.4 Packing group

ADR/RID/IMDG/ICAO Packing group: II

14.5 Environmental hazards No

14.6 Special precautions for user

EMS: F-E, S-D

Emergency Action Code: *3YE

Hazard Identification No. (ADR/RID): 33

Tunnel Restriction Code: (D/E)

SECTION 15 REGULATORY INFORMATION

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

National Regulations: The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I. 2009 No. 716).

EU Legislation: Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on



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classification, labelling and packaging of substances and mixtures (as amended).

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

This product may impact SEVESO storage regulations.

Guidance: CHIP for everyone HSG228.

Workplace Exposure Limits EH40.

Safety Data Sheets for Substances and Preparations.

Approved Classification and Labelling Guide (Sixth edition) L131.

DSEAR

Water Hazard Classification: WGK 1

15.2 Chemical Safety Assessment

A chemical safety assessment has not been carried out.

Inventory Information: TSCA EINECS PICCS NZIOC KECL ISHL ENCS

AICS DSL IECS

SECTION 16 OTHER INFORMATION

Hazard Statements in Full

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

EUH066 Repeated exposure may cause skin dryness or cracking.

The information supplied in this SDS is correct to the best of our knowledge. We do not accept any liability for loss, injury or damage, which may result from its use.

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

1.1 Product Identifier: SAF

(Sodium Acetate-Acetic Acid-Formalin Solution)
901000

1.2 Relevant identified uses of the substance or mixture and uses advised against: laboratory chemical (in vitro diagnostic)

1.3 Details of the supplier of the Safety Data Sheet:

Apacor Limited, Unit 5 Sapphire Centre, Fishponds Road,
Wokingham, Berkshire, RG41 2QL, United Kingdom
+44 (0) 118 979 5566
technical@apacor.com

1.4 Emergency telephone number:

+44 (0)118 979 5566
(Monday-Friday 0900-1700 excluding UK Public Holidays)

SECTION 2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Acute toxicity, Oral (Category 4), H302
Skin sensitisation (Category 1), H317
Acute toxicity, Inhalation (Category 4), H332
Germ Cell Mutagenicity (Category 2), H341
Carcinogenicity (Category 1B), H350

See Section 16 for the full text of H-Statements mentioned in this Section.

2.2 Label elements

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



Pictogram
Signal word

Danger

Hazard statement(s)

H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
Contains Formaldehyde

Precautionary statements:

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician
P308 + P313 - IF exposed or concerned: Get medical advice/ attention

2.3 Other hazards

No data available.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component: **Formaldehyde**

CAS No: 50-00-0

EC No: 200-001-8

Index No: 605-001-00-5

Classification: Acute Tox. 3 (H301 + H311 + H331); Skin Corr. 1B (H314); Skin Sens. 1 (H317); Muta. 2 (H341); Carc. 1B (H350);

Concentration: < 5%

Component: **Methanol**

CAS No: 67-56-1

EC No: 200-659-6

Index No: 603-001-00-x

Registration No: 01-2119433307-44-xxxx

Classification: Flam. Liq. 2 (H225); Acute Tox 3 (H301 + H311 + H331); STOT SE 1 (H370)

Concentration: < 1%

Component: **Acetic Acid**

CAS No: 64-19-7

EC No: 200-580-7

Index No: -

Registration No: -

Classification: Skin Corr. 1A (H314) ; Flam. Liq 3 (H226)

Concentration: ≤ 2%

SECTION 4 FIRST AID MEASURES

4.1 Description of first aid measures

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.

In case of skin contact: Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothes and shoes.

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

The most important known symptoms and effects are described in the labelling (Section 2.2) and/or in Section 11.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: treat symptomatically.

SECTION 5 FIRE FIGHTING MEASURES

5.1 Extinguishing media

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

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5.2 Special hazards arising from the substance or mixture

Carbon oxides.

5.3 Advice for firefighters

Wear self-contained breathing apparatus and full protective gear.

