

1 . Identification of the material and supplier

Names

Product name : Permlastic Catalyst (Regular; Heavy-Bodied)
ADG : UN3077
Manufacturer : **Kerr Australia Pty Limited**
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 North Ryde, NSW 2113
 Australia
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Uses

Area of application : Professional applications.
Material uses : Dental product: Denture impression material.
Product type : Paste.

2 . Hazards identification

Classification : Repr. Cat. 1; R61
 Repr. Cat. 3; R62
 Xn; R22
 R33
 N; R50/53

Risk phrases : R61- May cause harm to the unborn child.
 R62- Possible risk of impaired fertility.
 R22- Also harmful if swallowed.
 R33- Danger of cumulative effects.
 R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases : S53- Avoid exposure - obtain special instructions before use.
 S36/37- Wear suitable protective clothing and gloves.
 S61- Avoid release to the environment. Refer to special instructions/safety data sheet.

Statement of hazardous/dangerous nature : HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

Health effects are based on the uncured material.

3 . Composition/information on ingredients

Mixture : Yes.

Synonyms : Regular Permlastic; Heavy-Bodied Permlastic

Ingredient name	CAS number	Concentration
Limestone	1317-65-3	30-60
Lead compounds with the exception of those specified elsewhere in HSIS	1309-60-0	30-60
dimethyl sulfoxide	67-68-5	<10
Acetic acid, zinc salt, hydrate (2:1:2)	5970-45-6	<10

Permlastic Catalyst (Regular; Heavy-Bodied)

3 . Composition/information on ingredients

Other ingredients, determined not to be hazardous according to Safe Work Australia criteria, and not dangerous according to the ADG Code, make up the product concentration to 100%.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First-aid measures

First-aid measures

- Inhalation** : No special measures required. If inhaled, remove to fresh air. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Get medical attention if adverse health effects persist or are severe.
- Skin contact** : No special measures required. In case of contact, immediately flush skin with plenty of water. Get medical attention if symptoms occur.
- Eye contact** : No special measures are required. In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if symptoms occur.
- Protection of first-aiders** : In case of major fire and large quantities: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
- Advice to doctor** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Extinguishing media

- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : In case of major fire and large quantities: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. This material is very toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
No specific fire or explosion hazard.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Hazchem code** : 2Z

Permlastic Catalyst (Regular; Heavy-Bodied)

6 . Accidental release measures

Personal precautions : Low release. For professional use only. Handling of product in very small amounts or in situations where release is highly unlikely

Environmental precautions : Low release. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods for cleaning up

Small spill : Small Quantity. For professional use only. Absorb with an inert material and place in an appropriate waste disposal container.

Large spill : Small Quantity. For professional use only. Absorb with an inert material and place in an appropriate waste disposal container.

7 . Handling and storage

Handling : No special measures are required for small quantities under normal and intended conditions of product use. For professional use only. Put on appropriate personal protective equipment (see Section 8). Handle with care and dispose of in a safe manner.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Combustible liquid Not applicable.

8 . Exposure controls/personal protection

Occupational exposure limits

Ingredient name	Exposure limits
Limestone	Safe Work Australia (Australia, 8/2005). TWA: 10 mg/m ³ 8 hours.
Lead compounds with the exception of those specified elsewhere in HSIS	Safe Work Australia (Australia, 1/2014). TWA: 0.15 mg/m ³ , (as Pb) 8 hours. Form: Dust and fumes

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Exposure controls

Engineering measures : No special measures are required for small quantities under normal and intended conditions of product use.

Hygiene measures : No special measures are required for small quantities under normal and intended conditions of product use.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Permlastic Catalyst (Regular; Heavy-Bodied)

8 . Exposure controls/personal protection

- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Respiratory** : No special measures are required for small quantities under normal and intended conditions of product use.
- Skin** : No special measures are required for small quantities under normal and intended conditions of product use.
- Environmental exposure controls** : No special measures are required for small quantities under normal and intended conditions of product use.

9 . Physical and chemical properties

- Physical state** : Solid. [Paste.]
- Colour** : Brown. / Purple. Grey.
- Odour** : Fruity. [Slight]
- Boiling point** : Not available.
- Melting point** : Not available.
- Vapour pressure** : Not available.
- Relative density** : >1
- Flash point** : Not available.
- Flammable limits** : Not available.
- Vapour density** : Not available.
- pH** : Not available.
- Viscosity** : Not available.
- Auto-ignition temperature** : Not available.
- Solubility** : Insoluble in the following materials: cold water and hot water.

10 . Stability and reactivity

- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
Under normal conditions of storage and use, hazardous polymerisation will not occur.
- Conditions to avoid** : Avoid excessive heat.
- Materials to avoid** : Reactive or incompatible with the following materials: reducing materials.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 . Toxicological information

Potential acute health effects

- Inhalation** : No known significant effects or critical hazards.
- Ingestion** : Harmful if swallowed.
- Skin contact** : No known significant effects or critical hazards.
- Eye contact** : No known significant effects or critical hazards.
- Acute toxicity**

Permlastic Catalyst (Regular; Heavy-Bodied)**11 . Toxicological information**

Product/ingredient name	Result	Species	Dose	Exposure
Limestone	LD50 Oral	Rat	6450 mg/kg	-
dimethyl sulfoxide	LD50 Dermal	Rat	40000 mg/kg	-
	LD50 Oral	Rat	14500 mg/kg	-
Acetic acid, zinc salt, hydrate (2:1:2)	LD50 Oral	Rat	794 mg/kg	-

Conclusion/Summary : Not available.

