

SAFETY DATA SHEET

Permlastic Base

Section 1. Identification

GHS product identifier

: Permlastic Base

Other means of identification

: Light-Bodied Permlastic; Regular Permlastic; Heavy-Bodied Permlastic

Product type

: Solid.

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

Product use

: Dental Products: Denture impression material.

Area of application

: Professional applications.

Manufacturer

: Kerr Corporation

1717 West Collins Avenue Orange, CA 92867-5422

Telephone no.: 1-800-KERR-123

e-mail address of person responsible for this SDS

: edwin.varela@kavokerrgroup.com

Emergency telephone number (with hours of operation) : CHEMTREC® (24 hours) U.S.: 1-800-424-9300 International: +1-703-527-3887

Section 2. Hazards identification

OSHA/HCS status

: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

: SKIN CORROSION/IRRITATION - Category 2
TOXIC TO REPRODUCTION (Unborn child) - Category 1B
TOXIC TO REPRODUCTION (Fertility) - Category 2

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 79.6%

GHS label elements

Hazard pictograms :





Signal word

: Danger

Hazard statements

: Causes skin irritation.

May damage the unborn child. Suspected of damaging fertility.

Precautionary statements

Prevention

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wash hands thoroughly after handling.

Response

: IF exposed or concerned: Get medical attention. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before

reuse. If skin irritation occurs: Get medical attention.

Storage

: Store locked up.

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Section 2. Hazards identification

Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise

: None known.

classified

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

Other means of identification

: Light-Bodied Permlastic; Regular Permlastic; Heavy-Bodied Permlastic

CAS number/other identifiers

CAS number : Not applicable. : Not available. **Product code**

Ingredient name	Other names	%	CAS number
BBP	benzyl butyl phthalate	5-10	85-68-7
sulfur	sulfur	3-7	7704-34-9
octamethylcyclotetrasiloxane	octamethylcyclotetrasiloxane	0.5-1.5	556-67-2

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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 and hence require reporting in this section.

Section 4. First aid measures

Description of necessary first aid measures

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.

Inhalation

: No special measures required. If inhaled, remove to fresh air. Get medical attention if symptoms occur.

Skin contact

: No special protection is required. In case of contact, immediately flush skin with plenty of water. Get medical attention if symptoms occur.

Ingestion

: Large quantity: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

: No known significant effects or critical hazards. Inhalation

Skin contact : Causes skin irritation.

: No known significant effects or critical hazards. Ingestion

Over-exposure signs/symptoms

Eye contact

: Adverse symptoms may include the following: pain or irritation

watering redness

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Section 4. First aid measures

Inhalation : Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

Skin contact: Adverse symptoms may include the following:

irritation redness

reduced fetal weight increase in fetal deaths skeletal malformations

Ingestion : Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large

quantities have been ingested or inhaled.

Specific treatments: No specific treatment.

Protection of first-aiders : 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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing

media

: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing

media

: Do not use water jet.

Specific hazards arising from the chemical

Hazardous thermal decomposition products

: No specific fire or explosion hazard.

 Decomposition products may include the following materials: carbon dioxide

carbon monoxide sulfur oxides

halogenated compounds metal oxide/oxides

Special protective actions for fire-fighters

: 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.

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.

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Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

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

For emergency responders: Low release. See also the information in "For non-emergency personnel".

Environmental precautions

: Low release. Avoid dispersal of spilled 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).

Methods and materials for containment and 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.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

: Put on appropriate personal protective equipment (see Section 8). Avoid exposure obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

including any incompatibilities

Conditions for safe 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. Store locked up. 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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Appropriate engineering controls

- : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- **Environmental exposure** controls
- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

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Section 8. Exposure controls/personal protection

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: 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, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. Recommended: safety glasses with side-shields.

Skin protection

Hand protection

: 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.

Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Lab coat.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

: Good general ventilation should be sufficient to control worker exposure to airborne contaminants. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid. [Paste.]

Color : White. Odor : Sulfur.

Odor threshold : Not available. pН : Not available. **Melting point** : Not available. : Not available. **Boiling point** Flash point : Not available. : Not available. **Evaporation rate** : Not available. Flammability (solid, gas) Lower and upper explosive : Not available.

(flammable) limits

: Not available. Vapor pressure Vapor density Not available. Relative density : Not available.

Solubility : Insoluble in the following materials: cold water and hot water.

Solubility in water : Not available. Partition coefficient: n-Not available. octanol/water

Auto-ignition temperature : Not available.

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Section 9. Physical and chemical properties

Decomposition temperature: Not available.SADT: Not available.Viscosity: Not available.

Section 10. Stability and reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

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 polymerization will not occur.

Conditions to avoid : Avoid excessive heat.

Incompatible materials: 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.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
BBP	LD50 Dermal	Rabbit	>10000 mg/kg	-
	LD50 Dermal	Rat	6700 mg/kg	-
	LD50 Oral	Rat	2330 mg/kg	-
octamethylcyclotetrasiloxane	LC50 Inhalation Vapor	Rat	36 g/m³	4 hours
	LD50 Dermal	Rat	1770 mg/kg	-
	LD50 Oral	Rat	1540 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
octamethylcyclotetrasiloxane	Eyes - Mild irritant	Rabbit	-	24 hours 500 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.

Sensitization

• • • • • • • • • • • • • • • • • • • •	Route of exposure	Species	Result
Permlastic Base	skin	Guinea pig	Not sensitizing

Mutagenicity

Not available.

