



SAFETY DATA SHEET

Perma Seel Solvent

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

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

1.1. Product identifier

Product name Perma Seel Solvent

Product number 525306

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

Identified uses Embalming Sealant

1.3. Details of the supplier of the safety data sheet

Supplier The MazWell Group Ltd.
Units 11/14-15 Ardglen Industrial Estate,
Whitchurch, Hampshire,
RG28 7BB, United Kingdom
+44 (0)1256-893883
+44 (0)1256-893868
enquiries@themazwellgroup.com

1.4. Emergency telephone number

Emergency telephone +44 (0)1256 893883 (Mon- Fri 9:00 am - 4:30 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Flam. Liq. 2 - H225

Health hazards Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 STOT SE 3 - H335

Environmental hazards Not Classified

2.2. Label elements

Hazard pictograms



Signal word Danger

Hazard statements
H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

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Precautionary statements	<p>P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P312 Call a POISON CENTRE/doctor if you feel unwell.</p> <p>P403+P233 Store in a well-ventilated place. Keep container tightly closed.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
Contains	4-Chloro- α,α,α -trifluorotoluene
Supplementary precautionary statements	<p>P240 Ground and bond container and receiving equipment.</p> <p>P241 Use explosion-proof electrical equipment.</p> <p>P242 Use non-sparking tools.</p> <p>P243 Take action to prevent static discharges.</p> <p>P261 Avoid breathing vapour/ spray.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water.</p> <p>P321 Specific treatment (see medical advice on this label).</p> <p>P332+P313 If skin irritation occurs: Get medical advice/ attention.</p> <p>P337+P313 If eye irritation persists: Get medical advice/ attention.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.</p> <p>P403+P235 Store in a well-ventilated place. Keep cool.</p> <p>P405 Store locked up.</p>

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

4-Chloro-α,α,α-trifluorotoluene	50 - 100%
CAS number: 98-56-6	EC number: 202-681-1
Classification	
Flam. Liq. 3 - H226	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
STOT SE 3 - H335	
Acetone	10 - <25%
CAS number: 67-64-1	EC number: 200-662-2
Classification	
Flam. Liq. 2 - H225	
Eye Irrit. 2 - H319	
STOT SE 3 - H336	

The full text for all hazard statements is displayed in Section 16.

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SECTION 4: First aid measures

4.1. Description of first aid measures

General information	If in doubt, get medical attention promptly.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.
Ingestion	Do not induce vomiting unless under the direction of medical personnel. Get medical attention if a large quantity has been ingested.
Skin contact	Remove affected person from source of contamination. Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

4.2. Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	May cause respiratory system irritation.
Ingestion	May cause discomfort if swallowed.
Skin contact	Causes skin irritation.
Eye contact	Causes eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products	Carbon monoxide (CO). Carbon dioxide (CO ₂). Chlorine.
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5.3. Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapours. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out.
Special protective equipment for firefighters	Wear 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

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. Avoid contact with skin and eyes.
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6.2. Environmental precautions

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Environmental precautions Avoid discharge to the aquatic environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Eliminate all sources of ignition. Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Absorb spillage with inert, damp, non-combustible material. Collect and dispose of spillage as indicated in Section 13.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid spilling. Avoid contact with skin, eyes and clothing.

Advice on general occupational hygiene Do not eat, drink or smoke when using this product. Wash promptly if skin becomes contaminated. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep container tightly closed, in a cool, well ventilated place.

7.3. Specific end use(s)

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

Occupational exposure limits

Acetone

Long-term exposure limit (8-hour TWA): WEL 500 ppm 1210 mg/m³

Short-term exposure limit (15-minute): WEL 1500 ppm 3620 mg/m³

WEL = Workplace Exposure Limit.

8.2. Exposure controls

Appropriate engineering controls Provide adequate ventilation. Use explosion-proof ventilating equipment.

Eye/face protection Wear chemical splash goggles.

Hand protection It is recommended that chemical-resistant, impervious gloves are worn. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected.

Other skin and body protection Wear appropriate clothing to prevent repeated or prolonged skin contact.

