

MATERIAL SAFETY DATA SHEETS

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SECTION I

PRODUCT GROUP: PLASTER OF PARIS (DENTAL GRADE)

KALDENT® Dental Lab Plaster Class II
KALSTONE® Dental Stone Class III
KALROCK® Die Stone Class IV
ORTHOKAL® Orthodontic Stone Class III
LABSTONE® Dental Stone Class III

ULTRASTONE® Dental Stone Class III
ULTRAROCK® Die Stone Class IV
ULTRABASE® Die Stone Class IV
ULTRAARTICUL®
Articulation Stone Class III

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**SECTION II
INGREDIENTS**

MATERIALS		PEL mg / m ³	TLV mg / m ³	CAS NO
Plaster of Paris	40-100	10	15/5 (R)	26499-65-0
Portland Cement	0-50	10	15/5 (R)	65997-15-1
Bot. Napthalane Sulfonate	0-30	(NE)	(NE)	9069-79-8
Talc	0-25	2(R)	2 (R)	14807-96-6
Potassium Sulfate	0-4	(NE)	(NE)	7778-80-5
Starch	0-1	10	15/5(R)	9005-25-8
Ammonium Chloride	0-0.6	10 (F)	(NE)	12125-02-9
Monosodium Phosphate	0-0.6	(NE)	(NE)	7558-80-7
Tributyl Phosphate	0-0.1	2.5(T)	2.5(T)	126-73-8
Sodium Citrate	0-(Tr)	(NE)	(NE)	77-92-9
Calcium Salt of Polymerized Arylkyl-Sulfonic Acids	0-(Tr)	(NE)	(NE)	8061-52-7
Petroleum Distillate	0-(Tr)	5(M)	5(M)	64741-89-5

(T) Total (R) Respirable (NE) Not Established (Tr) Trace (M) Mist (F) Fume

**SECTION III
PHYSICAL DATA**

MELTING POINT: 1450°C – decomposes
SPECIFIC GRAVITY: 2.7 – 3.0
APPEARANCE AND ODOR: White powder, low odor
SOLUBILITY IN WATER: 0.2%
HARDENING TIME: Varies. Check usage and / or product specification data for each product

**SECTION IV
FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT (METHOD USED): None
EXTINGUISHING MEDIA: Not combustible
SPECIAL FIRE FIGHTING PROCEDURES: None
UNUSUAL FIRE AND EXPLOSION HAZARDS: None

**SECTION V
HEALTH HAZARD DATA**

EFFECTS OF OVEREXPOSURE:

ACUTE:

EYES: Portland cement is a strongly alkaline material. Contact with eyes will cause Irritation and possible corrosion damage.
SKIN: When mixed with water, this material hardens and then slowly becomes hot. DO NOT attempt to make a cast enclosing any part of the body. Failure to follow these instructions may cause severe burns that may require surgical removal of affected tissue. May dry skin.

INHALATION: Irritating and may be corrosive to respiratory tract.

INGESTION: May be corrosive to the digestive tract. Plaster hardens when wetted and, if ingested, may result in obstruction.

CHRONIC:

EYES: None known

SKIN: None Known

INHALATION: Long term inhalation of large amounts of respirable tale dust can cause lung damage (pulmonary fibrosis)

INGESTION: No chronic effects known

EMERGENCY AND FIRST AID PROCEDURES:

EYES: Flush eyes with water for 15 minutes including under lids. Call PHYSICIAN.

INHALATION: Remove to fresh air. Contact PHYSICIAN.

INGESTION: Dilute by giving 2 glasses of milk or water to drink, followed by fruit juices or diluted vinegar to neutralize the alkali from the Portland cement containing materials. Consult PHYSICIAN. Plaster hardens when wetted and, if ingested, may result in obstruction. See

TARGET ORGAN: Lungs

MEDICAL CONDITION WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung disease such as, but not limited to, bronchitis, emphysema and asthma.

PRIMARY ROUTE OF ENTRY: Inhalation.

CARCINOGENICITY OF INGREDIENTS:

MATERIAL	IARC	NTP	OSHA
Formaldehyde	2A	Yes	Yes

REACTIVITY DATA

STABILITY:	Stable
INCOMBATABILITY:	Acids
HAZARDOUS DECOMPOSITION PRODUCTS:	Above 1450°C – CaO and SO ₂
HAZARDOUS POLYMERISATION:	Will not occur

**SECTION VII
SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CAASE MATERIAL IS RELEASED OR SPILLED: Sweep or vacuum material from spillage into a waste container for disposal . Avoid dusting conditions.

WASTE DISPOSAL METHOD: This material can be disposed of as inert solid in a landfall or by other procedures which are accepted under federal, state and local regulations.

**SECTION VIII
SPECIAL PROTECTION INFORMATION**

RESPIRATORY PROTECTION: Provide general ventilation and local exhaust ventilation to meet TLV requirements. When dusty condition exists, wear an approved dust mask to guard Against nuisance particles.

PROTECTIVE EQUIPMENT: Gloves or protective clothing are usually, but not, necessarily, desirable in specific work situations. Eye protection (goggles) may be needed to avoid particulate irritation of the eye.

**SECTION IX
SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Be sure proper ventilation and respiratory and eye protection are used in dusty conditions. Eew pont condition or other conditions causing the presence of liquid water will harden plaster during storage.

