



## SAFETY DATA SHEET

### Permaglo Arterial

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** Permaglo Arterial  
**Product number** 104017

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

**Identified uses** Embalming Chemical

##### 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** Not Classified  
**Health hazards** Acute Tox. 3 - H301 Acute Tox. 3 - H311 Acute Tox. 3 - H331 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Muta. 2 - H341 Carc. 1B - H350 STOT SE 3 - H335  
**Environmental hazards** Not Classified

##### 2.2. Label elements

###### Hazard pictograms



**Signal word** Danger

**Hazard statements** H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.  
 H314 Causes severe skin burns and eye damage.  
 H317 May cause an allergic skin reaction.  
 H335 May cause respiratory irritation.  
 H341 Suspected of causing genetic defects.  
 H350 May cause cancer.

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<b>Precautionary statements</b>	<p>P201 Obtain special instructions before use.</p> <p>P260 Do not breathe vapour/ spray.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</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>P311 Call a POISON CENTER/ doctor.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
<b>Contains</b>	Formaldehyde
<b>Supplementary precautionary statements</b>	<p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P261 Avoid breathing vapour/ spray.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/ attention.</p> <p>P312 Call a POISON CENTRE/doctor if you feel unwell.</p> <p>P321 Specific treatment (see medical advice on this label).</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P361+P364 Take off immediately all contaminated clothing and wash it before reuse.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P403+P233 Store in a well-ventilated place. Keep container tightly closed.</p>

### 2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

<b>Formaldehyde</b>	<b>50 - 100%</b>
CAS number: 50-00-0	EC number: 200-001-8
<b>Classification</b>	
Acute Tox. 3 - H301	
Acute Tox. 3 - H311	
Acute Tox. 3 - H331	
Skin Corr. 1B - H314	
Eye Dam. 1 - H318	
Skin Sens. 1 - H317	
Muta. 2 - H341	
Carc. 1B - H350	
STOT SE 3 - H335	

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

## SECTION 4: First aid measures

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### 4.1. Description of first aid measures

<b>General information</b>	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
<b>Inhalation</b>	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. Get medical attention immediately.
<b>Ingestion</b>	Rinse nose and mouth with water. Do not induce vomiting unless under the direction of medical personnel. Get medical attention immediately.
<b>Skin contact</b>	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention immediately.
<b>Eye contact</b>	Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue.

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

<b>General information</b>	The severity of the symptoms described will vary dependent on the concentration and the length of exposure. Suspected of causing genetic defects. May cause cancer. The product contains a sensitising substance.
<b>Inhalation</b>	Chemical burns. May cause respiratory irritation. Symptoms following overexposure may include the following: Headache. Nausea, vomiting.
<b>Ingestion</b>	Causes burns. May cause stomach pain or vomiting. Ingestion of large amounts may cause unconsciousness.
<b>Skin contact</b>	Causes burns. May cause an allergic skin reaction.
<b>Eye contact</b>	Contact with concentrated chemical may very rapidly cause severe eye damage, possibly loss of sight.

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

<b>Notes for the doctor</b>	Treat symptomatically.
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## **SECTION 5: Firefighting measures**

### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.

### 5.2. Special hazards arising from the substance or mixture

<b>Specific hazards</b>	Very toxic gases or vapours.
<b>Hazardous combustion products</b>	Carbon dioxide (CO <sub>2</sub> ). Carbon monoxide (CO).

### 5.3. Advice for firefighters

<b>Protective actions during firefighting</b>	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.
<b>Special protective equipment for firefighters</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

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### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions** No action shall be taken without appropriate training or involving any personal risk. Wear protective clothing as described in Section 8 of this safety data sheet. If ventilation is inadequate, suitable respiratory protection must be worn. Avoid inhalation of vapours and contact with skin and eyes.

#### 6.2. Environmental precautions

**Environmental precautions** Avoid discharge into drains and 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. For personal protection, see Section 8. Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Dispose of contents/container in accordance with national regulations.

#### 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. 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. Eye wash facilities and emergency shower must be available when handling this product. Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. Use suitable respiratory protection if ventilation is inadequate.

**Advice on general occupational hygiene** Do not eat, drink or smoke when using this product. Take off immediately all contaminated clothing and wash it before reuse. Wash promptly if skin becomes contaminated.

#### 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. Protect containers from damage.

#### 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

##### Formaldehyde

Long-term exposure limit (8-hour TWA): WEL 2 ppm 2.5 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 2 ppm 2.5 mg/m<sup>3</sup>

WEL = Workplace Exposure Limit.