SECTION 6 ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid breathing vapours, 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. For personal protection see Section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and material for containment and cleaning up

Contain spillage and place in container for disposal according to local regulations (see Section 13). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal, see Section 13.

SECTION 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. For precautions, see Section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in a 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.

7.3 Specific end use(s)

No other specific uses are specified apart from those listed in Section 1.2.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

	Formaldehyde 50-00-0	Methanol 67-56-1	Acetic Acid 64-19-7
Austria	STEL: 0.5 ppm STEL: 0.6 mg/m ³ TWA: 0.5 ppm TWA: 0.6 mg/m ³	STEL: 800 ppm STEL: 1040 mg/m ³ TWA: 200 ppm TWA: 260 mg/m ³	STEL: 20 ppm STEL: 50 mg/m ³ TWA: 10 ppm TWA: 25 mg/m ³
Belgium	STEL: 0.3 ppm STEL: 0.38 mg/m ³	STEL: 250 ppm STEL: 333 mg/m ³ TWA: 200 ppm TWA: 266 mg/m ³	STEL: 15 ppm STEL: 38 mg/m ³ TWA: 10 ppm TWA: 25 mg/m ³

	Formaldehyde 50-00-0	Methanol 67-56-1	Acetic Acid 64-19-7
Denmark	STEL: 0.3 ppm STEL: 0.4 mg/m ³ TWA: 0.3 ppm TWA: 0.4 mg/m ³	STEL: 400 ppm STEL: 520 mg/m ³ TWA: 200 ppm TWA: 260 mg/m ³	STEL: 20 ppm STEL: 50 mg/m ³ TWA: 10 ppm TWA: 25 mg/m ³
France	TWA: 0.5 ppm STEL: 1 ppm	STEL: 1000 ppm STEL: 1300 mg/m ³ TWA: 200 ppm TWA: 260 mg/m ³	STEL: 10 ppm STEL: 25 mg/m ³
Germany	STEL: 0.6 ppm STEL: 0.74 mg/m ³ TWA: 0.3 ppm TWA: 0.37 mg/m ³	STEL: 800 ppm STEL: 1080 mg/m ³ TWA: 200 ppm TWA: 270 mg/m ³	STEL: 20 ppm STEL: 50 mg/m ³ TWA: 10 ppm TWA: 25 mg/m ³
Ireland	STEL: 2 ppm STEL: 2.5 mg/m ³ TWA: 2 ppm TWA: 2.5 mg/m ³	TWA: 200 ppm TWA: 260 mg/m ³	STEL: 15 ppm STEL: 37 mg/m ³ TWA: 10 ppm TWA: 25 mg/m ³
Italy		TWA: 200 ppm TWA: 260 mg/m ³	TWA: 10 ppm TWA: 25 mg/m ³
Poland	STEL: 1 mg/m ³ TWA: 0.5 mg/m ³	STEL: 300 mg/m ³ TWA: 100 mg/m ³	STEL: 30 mg/m ³ TWA: 15 mg/m ³
Portugal	STEL: 0.3 ppm	STEL: 250 ppm TWA: 200 ppm TWA: 260 mg/m ³	STEL: 15 ppm TWA: 10 ppm TWA: 25 mg/m ³
Spain	STEL: 0.3 ppm STEL: 0.37 mg/m ³	STEL: 250 ppm STEL: 333 mg/m ³ TWA: 200 ppm TWA: 266 mg/m ³	STEL: 15 ppm STEL: 37 mg/m ³ TWA: 10 ppm TWA: 25 mg/m ³
Sweden	STEL: 0.6 ppm STEL: 0.74 mg/m ³ TWA: 0.3 ppm TWA: 0.37 mg/m ³	STEL: 250 ppm STEL: 350 mg/m ³ TWA: 200 ppm TWA: 250 mg/m ³	STEL: 10 ppm STEL: 25 mg/m ³ TWA: 5 ppm TWA: 13 mg/m ³
The Netherlands	STEL: 0.5 mg/m ³ TWA: 0.15 mg/m ³	TWA: 133 mg/m ³	
UK	STEL: 2 ppm STEL: 2.5 mg/m ³ TWA: 2 ppm TWA: 2.5 mg/m ³	STEL: 250 ppm STEL: 333 mg/m ³ TWA: 200 ppm TWA: 266 mg/m ³	

8.2 Exposure controls**8.2.1 Appropriate engineering controls**

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

8.2.2 Personal protective equipment

(a) 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).