Carcinogenicity

Not available.

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Section 11. Toxicological information

Classification

Product/ingredient name	OSHA	IARC	NTP
BBP	-	3	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name		Route of exposure	Target organs
BBP	Category 3	Not applicable.	Respiratory tract irritation
sulfur	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely

routes of exposure

: Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes skin irritation.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:

pain or irritation watering redness

Inhalation : Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

Skin contact: Adverse symptoms may include the following:

irritation redness

reduced fetal weight increase in fetal deaths skeletal malformations

Ingestion: Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

<u>Delayed and immediate effects and also chronic effects from short and long term exposure</u> <u>Short term exposure</u>

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Section 11. Toxicological information

Potential immediate

effects

: Not available.

Potential delayed effects

: Not available.

Long term exposure

Potential immediate

: Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General: No known significant effects or critical hazards.Carcinogenicity: No known significant effects or critical hazards.Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: May damage the unborn child.

Developmental effects: No known significant effects or critical hazards.

Fertility effects : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
BBP	Acute EC50 0.22 ppm Marine water	Algae - Skeletonema costatum	72 hours
	Acute EC50 100 μg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 900 μg/l Fresh water	Crustaceans - Americamysis bahia	48 hours
	Acute EC50 0.76 mg/l Fresh water	Daphnia - Daphnia magna	2 days
	Acute LC50 510 μg/l Marine water	Fish - Cymatogaster aggregata - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 60 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Chronic NOEC 0.26 mg/l Fresh water	Daphnia - Daphnia magna	21 days
sulfur	Acute EC50 >5000 ppm Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 14 ppm Fresh water	Fish - Lepomis macrochirus	96 hours
octamethylcyclotetrasiloxane	Chronic NOEC 1.7 to 15 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 4.4 µg/l Fresh water	Fish - Oncorhynchus mykiss - Egg	93 days

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
ВВР	301B Ready Biodegradability - CO ₂ Evolution Test	93 % - 28 days	-	-
octamethylcyclotetrasiloxane	-	0 % - 42 days	-	-

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Section 12. Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
BBP	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
BBP octamethylcyclotetrasiloxane	4.77	1693.25	high
	6.488	13400	high

Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimized 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	UN3077	UN3077
UN proper shipping name	-	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (BBP). Marine pollutant (BBP)	Environmentally hazardous substance, solid, n.o.s. (BBP)
Transport hazard class(es)	-	9	9
Packing group	-	III	III
Environmental hazards	No.	Yes.	Yes.

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Section 14. Transport information

Additional information

Reportable quantity

1176.5 lbs / 534.12 kg Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Emergency schedules (EmS)

F-A. S-F

Special provisions 274, 335, 966, 967

The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Passenger and Cargo Aircraft

Quantity limitation: 400 kg Packaging instructions: 956 Cargo Aircraft Only Quantity

limitation: 400 kg

Packaging instructions: 956 Limited Quantities -

Passenger Aircraft Quantity

limitation: 30 kg

Packaging instructions: Y956

Special provisions A97, A158, A179

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according : Not available. to Annex II of MARPOL

73/78 and the IBC Code

Section 15. Regulatory information

U.S. Federal regulations

: TSCA 8(a) PAIR: Siloxanes and Silicones, di-Me, reaction products with silica; octamethylcyclotetrasiloxane; Siloxanes and Silicones, di-Me, hydroxy-terminated; Cvclosiloxanes, di-Me

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Water Act (CWA) 307: zinc sulphide; BBP

Clean Air Act Section 112

(b) Hazardous Air **Pollutants (HAPs)** : Not listed

Clean Air Act Section 602

: Not listed

Class I Substances

Clean Air Act Section 602 **Class II Substances**

: Not listed

DEA List I Chemicals

: Not listed

(Precursor Chemicals)

: Not listed

DEA List II Chemicals (Essential Chemicals)

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard

Delayed (chronic) health hazard

Composition/information on ingredients

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Section 15. Regulatory information

Name	%	hazard	Sudden release of pressure	Reactive	(acute) health	Delayed (chronic) health hazard
BBP sulfur octamethylcyclotetrasiloxane		No. Yes. Yes.	No.	No. No. No.	Yes. Yes. Yes.	Yes. No. Yes.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	zinc sulphide	1314-98-3	10 - 30
Supplier notification	zinc sulphide	1314-98-3	10 - 30

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts

: The following components are listed: BUTYL BENZYL PHTHALATE; SULFUR

New York

: The following components are listed: Butyl benzyl phthalate

New Jersey

- : The following components are listed: ZINC compounds; BUTYL BENZYL PHTHALATE; 1,2-BENZENEDICARBOXYLIC ACID, BUTYL PHENYLMETHYL ESTER; SULFUR
- Pennsylvania
- : The following components are listed: ZINC COMPOUNDS; 1,

2-BENZENEDICARBOXYLIC ACID, BUTYL PHENYLMETHYL ESTER; SULFUR

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	•	•	Maximum acceptable dosage level
BBP	No.	Yes.	No.	No.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



Section 16. Other information

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

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Version
Prepared by

: IHS

Key to abbreviations

: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships,

1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

UN = United Nations

References

: HCS (U.S.A.)- Hazard Communication Standard

International transport regulations

▼ Indicates information that has changed from previously issued version.

Notice to reader

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.

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