

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURES AND OF THE COMPANY/UNDERTAKING

1.1. Product Identifier

Product Name Pegasus Pourable Cold Cure Liquid

Based on methyl methacrylate:

CAS-No. 80-62-6
 EU Index No. 607-035-00-6
 REACH No. 01-2119452498-28
 EC-No. 201-297-1

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

For use in dental applications.

1.3. Details of the supplier of the safety data sheet

Supplier Davis Schottlander & Davis Ltd
 Fifth Avenue, Letchworth Garden City
 Hertfordshire SG6 2WD, UK
msds@schottlander.co.uk
www.schottlander.com

1.4. Emergency contacts

Office Hours Schottlander
 +44 1462 480 848

Out of Hours UK National Chemical Emergency Centre
 +44 1865 407333

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

This substance is classified as hazardous according to GHS

H225	Flammable Liquids	Hazard category 2
H315	Irritation of skin	Hazard category 2
H317	Skin sensitisation	Hazard category 1B
H335	Specific Target Organ Toxicity - Single exposure (inhalation)	Hazard category 3

2.2. Label elements

Signal word Danger (Code: Dgr)

GHS Pictogram



H315 H317 H335



H225

Hazard Statement	H225	Highly flammable liquid or vapour
	H315	Causes skin irritation
	H317	May cause an allergic skin reaction
	H335	May cause respiratory irritation
Precautionary Statement (Prevention)	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking
	P261	Avoid breathing dust/fume/gas/mist/vapours/spray
	P280	Wear protective gloves/protective clothing/eye protection/face protection
(Response)	P303+361+353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
(Disposal)	P501	Dispose of contents/container in accordance with local regulation

2.3. Other hazards

Polymerisation with heat evolution may occur in the presence of radical forming substances (e.g peroxides), reducing substances, and/or heavy metal ions.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

In Accordance with Regulation EC 1272/2008

COMPONENT	CAS NO. EC INDEX NO. REACH NO. E INECS NO.	CONTENT	HAZARD/CATEGORY/STATEMENT
Methyl Methacrylate	80-62-6 607-035-00-6 01-2119452498-28 201-297-1	>96%	Flam. Liq./2/H225 Skin Irrit./2/H315 Skin Sens./1/H317 STOT SE (inhalation)/3/H335
1,4-Butanediol Dimethacrylate	2082-81-7 - Pre-registered 218-218-1	<4.0%	Skin Sens./1/H317 STOT SE (inhalation)/3/H335

4. FIRST AID MEASURES

4.1. Description of first aid measures

General advice	Medical treatment is necessary if symptoms occur which are obviously caused by skin or eye contact with the product, or by vapour inhalation. Remove soiled soaked clothing immediately.
Inhalation	Move casualty to fresh air and keep them calm. Seek medical attention.
Skin contact	Wash off immediately with soap and water. If skin irritation occurs, seek medical attention.
Eye contact	Holding eyelids open, immediately rinse thoroughly with plenty of water. Seek medical advice.

Ingestion Do not induce vomiting. Immediately contact a doctor.
Self protection of first-aiders No specific protection is required. Gloves are recommended.

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

Causes skin and eye irritation. Skin sensitisation.

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

Seek immediate medical attention if symptoms indicate excessive exposure to eyes or skin.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media Foam, dry powder, carbon dioxide

Unsuitable extinguishing media Water

5.2. Special hazards arising from the substance or mixture

No

5.3. Advice for firefighters

Wear self-contained breathing apparatus and full protective clothing

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Take care for adequate ventilation. Use personal protective clothing. Keep away from sources of ignition. Use breathing apparatus if exposed to vapour/dust/mist/aerosol.

6.2. Environmental procedures

Do not allow to enter drains/surface water/ground water/sewerage systems. If entry occurs IMMEDIATELY alert The Environment Agency or other equivalent appropriate body.

6.3. Methods and material for containment and cleaning up

Larger volumes: remove mechanically (by pumping). Use explosion-proof equipment. Smaller volumes and/or residues: contain with absorbent material (eg. sand, diatomaceous earth, acid absorbent, universal absorbent or sawdust). Dispose of in accordance with local regulations.