**SECTION X
CHEMICAL STABILITY AND REACTIVITY**

STABILITY	Stable
CONDITIONS TO AVOID	Contact with incompatibles (see below)
INCOMPATABILITY	Acids, Exposure to water and acids must be supervised because the reactions are vigorous and produce large amounts of heat
HAZARDOUS POLYMERIZATION	None known
HAZARDOUS DECOMPOSITION	Above 1450 Deg C – calcium oxide (CaO) and sulfur dioxide (SO ₂)

**SECTION XI
TOXICOLOGICAL INFORMATION**

ACUTE EFFECTS: The sulfate ion has caused gastro-intestinal disturbance in humans following large oral doses. Limited studies involving the repeated inhalation of an (unspecified) calcium sulfate failed to identify any particular target organs in monkeys, rats and hamsters. No evidence of mutagenicity was found in Ames bacterial tests. Plaster of paris: Oral LD₅₀ rat . 5000 mg/kg. Dermal D₅₀ – None Determined; Skin irritation LD₅₀ – None Determined; Eye irritation LD₅₀ – None Determined.

CHRONIC EFFECTS / CARCINOGENICITY:

Plaster of Paris: Testing of dust from KALABHAL plaster of paris has not detected respirable crystalline silica.

Crystalline Silica: Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing. The weight percent of respirable crystalline silica may not have been measured in this product. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e. silicosis) and / or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In Making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1)

**SECTION XII
ECOLOGICAL INFORMATION**

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on ecology.
Ecotoxicity Value: Not determined

**SECTION X III
DISPOSAL CONSIDERATIONS**

WASTE DOSPOSAL METHOD: Dispose of material in accordance with federal, state, and local regulations. Never discharge directly into sewers or surface waters. Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Slurry may plug drains. Trace amounts of residue can be flushed to a drain, using plenty of water.

**SECTION XIV
TRANSPORT INFORMATION**

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated	
Shipping Name	Same as product name
Hazard Class	Not classified
UN / NA #	None. Not classified
Packing Group	None
Label (s) required	Not applicable
GGCSec/MDG-Code	Not classified
ICAO/IA-DGR	Not applicable
RID/ADR	None
ADNR	None

**SECTION XV
REGULATORY INFORMATION**

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)
 SARA Title Section 313 (EPCRA) Toxic Chemicals: X = Subject to reporting under Section 313
 CERCLA Hazardous Substances: Reportable Quantity (RQ)
 CAA Section 112 @ Regulated Chemicals for Accidental Release Prevention: Threshold Quantities (TQ)
 RCRA Hazardous Waste: RCRA hazardous waste code.

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of Controlled Product regulations and the MSDS contains all the information required by the Controlled Products Regulations. All ingredients of this product are included in the Canadian Domestic Substances List (DSL)

MATERIAL	WT%	IDL Item #	WHMIS Classification
Plaster of Paris (CaSO ₄ . 1/2 H ₂ O)	>99	Not Listed	Not Listed
Crystalline Silica	<1	1406	D2A

IDL Item # Canadian Hazardous Products Act – Ingredient Disclosure List Item #
 WHMIS Classification: Workplace Hazardous Material Information System

Risk and Safety Phrases defined by European Union Directive 67/548/EEC (Annex III and IV)

R – Phrase(s) : R36/37/38
 S-Phrase(s): S51 S38 S39 S2

SECTION XVI OTHER INFORMATION

Label Information

WARNING

When mixed with water, this material hardens and becomes very hot – sometimes quickly. DO NOT attempt to make a cast enclosing any part of the body using this material. Failure to follow these instructions can cause severe burns that may require surgical removal of affected tissue or amputation of limb.

Dust may cause irritation to eyes, skin, nose, throat and upper respiratory tract. Avoid irritation by reducing exposure to dust. Use in a well ventilated area or provide sufficient local ventilation. If dusty, wear a NIOSH/MSHA-approved dust respirator. Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Wash with soap and water after use. Do not ingest. If ingested, call physician. Product safety information: +91 22 25781823

KEEP OUT OF REACH OF CHILDREN

Key / Legend

Key / Legend	
TLV	Threshold Limit Value
PEL	Permissible Exposure Limit
CAS	Chemical Abstracts Service (Registry Number)
NIOSH	National Institute for Occupational Safety and Health
MSHA	Mine Safety and Health Administration
OSHA	Occupational Health and Safety Administration
ACGIH	American Conference of Governmental Industrial Hygienists
IARC	International Agency for Research on Cancer
DOT	United States Department of Transportation
EPA	United States Environmental Protection Agency
NFPA	National Fire Protection Association
HMIS	Hazardous Materials Identification System
PPE	Personal Protection Equipment
TSCA	Toxic Substances Control Act
DSL	Canadian Domestic Substances List
NDSL	Canadian Non-Domestic Substances List
SARA	Superfund Amendments and Reauthorization Act of 1986
CAA	Clean Air Act
EPCRA	Resource Conservation and Recovery Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1986
UN / NA #	United Nations / North America number
CFR	Code of Federal Regulations
WHMIS	Workplace Hazardous Material Information System

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The information contained in this document applied to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for his / her own particular use.