(b) 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 should satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

(c) Body Protection: Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

(d) 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

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a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

8.2.3 Environmental exposure controls

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) **Appearance** aqueous solution Form: colourless liquid

b) **Odour** characteristic

c) **Odour threshold** no data available

d) **pH** no data available

e) **Melting point / freezing point** no data available

f) **Initial boiling point and boiling range** 102°C

g) **Flash point** >105°C

h) **Evaporation rate** no data available

i) **Flammability (solid, gas)** no data available

j) **Upper/lower flammability or explosive limits** no data available

k) **Vapour pressure** no data available

l) **Vapour density** >1

m) **Relative density** 1.071

n) **Solubility (ies)** Soluble in water

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

p) **Auto-ignition temperature** no data available

q) **Decomposition temperature** no data available

r) **Viscosity** no data available

s) **Explosive properties** no data available

t) **Oxidising properties** no data available

9.2 Other information

No data available.

SECTION 10 STABILITY AND REACTIVITY

10.1 Reactivity

No data available.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

No materials to be mentioned in particular.

10.6 Hazardous decomposition products

Carbon oxides.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1 Information of toxicological effects

Acute toxicity: no data available

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitisation: no data available

Germ cell mutagenicity: no data available

Carcinogenicity: IARC: 1 - Group 1: Carcinogenic to humans (Formaldehyde)

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

Additional Information

Chemical Name	
Formaldehyde	LD50 oral 600 mg/kg (Rat) LD50 dermal 270 mg/kg (Rabbit) LC50 inhalation 0.578 mg/L (Rat) 4 h
Methanol	LD50 oral - rat - 5628 mg / kg LC50 inhalation - rat - 4h – 83.2 mg/l/4h
Acetic Acid	LD50 oral 3310 mg/kg (Rat) LD50 dermal 1060 mg/kg (Rabbit) LC50 inhalation 11.4 mg/L (Rat) 4 h

SECTION 12 ECOLOGICAL INFORMATION

12.1 Toxicity

Ecotoxicity effects: contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.

Toxicity to Fish	
Formaldehyde	0.032 - 0.226: 96 h Oncorhynchus mykiss mL/L LC50 flow-through 100- 136: 96 h Oncorhynchus mykiss mg/L LC50 static 1510: 96 h Lepomis macrochirus µg/L LC50 static 22.6 - 25.7: 96 h Pimephales promelas mg/L LC50 flow-through 23.2 - 29.7: 96 h Pimephales promelas mg/L LC50 static 41: 96 h Brachydanio rerio mg/L LC50 static
Methanol	LC50 - Pimephales promelas – 28200 mg / L 96h
Acetic Acid	75: 96 h Lepomis macrochirus mg/L LC50 static 79: 96 h Pimephales promelas mg/L LC50 static

Toxicity to Daphnia and other Aquatic Invertebrates

Formaldehyde	11.3 - 18: 48 h Daphnia magna mg/L EC50 Static 2: 48 h Daphnia magna mg/L LC50
Methanol	EC50 - Daphnia magna - >10000 mg/l
Acetic Acid	47: 24 h Daphnia magna mg/L EC50 65: 48 h Daphnia magna mg/L EC50 Static

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

Chemical Name	log Pow
Formaldehyde	0.35
Methanol	-0.77
Acetic Acid	0

12.4 Mobility in soil

No data available.



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12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No data available.

12.7 Additional information

None.

