

SAFETY DATA SHEET

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

1.1. Product Identifier

Product Name Pegasus Plus Denture Base 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 and not for use on nail 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 |

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2.2. Label elements

Signal word Danger (Code: Dgr)

GHS Pictogram



H315 H317 H335



H225

| | | |
|---|------------------------------|--|
| Hazard Statement | H225 H315 H317 H335 | Highly flammable liquid or vapour Causes skin irritation May cause an allergic skin reaction May cause respiratory irritation |
| Precautionary Statement (Prevention) | P210 P261 P280 | Keep away from heat/sparks/open flames/hot surfaces. No smoking Avoid breathing dust/fume/gas/mist/vapours/spray 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. EINECS NO. | CONTENT | HAZARD/CATEGORY/STATEMENT |
|--------------------------------|--|---------|---|
| Methyl Methacrylate | 80-62-6 607-035-00-6 01-2119452498-28 201-297-1 | >90% | Flam. Liq./2/H225 Skin Irrit./2/H315 Skin Sens./1/H317 STOT SE (inhalation)/3/H335 |
| Ethylene Glycol Dimethacrylate | 97-90-5 607-114-00-5 Pre-registered 202-617-2 | 2.5-10% | Skin Sens./1/H317 STOT SE (inhalation)/3/H335 |

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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-aider | 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.

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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.

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| | | | |
|--------------|-----------------------|---------|---|
| WEL (8hrs) | 208mg/m ³ | 50 ppm | (Indicative occupational exposure limit value 2009/161/EC 2009) |
| WEL (15mins) | 416 mg/m ³ | 100 ppm | (Indicative occupational exposure limit value 2009/161/EC 2009) |

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 | 210mg/m ³ |
| | Dermal | 74.3mg/m ³ |
| | Oral | - |

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 (e.g. EN140) to be used in case of high concentrations, short term: filter appliance, filter A, e.g. EN141

Hand protection Butyl rubber gloves (0.7mm), break through time 60 minutes (e.g. 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. E.g. EN166

Body protection On handling larger quantities: face mask (e.g. EN136), chemical-resistant boots (e.g. EN13832) and rubber apron.

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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) |
| 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

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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 | |
| Acute Oral Toxicity | LD ₅₀ rat | >5000mg/kg |
| | LD ₅₀ mouse | =5200mg/kg |
| | LD ₅₀ rabbit | >5000mg/kg |
| Acute Inhalation Toxicity | LC ₅₀ rat, 4h | 29.8mg/l |
| | LC ₅₀ mouse, 3h | 33mg/l |
| Acute Dermal Toxicity | LD ₅₀ rabbit | >5000mg/kg |
| Caustic Burning/Skin Irritation | Rabbit, 24h (OECD 405) Not irritating-slightly irritating If skin contact is prolonged and/or frequent, irritations cannot be excluded. Skin Irritant Category 2 (UN-GHS) | |
| Serious Eye Damage/Irritation Respiratory/Skin Sensitisation | Rabbit, 24h | Not irritating-slightly irritating |
| | Guinea pig (OECD 406) | Sensitising 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) |
| Aspiration Hazard | No evidence for hazardous properties (structure-activity relationship) | |
| Germ Cell Mutagenicity | +ve as well as -ve results in in vitro mutagenicity/genotoxicity tests. No experimental evidence of genotoxicity in vivo 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 | NOAEL, 25ppm 400ppm |
| | Rat, dilute ingestion, 6-2000ppm Findings: no toxic effect | 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 |
| Aquatoxicity, fish | LC ₅₀ <i>Oncorhynchus mykiss</i> , 96h LC ₅₀ <i>Lepomis macrochirus</i> , 72h LC ₅₀ <i>Lepomis macrochirus</i> , 96h | >79mg/l 264mg/l 191mg/l |
| Aquatoxicity, invertebrates | EC ₅₀ <i>Daphnia magna</i> , 48h (OECD 202) <i>Daphnia magna</i> , 21d flow through (OECD 202) | 69mg/l NOEC, 37mg/l |
| Aquatoxicity, aquatic plants | EC ₅₀ <i>Selenastrum capricornutum</i> , 72hr (OECD 201) EC3 <i>Scenedesmus quadricauda</i> , 8d (DIN 38412:9) | >110mg/l 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 |
|-----------------|--------------------------------------|

12.4. Mobility in soil

| | |
|----------|--|
| Mobility | The substance has poor water solubility. No evidence for hazardous properties |
|----------|--|

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,
STABILIZED, Class 3, Group II, Tunnel restriction code D/E
Hazard no. 339

Land Transport RID/GGVSEB UN 1247

METHYL METHACRYLATE MONOMER,
STABILIZED, Class 3, Group II Hazard no. 339

Inland Waterway Transport ADNR/GGVSEB

UN 1247 METHYL METHACRYLATE MONOMER,
STABILIZED, Class 3, Group II

Shipment by Sea IMDG/GGVSee

UN 1247 METHYL METHACRYLATE MONOMER,
STABILIZED, Class 3, Group II

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EmS F-E, S-D
Marine pollutant No

Air Transport ICAO/IATA

UN 1247 METHYL METHACRYLATE 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

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

COMMISSION REGULATION (EC) 2018/1480 of 4 October 2018 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures and correcting Commission Regulation (EU) 2017/776.

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), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

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 stabilized 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 |
|------------|---|

Revision

This document differs from the previous version in the following areas:
8 Origin of WEL values stated.
8 Standards for protective equipment included.

16.2 Date of the latest revision of the SDS

| | |
|-------------------|------------|
| Revision Date: | 01/11/2023 |
| Revision: | V5 |
| Next Review Date: | 01/11/2026 |

SAFETY DATA SHEET

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