Hygiene measures Wash contaminated skin thoroughly after handling. Do not eat, drink or smoke when using this product. Provide eyewash station. Wash at the end of each work shift and before eating, smoking and using the toilet.

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Respiratory protection Provide adequate ventilation. Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible.

Environmental exposure controls Keep container tightly sealed when not in use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Clear liquid.
Colour	Colourless.
Odour	Hydrocarbons.
Odour threshold	Not available.
pH	Not available.
Melting point	Not available.
Initial boiling point and range	66-68°C @ 760 mm Hg
Flash point	< 22°C Closed cup.
Evaporation rate	> 1 (butyl acetate = 1)
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 1% Upper flammable/explosive limit: 13%
Vapour pressure	Not available.
Vapour density	> 1
Relative density	0.99-1.00 @ 20°C
Solubility(ies)	Slightly soluble in water.
Partition coefficient	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	Not available.
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Volatility 100%

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity See the other subsections of this section for further details.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Will not polymerise.

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10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition. Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials

Materials to avoid Strong reducing agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data Irritating.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met. May cause sensitisation or allergic reactions in sensitive individuals.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Genotoxicity - in vivo Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure STOT SE 3 - H335 May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

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Inhalation	Irritating to respiratory system.
Ingestion	May cause discomfort if swallowed.
Skin contact	Irritating to skin.
Eye contact	Irritating to eyes.

Toxicological information on ingredients.

4-Chloro- α,α,α -trifluorotoluene

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,546.0

Species Rat

Notes (oral LD₅₀) REACH dossier information. Based on available data the classification criteria are not met.

ATE oral (mg/kg) 5,546.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 3,301.0

Species Rabbit

Notes (dermal LD₅₀) REACH dossier information. Based on available data the classification criteria are not met.

ATE dermal (mg/kg) 3,301.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ dust/mist mg/l) 32.03

Species Rat

Notes (inhalation LC₅₀) REACH dossier information. Based on available data the classification criteria are not met.

ATE inhalation (dusts/mists mg/l) 32.03

Skin corrosion/irritation

Animal data Irritating.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Germ cell mutagenicity

Genotoxicity - in vitro Gene mutation: Negative. REACH dossier information. Based on available data the classification criteria are not met.

Genotoxicity - in vivo Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.

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Reproductive toxicity

Reproductive toxicity - fertility One-generation study - NOAEL 45 mg/kg/day, Oral, Rat F1 REACH dossier information. Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure STOT SE 3 - H335 May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure LOAEL 150 mg/kg/day, Oral, Rat

Acetone

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,800.0

Species Rat

ATE oral (mg/kg) 5,800.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 7,427.0

Species Rabbit

ATE dermal (mg/kg) 7,427.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ gases ppmV) 54,000.0

Species Rat

Acute toxicity inhalation (LC₅₀ vapours mg/l) 128.0

Species Rat

ATE inhalation (gases ppm) 54,000.0

ATE inhalation (vapours mg/l) 128.0

Skin corrosion/irritation

Human skin model test Repeated exposure may cause skin dryness or cracking.

Skin sensitisation

Skin sensitisation Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Gene mutation: Negative. This substance has no evidence of mutagenic properties.

Carcinogenicity

Carcinogenicity NOEL 0.1 ml, Dermal, Mouse

Reproductive toxicity

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Reproductive toxicity - development Maternal toxicity: - NOAEC: 2200 ppm, Inhalation, Rat No evidence of reproductive toxicity in animal studies.

Specific target organ toxicity - single exposure

STOT - single exposure STOT SE 3 - H336 Vapours may cause drowsiness and dizziness.

Target organs Central nervous system

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEL 20000 ppm, Oral, Mouse Not classified as a specific target organ toxicant after repeated exposure.

SECTION 12: Ecological information

12.1. Toxicity

Toxicity Aquatic toxicity is unlikely to occur. However, large or frequent spills may have hazardous effects on the environment.

Ecological information on ingredients.

4-Chloro- α,α,α -trifluorotoluene

Toxicity Based on available data the classification criteria are not met.