Amended sections are indicated by a line in the border.

The information supplied in this SDS is correct to the best of our knowledge. We do not accept any liability for loss, injury or damage, which may result from its use.

SECTION 13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product: Dispose of waste in accordance with all federal, state, and local regulations.

Contaminated packaging: Dispose of as unused product.

SECTION 14 TRANSPORT INFORMATION

IATA/DOT/IMDG/TDG: Not regulated.

14.1 UN number: -

14.2 UN proper shipping name: -

14.3 Transport hazard class(es): -

14.4 Packing group: -

14.5 Environmental hazards: -

14.6 Special precautions for user: -

SECTION 15 REGULATORY INFORMATION

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

No data available.

15.2 Chemical Safety Assessment

No chemical safety assessment has been carried out for this product.

SECTION 16 OTHER INFORMATION

Full text of H-Statements referred to in Sections 2 and 3

H225 Highly flammable liquid and vapour.

H226 Flammable liquid and vapour.

H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

H341 Suspected of causing genetic defects.

H350 May cause cancer.

H370 Causes damage to organs.

Acute Tox. Acute toxicity

Carc. Carcinogenicity

Flam. Liq. Flammable liquids

Muta. Germ Cell Mutagenicity

Skin Corr. Skin corrosion

Skin Sens. Skin sensitisation

STOT SE Specific target organ toxicity - single exposure

TRITON X SOLUTION SAFETY DATA SHEET

This Safety Datasheet complies with the requirements of Regulation (EC) No 1907/2006

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/ MIXTURE AND THE COMPANY/UNDERTAKING**1.1 Product Identifier: 1472, 172018****TRITON X Solution**

Used at concentration of $\leq 0.1\%$ in: 900000, 901000, 903000

1.2 Relevant identified uses of the substance or mixture and uses advised against: for laboratory use (in vitro diagnostic).

1.3 Details of the supplier of the Safety Data Sheet:

Apacor Limited, Unit 5 Sapphire Centre, Fishponds Road, Wokingham, Berkshire, RG41 2QL, England

+44 (0) 118 979 5566

technical@apacor.com

1.4 Emergency telephone number:

+44 (0)118 979 5566

(Monday-Friday 0900-1700 excluding UK Public Holidays)

SECTION 2 HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008

[CLP]:

Serious eye damage (Category1), H318

See Section 16 for the full text of H-Statements mentioned in this Section.

2.2 Label elements

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



Pictogram

Signal word

Danger

Hazard statement(s)

H318 Causes serious eye damage

Precautionary statements:

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.

P313 Get medical advice/attention.

See Section 16 for the full text of H-Statements mentioned in this Section.

2.3 Other hazards

None known.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS**3.2 Mixtures****Hazardous ingredients according to Regulation (EC) No 1272/2008**

Component: **Triton X-100** (concentration 10–20%) (included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No 1907/2006 (REACH))

CAS No: 9002-93-1

EC No: -

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

Classification: Acute Tox. 4 (H302); Serious Eye Dam. 1 (H318)

Concentration: 5–10%

See Section 16 for the full text of H-Statements mentioned in this Section.

SECTION 4 FIRST AID MEASURES**4.1 Description of first aid measures**

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: Take off immediately all contaminated clothing. Rinse skin with water/shower.

In case of eye contact: rinse out with plenty of water. Immediately consult an ophthalmologist.

If swallowed: immediately make victim drink water (2 glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

Irritation and corrosion. Risk of serious damage to eyes.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5 FIRE FIGHTING MEASURES**5.1 Extinguishing media**

Suitable extinguishing media: Use water spray, foam, dry chemical or carbon dioxide. (Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.)

Unsuitable extinguishing media: For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Not combustible. Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.

Further information: Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6 ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

TRITON X SOLUTION SAFETY DATA SHEET

This Safety Datasheet complies with the requirements of Regulation (EC) No 1907/2006

Advice for emergency responders: Protective equipment see Section 8.

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 material for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal, see Section 13.