6.4. Reference to other sections

For personal protection see section 8.
For disposal considerations see section 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Measures to Prevent Fire

Ensure the area is well ventilated. Keep container tightly closed. Keep away from heat, sparks and open flame – no smoking. Take precautionary measures against static discharge. In the event of fire, use explosion-proof equipment only. Cool the endangered containers with water. When heated above the flashpoint and/or during spraying (atomising), ignitable mixtures may form in air.

Measures to Protect the Environment

Avoid spills. Keep substance away from drains to sewer. Keep container tightly closed.

General Occupational Hygiene

Do not eat, drink or smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions of safe storage, including any incompatibilities

Keep only in the original container and do not allow temperature to exceed 30°C. Protect from light. Fill the container by approx. 90% only as oxygen (air) is required for stabilisation. With large storage containers, ensure oxygen supply is sufficient to allow stability. Can polymerise with intense heat release.

7.3. Specific end use(s)

No

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components or products of decomposition according to point 10, with limit values related to the place of work which require monitoring.

Methyl Methacrylate	CAS No. 80-62-6	
WEL (8hrs)	208 mg/m ³	50 ppm
WEL (15mins)	416 mg/m ³	100 ppm

8.2. Exposure controls

Monitoring Data

For monitoring procedures and technical data refer to, for instance, The National Institute for Health and Safety (NIOSH) – Manual of Analytical Methods, method 2537; Occupational Health and Safety Administration (OHSA)

Derived No-Effect Level (DNEL)

CRITICAL COMPONENT	ROUTES OF EXPOSURE (LONG-TERM)	DNEL
Methyl Methacrylate	Inhalation Dermal Oral	210mg/m ³ 74.3mg/m ³

Predicted No-Effect Concentration (PNEC)

CRITICAL COMPONENT	ROUTES OF EXPOSURE (LONG-TERM)	PNEC
Methyl Methacrylate	Water	0.94mg/l
	Soil	-
	Air	-

General protective measures Do not inhale vapours. Avoid contact with eyes and skin.

8.3. Personal Protective Equipment



Hygiene measures	Store work clothes separately. Remove soiled or soaked clothing immediately. Follow the usual good standards of occupational hygiene. Clean skin thoroughly after handling. Apply skin cream.
Respiratory protection	If ventilation is insufficient, breathing apparatus to be used in case of high concentrations, short term: filter appliance, filter A.
Hand protection	Butyl rubber gloves (0.7mm), break through time 60 minutes (EN 374:2004). In practice, due to variable exposure conditions, this information can only be used as an aid to selection of a suitable chemical protection glove. This information does not substitute suitability tests by the end user. A suitable glove type should be selected for each work environment. Gloves should be replaced regularly, especially after extended contact with the substance.
Eye protection	Wear approved, tightly fitting safety goggles.
Body protection	On handling larger quantities: face mask, chemical-resistant boots and rubber apron.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Form	Liquid
Colour	Colourless
Odour	Ester-like
Melting Temperature	-48°C
Boiling Temperature	100.3°C @ 1.013hPa
Flashpoint	10°C (method DIN 51755 - closed cup)
Ignition Temperature	430°C (method DIN 51794)
Lower Explosion Limit	2.1% vol. @ 10.5°C
Upper Explosion Limit	12.5% vol.
Vapour Pressure	47hPa @ 20°C
Relative Density	0.94g/cm ³ @ 20°C
Relative Vapour Density	>1 @ 20°C (related to air)

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Solubility in Water	1.6g/l @ 20°C, difficult to mix
Solubility (Qualitative)	Miscible with most organic solvents
pH value	Not applicable
Partition Co-efficient	logPow 1.38 (measured, n-Octanol/water)
Viscosity (Dynamic)	0.6mPa·s @ 20°C (method Brookfield)

9.2. Other information

None

10. STABILITY AND REACTIVITY

10.1. Reactivity

Refer to sections 2.3 and 10.2

10.2. Chemical stability

Stable under normal temperature conditions and when used as directed. No decomposition occurs when used as directed.

10.3. Possibility of hazardous reactions

Refer to section 2.3.