#### 8.2. Exposure controls

**Appropriate engineering controls** Provide adequate general and local exhaust ventilation. Use explosion-proof general and local exhaust ventilation.

**Eye/face protection** Wear tight-fitting, chemical splash goggles or face shield. Personal protective equipment for eye and face protection should comply with European Standard EN166.

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<b>Hand protection</b>	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. 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. To protect hands from chemicals, gloves should comply with European Standard EN374.
<b>Other skin and body protection</b>	Wear suitable protective clothing as protection against splashing or contamination.
<b>Hygiene measures</b>	Do not eat, drink or smoke when using this product. Eye wash facilities and emergency shower must be available when handling this product. Wash promptly if skin becomes contaminated.
<b>Respiratory protection</b>	Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Respirator selection must be based on exposure levels, the hazards of the product and the safe working limits of the selected respirator. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked.
<b>Environmental exposure controls</b>	Keep container tightly sealed when not in use. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Clear liquid.
<b>Colour</b>	Fluorescent. Pink. Orange.
<b>Odour</b>	Pungent. Perfume.
<b>Odour threshold</b>	Not available.
<b>pH</b>	pH (concentrated solution): 8.0-9.5
<b>Melting point</b>	Not available.
<b>Initial boiling point and range</b>	94-97°C @ 760 mm Hg
<b>Flash point</b>	62°C Closed cup.
<b>Evaporation rate</b>	< 1 (butyl acetate = 1)
<b>Upper/lower flammability or explosive limits</b>	Lower flammable/explosive limit: 7% Upper flammable/explosive limit: 73%
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	> 1
<b>Relative density</b>	1.055-1.065 @ 20°C
<b>Solubility(ies)</b>	Soluble in water.
<b>Partition coefficient</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition Temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not considered to be explosive.

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**Oxidising properties** Does not meet the criteria for classification as oxidising.

### 9.2. Other information

**Other information** No information required.

**Volatility** 99%

## 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** May polymerise. The following materials may react with the product: Strong oxidising agents.

### 10.4. Conditions to avoid

**Conditions to avoid** Avoid exposure to high temperatures or direct sunlight.

### 10.5. Incompatible materials

**Materials to avoid** Strong oxidising agents. 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 LD<sub>50</sub>)** Harmful if swallowed.

**ATE oral (mg/kg)** 153.85

#### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** Harmful in contact with skin.

**ATE dermal (mg/kg)** 461.54

#### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** Harmful if inhaled.

**ATE inhalation (gases ppm)** 1,076.92

#### Skin corrosion/irritation

**Animal data** Corrosive.

#### Serious eye damage/irritation

**Serious eye damage/irritation** Corrosivity to eyes is assumed.

#### Respiratory sensitisation

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

#### Skin sensitisation

**Skin sensitisation** Sensitising.

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### Germ cell mutagenicity

**Genotoxicity - in vitro** Suspected of causing genetic defects.

### Carcinogenicity

**Carcinogenicity** May cause cancer.

### 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.

### Toxicological information on ingredients.

#### Formaldehyde

##### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** Toxic if swallowed.

**ATE oral (mg/kg)** 100.0

##### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** Toxic in contact with skin.

**ATE dermal (mg/kg)** 300.0

##### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** Toxic if inhaled.

**ATE inhalation (gases ppm)** 700.0

##### Skin corrosion/irritation

**Animal data** Dose: 1 mL, 20 hours, Rabbit Erythema/eschar score: Moderate to severe erythema (3). Oedema score: Moderate oedema - raised approximately 1 mm (3). REACH dossier information. Corrosive to skin.

##### Serious eye damage/irritation

**Serious eye damage/irritation** Corrosive to skin. Corrosivity to eyes is assumed. Causes serious eye damage.

##### Respiratory sensitisation

**Respiratory sensitisation** Mouse: Not sensitising. REACH dossier information. Based on available data the classification criteria are not met.

##### Skin sensitisation

**Skin sensitisation** Local Lymph Node Assay (LLNA) - Mouse: Sensitising. REACH dossier information. Epidemiological studies have shown evidence of skin sensitisation.