SECTION 7 HANDLING AND STORAGE**7.1 Precautions for safe handling**

Avoid inhalation of vapour or mist. For precautions see Section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Tightly closed. Recommended storage temperature see product label.

7.3 Specific end use(s)

No other specific uses are specified apart from those listed in Section 1.2.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters**

Contains no substances with occupational exposure limit values.

8.2 Exposure controls**8.2.1 Appropriate engineering controls**

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

8.2.2 Personal protective equipment

(a) 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).

(b) 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 should satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

(c) Body Protection: Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

(d) 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).

8.2.3 Environmental exposure controls

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

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

a) Appearance Form: clear, liquid; Colour: light yellow

b) Odour no data available

c) Odour threshold no data available

d) pH 9.7

e) Melting point / freezing point approx. 6°C

f) Initial boiling point and boiling range 200°C

g) Flash point 251°C

h) Evaporation rate no data available

i) Flammability (solid, gas) no data available

j) Upper/lower flammability or explosive limits no data available

k) Vapour pressure <1 hPa at 25°C

l) Vapour density no data available

m) Relative density 1.070 g/cm³

n) Solubility (ies) Soluble in water

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

p) Auto-ignition temperature no data available

q) Decomposition temperature no data available

r) Viscosity no data available

s) Explosive properties no data available

t) Oxidising properties no data available

9.2 Other information no data available

SECTION 10 STABILITY AND REACTIVITY**10.1 Reactivity**

No data available.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

No data available.

10.5 Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents.

10.6 Hazardous decomposition products

Other decomposition products—no data available. In the event of fire: see Section 5.

TRITON X SOLUTION SAFETY DATA SHEET

This Safety Datasheet complies with the requirements of Regulation (EC) No 1907/2006

SECTION 11 TOXICOLOGICAL INFORMATION**11.1 Information of toxicological effects****Acute toxicity:** no data available**Skin corrosion/irritation:** no data available**Serious eye damage/eye irritation:** no data available**Respiratory or skin sensitisation:** no data available**Germ cell mutagenicity:** no data available**Carcinogenicity:** IARC: no component of this product present at levels greater than 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**Additional information:** RTECS: not available. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.**11.2 Further information**

Triton X-100

Acute oral toxicity: LD50 Rat: 1,800 mg/kg (RTECS)

Germ cell mutagenicity: Genotoxicity in vitro Mutagenicity (mammal cell test): Mouse lymphoma test Result: negative

SECTION 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

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects

Discharge into the environment must be avoided.

Components: Triton X-100

Toxicity to fish

LC50 *Lepomis macrochirus*: 2,800 - 3,200 µg/l; 96 h

Toxicity to daphnia and other aquatic invertebrates

LC50 *Daphnia magna*: 11.2 mg/l; 48 h**12.7 Additional information**

No data available.

SECTION 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.**SECTION 14 TRANSPORT INFORMATION****IATA/DOT/IMDG/TDG:** Not regulated.**14.1 UN number:** -**14.2 UN proper shipping name:** -**14.3 Transport hazard class(es):** -**14.4 Packing group:** -**14.5 Environmental hazards:** -**14.6 Special precautions for user:** -**SECTION 15 REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Substances of very high concern (SVHC): This product does contain substances of very high concern above the respective regulatory limit (>0.1% w/w), Regulation (EC) No 1907/2006 (REACH), Article 57).

Contains: Triton X-100.

15.2 Chemical Safety Assessment

No chemical safety assessment has been carried out for this product.

SECTION 16 OTHER INFORMATION**Full text of H-Statements referred to in Sections 2 and 3**

H302 Harmful if swallowed

H318 Causes serious eye damage

Acute Tox. Acute Toxicity

Serious Eye Dam. Serious Eye Damage

Amended sections are indicated by a line in the border.

The information supplied in this SDS is correct to the best of our knowledge. We do not accept any liability for loss, injury or damage, which may result from its use.