10.4. Conditions to avoid

The substance is normally supplied in a STABILIZED form. If the permissible storage period/storage temperature is exceeded, the product may polymerise with heat generation. Avoid excessive heat for long periods of time. Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

- Free radical initiators
- Reducing agents
- Tertiary amines
- Heavy metals
- Peroxides
- Oxidising agents
- Mineral acids
- Strong acids/alkalis

10.6. Hazardous decomposition products

Oxides of carbon. No decomposition occurs when used as directed.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Metabolism	The substance is rapidly metabolised
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Acute Oral Toxicity	LD ₅₀ rat LD ₅₀ mouse LD ₅₀ rabbit	>5000mg/kg =5200mg/kg >5000mg/kg
Acute Inhalation Toxicity	LC ₅₀ rat, 4h LC ₅₀ mouse, 3h	29.8mg/l 33mg/l
Acute Dermal Toxicity	LD ₅₀ rabbit	>5000mg/kg
Caustic Burning/Skin Irritation	Rabbit, 24h (OECD 405) If skin contact is prolonged and/or frequent, irritations cannot be excluded. Skin Irritant Category 2 (UN-GHS)	Not irritating-slightly irritating
Serious Eye Damage/Irritation	Rabbit, 24h	Not irritating-slightly irritating
Respiratory/Skin Sensitisation	Guinea pig (OECD 406) Repeated exposure may cause skin dryness or cracking. In humans, various types of allergic reactions have been observed (symptoms: headache, eye irritations, skin affectations) Skin Irritant Category 1B (UN-GHS)	Sensitising
Aspiration Hazard	No evidence for hazardous properties (structure-activity relationship)	
Germ Cell Mutagenicity	+ve as well as -ve results in <i>in vitro</i> mutagenicity/genotoxicity tests. No experimental evidence of genotoxicity <i>in vivo</i> is available. In general, not mutagenic according to international criteria	
Carcinogenicity	Non-carcinogenic in inhalation and feeding studies performed in rats, mice and dogs	
Reprotoxicity/Teratogenicity	No indication of toxic effects in experimental models	
Human Health Hazard Assessment	CMR:no	
Specific Target Organ Toxicity - single exposure	respiratory tract irritation	Hazard Category 3
Specific Target Organ Toxicity - repeated exposure	no evidence for hazardous properties rat, inhalation, 25-400ppm Findings: damage to nasal mucous membrane Rat, dilute ingestion, 6-2000ppm Findings: no toxic effect	NOAEL, 25ppm 400ppm NOAEL, 2000ppm
General Information	Avoid contact with skin and eyes and inhalation of substance vapours	

12. ECOLOGICAL INFORMATION

12.1. Ecotoxicity

Aquatic Environment	Hazardous to the aquatic environment	Acute Aquatic Toxicity Category 3
Aquatotoxicity, fish	LC ₅₀ <i>Oncorhynchus mykiss</i> , 96h	>79mg/l

	LC ₅₀ <i>Lepomis macrochirus</i> , 72h	264mg/l
	LC ₅₀ <i>Lepomis macrochirus</i> , 96h	191mg/l
Aquatic toxicity, invertebrates	EC ₅₀ <i>Daphnia magna</i> , 48h (OECD 202)	69mg/l
	<i>Daphnia magna</i> , 21d flow through (OECD 202)	NOEC, 37mg/l
Aquatic toxicity, aquatic plants	EC ₅₀ <i>Selenastrum capricornutum</i> , 72hr (OECD 201)	>110mg/l
	EC3 <i>Scenedesmus quadricauda</i> , 8d (DIN 38412:9)	37mg/l
Toxicity in Microorganisms	EC3 <i>Pseudomonas putida</i> , 16h	100mg/l

12.2. Persistence and degradability

Persistence and Degradability	No evidence for hazardous properties	
Biodegradability	Readily degradable, 14d, 28d (OECD 301, 301C)	94%
	The substance is inherently biodegradable, but not readily biodegradable to OECD criteria	

12.3. Bioaccumulative potential

Bioaccumulation	No evidence for hazardous properties
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12.4. Mobility in soil

Mobility	The substance has poor water solubility. No evidence for hazardous properties
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12.5. Results of PBT and vPvB assessment

Persistent, Bioaccumulative or Toxic	No (REACH, Annex VIII)
very Persistent, very Bioaccumulative	No (REACH, Annex VIII)

12.6. Other adverse effects

General Information	Do not allow to enter soil, waterways or waste water
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13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Substance	Waste is hazardous and to be treated as controlled waste. Product must be disposed of as special waste after consultation with local waste authorities and the disposal company in a suitable and licensed facility.
Packaging	Contaminated packaging should be emptied optimally and after appropriate professional cleaning may be taken for re-use. Packaging that cannot be cleaned should be disposed of professionally. Do not puncture or incinerate, even when empty. Contaminated rags and the like must be discarded into designated a fireproof bucket.