##### Germ cell mutagenicity

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<b>Genotoxicity - in vitro</b>	DNA damage and/or repair: Positive. REACH dossier information. Suspected of causing genetic defects.
<b>Genotoxicity - in vivo</b>	DNA-protein cross-links (DPC): Positive. REACH dossier information. Suspected of causing genetic defects.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	NOAEC 15 ppm, Inhalation, Mouse May cause cancer.
<b>IARC carcinogenicity</b>	IARC Group 1 Carcinogenic to humans.
<b>NTP carcinogenicity</b>	Known human carcinogen.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	Based on available data the classification criteria are not met.
<b>Reproductive toxicity - development</b>	Developmental toxicity: - NOAEC: 10 ppm, Inhalation, Rat REACH dossier information. Based on available data the classification criteria are not met.
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>STOT - single exposure</b>	STOT SE 3 - H335 May cause respiratory irritation.
<b>Target organs</b>	Respiratory system, lungs
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>STOT - repeated exposure</b>	LOAEL 82 mg/kg/day, Oral, Rat REACH dossier information. Based on available data the classification criteria are not met.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Not anticipated to present an aspiration hazard, based on chemical structure.

### 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.

##### Formaldehyde

<b>Toxicity</b>	Based on available data the classification criteria are not met.
<b><u>Acute aquatic toxicity</u></b>	
<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: 6.7 mg/l, Striped bass ( <i>Morone saxatilis</i> )
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours: 5.8 mg/l, <i>Daphnia pulex</i>
<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 72 hours: 3.48 mg/l, <i>Scenedesmus subspicatus</i>

#### 12.2. Persistence and degradability

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

#### Ecological information on ingredients.

##### Formaldehyde



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**Persistence and degradability** The product is biodegradable.

**Phototransformation** Water - DT<sub>50</sub> : 1.7 days  
Estimated value.

### 12.3. Bioaccumulative potential

**Bioaccumulative potential** No data available on bioaccumulation.

**Partition coefficient** Not available.

### Ecological information on ingredients.

#### Formaldehyde

**Bioaccumulative potential** BCF: <1, *Litopenaeus stylirostris* (blue shrimp) : ,

**Partition coefficient** log Pow: 0.35

### 12.4. Mobility in soil

**Mobility** Mobile.

### Ecological information on ingredients.

#### Formaldehyde

**Mobility** The product is soluble in water.

**Adsorption/desorption coefficient** - log K<sub>oc</sub>: 1.202 @ °C Estimated value.

**Henry's law constant** 0.034 Pa m<sup>3</sup>/mol @ 25°C

**Surface tension** 69.9 mN/m @ 25°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.

#### Formaldehyde

**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** Empty containers must not be punctured or incinerated because of the risk of an explosion. The packaging must be empty (drop-free when inverted). Dispose of contents/container in accordance with national regulations.

## SECTION 14: Transport information

### 14.1. UN number

**UN No. (ADR/RID)** 2209

## Permaglo Arterial

UN No. (IMDG)	2209
UN No. (ICAO)	2209
UN No. (ADN)	2209

### 14.2. UN proper shipping name

Proper shipping name (ADR/RID)	FORMALDEHYDE SOLUTION
Proper shipping name (IMDG)	FORMALDEHYDE SOLUTION
Proper shipping name (ICAO)	FORMALDEHYDE SOLUTION
Proper shipping name (ADN)	FORMALDEHYDE SOLUTION

### 14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID classification code	C9
ADR/RID label	8
IMDG class	8
ICAO class/division	8
ADN class	8

#### Transport labels



### 14.4. Packing group

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

### 14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant  
No.

### 14.6. Special precautions for user

EmS	F-A, S-B
ADR transport category	3
Emergency Action Code	•2X
Hazard Identification Number (ADR/RID)	80
Tunnel restriction code	(E)

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

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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

<b>National regulations</b>	EH40/2005 Workplace exposure limits. The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).
<b>EU legislation</b>	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

<b>Classification abbreviations and acronyms</b>	Flam. Liq. = Flammable liquid Acute Tox. = Acute toxicity Carc. = Carcinogenicity Eye Dam. = Serious eye damage Eye Irrit. = Eye irritation Muta. = Germ cell mutagenicity Skin Corr. = Skin corrosion Skin Irrit. = Skin irritation STOT RE = Specific target organ toxicity-repeated exposure STOT SE = Specific target organ toxicity-single exposure Skin Sens. = Skin sensitisation
<b>Training advice</b>	Only trained personnel should use this material.
<b>Revision comments</b>	Revised regulations.
<b>Revision date</b>	30/08/2016
<b>Revision</b>	12
<b>Supersedes date</b>	15/08/2014
<b>SDS number</b>	661
<b>Hazard statements in full</b>	H301 Toxic if swallowed. H311 Toxic in contact with skin. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H331 Toxic if inhaled. H335 May cause respiratory irritation. H341 Suspected of causing genetic defects. H350 May cause cancer.

## Permaglo Arterial

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.