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 3 mg/l, Brachydanio rerio (Zebra Fish)

Acute toxicity - aquatic invertebrates IC₅₀, 48 hours: 2 mg/l, Daphnia magna

Acetone

Toxicity Aquatic toxicity is unlikely to occur.

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 6210 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates LC₅₀, 48 hours: 8800 mg/l, Daphnia pulex

Acute toxicity - aquatic plants NOEC, 8 days: 530 mg/l, Microcystis aeruginosa

Acute toxicity - microorganisms EC₁₂, 30 minutes: 1000 mg/l, Activated sludge

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates NOEC, 28 days: 1106 - 2212 mg/l, Daphnia magna
LOEC, 28 days: 2212 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability The degradability of the product is not known.

Ecological information on ingredients.

4-Chloro- α,α,α -trifluorotoluene

Phototransformation Water - Degradation 3%: 28 days

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Biodegradation Water - Degradation 19.2%: 28 days

Acetone

Persistence and degradability The product is readily biodegradable.

Phototransformation Water - DT₅₀ : 10 days

Biodegradation Water - Degradation (90.9%): 28 days

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not available.

Ecological information on ingredients.

4-Chloro- α,α,α -trifluorotoluene

Bioaccumulative potential BCF: 121.8, Lepomis macrochirus (Bluegill)

Partition coefficient log Pow: 3.7

Acetone

Partition coefficient log Pow: -0.24

12.4. Mobility in soil

Mobility Semi-mobile.

Ecological information on ingredients.

4-Chloro- α,α,α -trifluorotoluene

Mobility Semi-mobile.

Adsorption/desorption coefficient Water - Koc: 420-530 @ 20°C

Surface tension 71.9 mN/m @ 20°C

Acetone

Mobility The product is soluble in water.

Henry's law constant 2.929 Pa m³/mol @ 25°C

Surface tension 23700 mN/m @ 20°C

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

4-Chloro- α,α,α -trifluorotoluene

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

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Acetone

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods Do not empty into drains. Dispose of contents/container in accordance with national regulations.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	1993
UN No. (IMDG)	1993
UN No. (ICAO)	1993
UN No. (ADN)	1993

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	FLAMMABLE LIQUID, N.O.S. (1-CHLORO-4-TRIFLUOROMETHYL BENZENE, ACETONE)
Proper shipping name (IMDG)	FLAMMABLE LIQUID, N.O.S. (1-CHLORO-4-TRIFLUOROMETHYL BENZENE, ACETONE)
Proper shipping name (ICAO)	FLAMMABLE LIQUID, N.O.S. (1-CHLORO-4-TRIFLUOROMETHYL BENZENE, ACETONE)
Proper shipping name (ADN)	FLAMMABLE LIQUID, N.O.S. (1-CHLORO-4-TRIFLUOROMETHYL BENZENE, ACETONE)

14.3. Transport hazard class(es)

ADR/RID class	3
ADR/RID classification code	F1
ADR/RID label	3
IMDG class	3
ICAO class/division	3
ADN class	3

Transport labels



14.4. Packing group

ADR/RID packing group	II
IMDG packing group	II
ICAO packing group	II
ADN packing group	II

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14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS	F-E, S-E
ADR transport category	2
Emergency Action Code	•3YE
Hazard Identification Number (ADR/RID)	33
Tunnel restriction code	(D/E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not relevant.

SECTION 15: Regulatory information

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

National regulations	EH40/2005 Workplace exposure limits. The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].
EU legislation	Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on 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). Commission Regulation (EU) No 2015/830 of 28 May 2015.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Classification abbreviations and acronyms	Eye Irrit. = Eye irritation Flam. Liq. = Flammable liquid Skin Irrit. = Skin irritation STOT SE = Specific target organ toxicity-single exposure
Training advice	Only trained personnel should use this material.
Revision comments	Revised regulations.
Revision date	27/08/2019
Revision	4
Supersedes date	30/08/2016
SDS number	657

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Hazard statements in full	H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness.
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This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.