List of Waste, LOW

Chemicals and gases in containers, 16 05

16 05 06	Laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals.
16 05 08	Discarded organic chemicals consisting of or containing dangerous substances.

Always check the given waste code according to the actual conditions of manufacturing, formulation or use in your facility.

14. TRANSPORT INFORMATION**14.1. UN number**

UN 1247

Hazard Class 3, flammable liquids

Packing Group II

**14.2. UN proper shipping name****Land Transport ADR/GGVSEB UN/Germany**

UN 1247

 METHYL METHACRYLATE MONOMER MONOMER,
 STABILIZED, Class 3, Group II, Tunnel restriction code
 D/E Hazard no. 339
Land Transport RID/GGVSEB

UN 1247

 METHYL METHACRYLATE MONOMER MONOMER,
 STABILIZED, Class 3, Group II
 Hazard no. 339
Inland Waterway Transport ADNR/GGVSEB

UN 1247

 METHYL METHACRYLATE MONOMER MONOMER,
 STABILIZED, Class 3, Group II
Shipment by Sea IMDG/GGVSee

UN 1247

 METHYL METHACRYLATE MONOMER MONOMER,
 STABILIZED, Class 3, Group II

EmS

F-E, S-D

Marine pollutant No

Air Transport ICAO/IATA

UN 1247

 METHYL METHACRYLATE MONOMER MONOMER,
 STABILIZED, Class 3, Group II
14.3. Transport hazard class(es)

Refer to section 14.2

14.4. Packing group

Refer to section 14.2

14.5. Environmental hazards

Refer to section 14.2, not applicable if unmentioned

14.6. Special precautions for user

Refer to section 14.2

14.7. Transport in bulk according to the IBC code

For transport approval
see regulatory information

MARPOL 73/78, Annex II – Regulations for Control of
Pollution by Noxious Liquid Substances in Bulk
SOLAS Chapter VII – Carriage of Dangerous Goods

15. REGULATORY INFORMATION

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

National Legislation

Occupational Restrictions

Note for juveniles
Note for pregnant women and nursing mothers
EC Directive 92/85/EEC

Status of Registration

REACH (EU)	registered/pre-registered
TSCA (USA)	listed or exempt
DSL (CDN)	listed or exempt
AICS (AUS)	listed or exempt
METI (J)	listed or exempt
ECL (KOR)	listed or exempt
PICCS (RP)	listed or exempt
IECSC (CN)	listed or exempt
HSNO (NZ)	listed or exempt Code: HSR001195

15.2. Chemical safety assessment

Labelling in accordance with GefStoffV/EC

Methyl Methacrylate

Hazard symbols

F	Highly Flammable
Xi	Irritant

H-statements from Section 3

H225	Highly flammable liquid and vapour
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H335	May cause respiratory irritation

16. OTHER INFORMATION

The substance is normally supplied in a stabilised form.

If the permissible storage period and/or storage temperature is noticeably exceeded, the substance may polymerise with heat evolution.

The instructions given here are valid only for the substance as supplied, not for derivatives resulting from its use.

References	Quoted manuals and standards
	IMO
	OECD-SIDS
	SIAR
	NIH
	NIOSH
	OHSA
	UNECE

16.2 Date of the latest revision of the SDS

Revision Date:	24/10/2023
Revision:	V5
Next Review Date:	24/10/2026

This datasheet has been re-written and replaces all previous versions. The information and all further technical advice is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the substances in terms of their safety and handling requirements. The instructions given here are valid only for the product as supplied, not for derivatives resulting from its use. It implies no liability or other legal responsibility on our part. In particular, no warranty, whether expressed or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection of incoming goods.

END OF SAFETY DATA SHEET