Potential chronic health effects**Chronic toxicity**

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
dimethyl sulfoxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	100 milligrams	-
Acetic acid, zinc salt, hydrate (2:1:2)	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Conclusion/Summary**Skin**

: Mucosal tissue: the average mucosal irritation score was within acceptable limits. The test article was not considered an irritant to the mucosal tissue of the rabbit and therefore not irritating to the mouth.

Sensitiser

Product/ingredient name	Route of exposure	Species	Result
Permlastic Catalyst (Regular; Heavy-Bodied)	skin	Guinea pig	Not sensitizing

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Product name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
Lead compounds with the exception of those specified elsewhere in HSIS	-	-	Repr. Cat. 1; R61	Repr. Cat. 3; R62

Chronic effects : Danger of cumulative effects.

Carcinogenicity : No known significant effects or critical hazards.

Permlastic Catalyst (Regular; Heavy-Bodied)

11 . Toxicological information

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Can cause birth defects.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : May impair fertility, based on animal data.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Skin : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Eyes : No specific data.

Target organs : Contains material which may cause damage to the following organs: blood, kidneys, lungs, the nervous system, mucous membranes, peripheral nervous system, gastrointestinal tract, upper respiratory tract, skin, eyes, central nervous system (CNS).

12 . Ecological information

Ecotoxicity : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
dimethyl sulfoxide	Acute LC50 25000 ppm Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 34000000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 6 ppb Fresh water	Fish - Poecilia reticulata - Adult	16 weeks

Conclusion/Summary : Not available.

Other ecological information

Persistence/degradability

Product/ingredient name	Test	Result	Dose	Inoculum
dimethyl sulfoxide	301C Ready Biodegradability - Modified MITI Test (I)	3.1 % - 14 days	-	-

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
dimethyl sulfoxide	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
dimethyl sulfoxide	-1.35	3.16	low

Other adverse effects : No known significant effects or critical hazards.





Permlastic Catalyst (Regular; Heavy-Bodied)

13 . Disposal considerations

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.





14 . Transport information

International transport regulations

Regulation	UN number	Proper shipping name	Classes	PG*	Label	Additional information
ADG	UN3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N. O.S. (lead dioxide)	9	III	 	The product is not regulated as a dangerous good when transported by road or rail in either an IBC, or in other container types if ≤500 kg. The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. <u>Hazchem code</u> 2Z <u>Special provisions</u> 274, 331, 335, AU01
ADR	UN3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N. O.S. (lead dioxide)	9	III	 	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. <u>Hazard identification number</u> 90 <u>Limited quantity</u> 5 kg <u>Special provisions</u> 274, 335, 601, 375 <u>Tunnel code</u> (E)

Permlastic Catalyst (Regular; Heavy-Bodied)

14 . Transport information

<p>IMDG</p>	<p>UN3077</p>	<p>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N. O.S. (lead dioxide). Marine pollutant (lead dioxide)</p>	<p>9</p>	<p>III</p>	 	<p>The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.</p> <p>Emergency schedules (EmS) F-A, S-F</p> <p>Special provisions 274, 335, 966, 967, 969</p> <p>IMDG Code Segregation group 7 - Heavy metals and their salts (including their organometallic compounds) 9 - Lead and its compounds</p>
<p>IATA</p>	<p>UN3077</p>	<p>Environmentally hazardous substance, solid, n.o.s. (lead dioxide)</p>	<p>9</p>	<p>III</p>	 	<p>The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.</p> <p>Passenger and Cargo Aircraft Quantity limitation: 400 kg Packaging instructions: 956</p> <p>Cargo Aircraft Only Quantity limitation: 400 kg Packaging instructions: 956</p> <p>Limited Quantities - Passenger Aircraft Quantity limitation: 30 kg Packaging instructions: Y956</p> <p>Special provisions A97, A158, A179, A197</p>

PG* : Packing group

15 . Regulatory information

[Standard Uniform Schedule of Medicine and Poisons](#)

Not regulated.

[Control of Scheduled Carcinogenic Substances](#)

Permlastic Catalyst (Regular; Heavy-Bodied)

15 . Regulatory information

<u>Ingredient name</u>	<u>Schedule</u>
Lead compounds with the exception of those specified elsewhere in HSIS crystalline silica non-respirable	Prohibited [For abrasive blasting at a concentration of greater than 0.1% as lead or which would expose the operator to levels in excess of those set in the regulations covering lead] Prohibited [For abrasive blasting at a concentration of greater than 1%]

Australia inventory (AICS) : All components are listed or exempted.

EU Classification : Repr. Cat. 1; R61
Repr. Cat. 3; R62
Xn; R22
R33
N; R50/53

16 . Other information

Person who prepared the MSDS :

Date of previous issue : 1/6/2014

Date of issue/ Date of revision : 5/15/2015

Version : 2

 Indicates information that has changed from previously issued version.

Disclaimer

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.