

1. IDENTIFICATION OF SUBSTANCES / PREPARATION AND COMPANY

Product Name: Pegasus Pourable Cold Cure Liquid
 Product Code: 225, 227

Application: With Pegasus Pourable Cold Cure Powder forms a cold cured acrylic denture base.

Company: Davis Schottlander & Davis Ltd
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2. HAZARD IDENTIFICATION

Classification of the substance or mixture:

This substance is classified as hazardous according to GHS
Regulation EC1272/2008

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

Label elements:

In Accordance with Regulation EC 1272/2008

Signal word: Danger

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, hot surfaces, sparks, open flames and other ignition sources. 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): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P501 Dispose of contents/container in accordance with local Regulations.

Hazardous components for labelling: Methyl methacrylate.

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

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 01-2119452498-28 201-29701	>96%	Flam. Liq./2/H225 Skin Irrit./2/H315 Skin Sens./1/H317 STOT SE (inhalation)/3/H335
1,4- Butanediol dimethacrylate	208-81-7 - Pre-registered 218-218-1	<4.0%	Skin Irrit./2/H315 Eye Irrit/2a/H319 STOT SE (inhalation)/3/H335

4. FIRST AID MEASURES

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.

Most important symptoms and effects, both acute and delayed:

Causes skin and eye irritation. Skin sensitisation.

Indication of any immediate medical attention and special treatment needed:

No.

5. FIRE FIGHTING MEASURES**Extinguishing media:**

Suitable extinguishing media: Foam, dry powder, carbon dioxide.

Unsuitable extinguishing media: Water.

Special hazards arising from the substance or mixture:

None

Advice for firefighters:

Wear self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES**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.

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.

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 (e.g. sand, diatomaceous earth, acid absorbent, universal absorbent or sawdust). Dispose of in accordance with local regulations.

References to other sections:

For personal protection see section 8.

For disposal considerations see section 13.

7. HANDLING AND STORAGE**Precautions for safe handling:**

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.

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.

Specific end use(s):

No

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**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)	208mg/m ³	50 ppm	
WEL (15mins)	416mg/m ³	100ppm	

Exposure controls:

Monitoring Date: For monitoring procedures and technical data refer to, for instance, The National Institute for Health and Safety (NIOSH) – Manual of Analytical Methods, method 2537.

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.

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**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)
Other information:	None

10. STABILITY AND REACTIVITY**Reactivity:**

Refer to Sections 2 and 10

Chemical stability:

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

Possibility of hazardous reactions:

Refer to Section 2

Conditions to avoid:

The substance is normal supplied in a stabilised 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.

Incompatible materials:

Free radical initiators

Reducing agents

Tertiary amines

Heat metals

Peroxides

Oxidising agents

Mineral acids

Strong acids/alkalis

Hazardous decomposition products:

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

11. TOXICOLOGY INFORMATION

Information on toxicological effects:

Metabolism	The substance is rapidly metabolised	
Acute Oral Toxicity	LD50 rat	>5000mg/kg
	LD50 mouse	=5200mg/kg
	LD50 rabbit	>5000mg/kg
Acute Inhalation Toxicity	LC50 rat, 4h	29.8mg/l
	LC50 mouse, 3h	33mg/l
Acute Dermal Toxicity	LD50 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	Rabbit, 24h	Not irritating-slightly irritating
Respiratory/Skin Sensitisation	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	NOAEL, 25ppm
	Findings: damage to nasal mucous membrane	400ppm
	Rat, dilute ingestion, 6-2000ppm	NOAEL, 2000ppm
	Findings: no toxic effect	
General Information:	Avoid contact with skin and eyes and inhalation of substance vapours.	

12. ECOLOGICAL INFORMATION

Ecotoxicity:

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

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	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
Persistence and degradability:		
Persistence and Degradability	No evidence for hazardous properties	
Biodegradability	Readily degradable, 14d, 28d (OECD 301, 301C) The substance is inherently biodegradable, but not readily biodegradable to OECD criteria	94%
Bioaccumulative potential:		
Bioaccumulation	No evidence for hazardous properties	
Mobility in soil:		
Mobility	The substance has poor water solubility. No evidence for hazardous properties.	
Results of PBT and vPvB assessment:		
Persistent, Bioaccumulative or Toxic	No (REACH, Annex VIII)	
Very Persistent, very Bioaccumulative	No (REACH, Annex VIII)	
Other adverse effects:		
General Information	Do not allow to enter soil, waterways or waste water.	

13. DISPOSAL CONSIDERATIONS

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

UN number	UN 1247	Hazard Class 3, flammable liquids	Packing Group II
UN proper shipping name	Land Transport ADR/GGVSEB UN/Germany		
	UN 1247	METHYL METHACRYLATE MONOMER MONOMER, STABILISED, Class 3, Group II, Tunnel restriction code D/E Hazard no. 339	
Land Transport RID/GGVSEB	UN 1247	METHYL METHACRYLATE MONOMER MONOMER, STABILISED, Class 3, Group II Hazard no. 339	
Inland Waterway Transport ADNR/GGVSEB	UN 1247	METHYL METHACRYLATE MONOMER MONOMER, STABILISED, Class 3, Group II	
Shipment by Sea IMDG/GGVSee	UN 1247	METHYL METHACRYLATE MONOMER MONOMER, STABILISED, Class 3, Group II	
	EmS	F-E, S-D	
	Marine pollutant	No	
Air Transport ICAO/IATA	UN 1247	METHYL METHACRYLATE MONOMER MONOMER, STABILISED, Class 3, Group II	
Transport hazard class(es)	Refer to section 14		
Packing group	Refer to section 14		
Environmental hazards	Refer to section 14, not applicable if unmentioned		
Special precautions for user	Refer to section 14		
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

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
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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
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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).

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.

Chemical safety assessment

A Chemical Safety Assessment has not been carried out by the supplier.

16. FURTHER 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

UNECE

Revision

This document differs from the previous version in the following areas:

Title Revised to state in Accordance with Regulation (EU) 2015/830

15 Inclusion of Statements regarding pertinent EU regulations.

16 Addition of detailed revision information.

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.