

SAFETY DATA SHEETS

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U. S. DEPARTMENT OF LABOR
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

MATERIAL SAFETY DATA SHEET

EFFECTIVE 09-01-11

SECTION I

TAK SYSTEMS
14 KENDRICK ROAD
WAREHAM, MA 02571

TRANSPORTATION EMERGENCY: (508) 295-9630
MEDICAL EMERGENCY: (508) 295-9630

TRADE NAME AND SYNONYMS: Earth Stone (ES)/ Earth Stone Activator Liquid (EAL)
FORMULA:

SECTION II – HAZARDOUS INGREDIENTS

COMPONENT	%	TLV (UNITS)
Gypsum	> 75%	10

SECTION III – PHYSICAL DATA

BOILING POINT: (EAL) 212° F
MELTING POINT: (ES) 1450° C – Decompose
SPECIFIC GRAVITY: (EAL) 1/ (ES) 2.3-2.6
SOLUBILITY IN WATER: (EAL) Complete/ (ES) 0.15%
VAPOR PRESSURE (mmHg): N/A
VAPOR DENSITY (AIR=1): N/A
EVAPORATION RATE: N/A
% VOLATILE BY VOLUME: N/A

APPEARANCE & ODOR: (EAL) Clear/ (ES) Off White Powder

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: Non-Combustible

FLAMMABLE LIMITS: N/A

EXTINGUISHING MEDIA: Use extinguishing media appropriate to surrounding fire.

SPECIAL FIRE-FIGHTING PROCEDURES: Use self-contained breathing apparatus when fighting fires in enclosed areas. Do not direct a solid stream of water or foam into burning molten material; this may spread.

UNUSUAL FIRE & EXPLOSION HAZARDS: None

SECTION V – HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: 10 Total, Respirable 3

EFFECT OF OVEREXPOSURE: Inhalation of excessive dust over a prolonged period can result in lung damage.

EMERGENCY AND FIRST AID PROCEDURES: No known acute toxic effects.

SECTION VI – REACTIVITY DATA

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITION TO AVOID: Inhalation of dust.

INCOMPATIBILITY (MATERIALS TO AVOID): (ES) will solidify on contact with water.

SECTION VII – SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Sweep up material into a waste container for disposal. If already mixed with water, scrape up and place in container. Avoid dusting condition, minimize airborne dust. Wear appropriate protective equipment.

DISPOSAL PROCEDURE: Bury in a landfill where permitted under appropriate Federal, State, and Local regulations.

SECTION VIII – SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE): Dust respirator if dusty condition exists.

VENTILATION: General ventilation is expected to be satisfactory. Use local exhaust ventilation if necessary to control dust.

EYE & SKIN PROTECTION: Rubber or plastic gloves, and safety glasses, as good hygiene practice.

OTHER PROTECTIVE EQUIPMENT: N/A

SECTION IX – STORAGE AND HANDLING PRECAUTIONS

PRECAUTION TO BE TAKEN IN HANDLING AND STORING: During handling wear the appropriate respiratory, eye and skin protection if warranted per environmental conditions. Keep dry. Dew point conditions or other conditions causing presence of liquid will harden this material during storage.

OTHER PRECAUTION: None

SECTION X – REGULATORY INFORMATION

STATUS ON SUBSTANCE LISTS: The concentrations shown are maximum or ceiling levels (weight %) to be used for calculations for regulation. Trade Secrets are indicated by TS.

FEDERAL EPA

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQs) in 40 CFR 302.4.

Component present in this product at a level which could require reporting under statute are: None

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312)

Components present in this product at a level which could require reporting under statute are: None

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material.

Components present in this product at a level which could require reporting under statute are: None

STATE RIGHT-TO-KNOW

California: Substances known to the state of California is cause cancer, birth defect or other reproductive harm: None known

Massachusetts: Right-to-know, Substance List (MSL) Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products.

Components present in this product at a level which could require reporting under the statute: None known

PENNSYLVANIA: Right-to-know, Hazardous substance List Hazardous substances and Special Hazardous Substances on the list must identify when present in products.

Components present in this product at a level which could require reporting under the statute: None known

New Jersey: Substances on the New Jersey workplace hazardous substance list present at a concentration of 1% or more (0.1% for substances identified as carcinogens, mutagens or teratogens): None known

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TAK Systems

SAFETY DATA SHEET

1. Identification

Product Identifier:	Earth Stone
Recommended Use:	Base
Recommended Restriction:	Use in accordance with manufacturer's recommendations
Manufacturer/ Supplier:	TAK Systems
Address:	PO Box 939 East Wareham MA 02538
Telephone:	508-295-9630
Website:	www.taksystems.com

2. Hazard(s) Identification

Physical Hazards:	Not classified
Health Hazards:	Not classified
OSHA Defined Hazards:	Not classified
Label Elements	
Hazard Symbol:	None
Signal Word:	None
Hazard Statement:	None
Precautionary Statement:	
Prevention:	Observe good industrial hygiene practices.
Response:	Get medical attention/advice if you feel unwell.
Storage:	Store as indicated in section 7.
Disposal:	Dispose of in accordance with local, state and federal regulations.
Hazard(s) not Otherwise Classified (HNOC):	None known

3. Composition/Information on Ingredients:

Mixtures:

Chemical Name	CAS Number	%
Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1)	26499-65-0	> 95

Composition Comments: All concentrations are in percent by weight unless ingredient is a gas

4. First Aid Measure

Inhalation: Dust irritates the respiratory systems, and may cause coughing and difficulties in breathing. Move injured person into fresh air and keep person calm under observation. Get medical attention if systems persists.

Skin Contact: Contact with dust: Rinse area with plenty of water. Get Medical attention if irritation develops or persists.

Eye Contact: Dust in eyes: Do not rub eyes. Flush thoroughly with water. If Irritation occurs, get medical assistance.

Ingestion: Earth Stone hardens and if ingested may result in stomach and intestinal blockage. Drinking gelatin solutions or large volumes of water may delay setting.

Most important Symptoms/effects, and Special Treatment Needed: Provide general supportive measures and treat symptomatically.

General Information: Ensure that medical personnel are aware of the material(s) Involved.

5. Fire-Fighting Measures

Suitable Extinguishing Media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable Extinguishing Media: Not applicable.

Specific Hazards Arising from The Chemical: Not a fire hazard.

Special Protective Equipment And Precautions for Firefighters: Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting Equipment/Instruction: Use standard firefighting procedures and consider the hazards of other involved materials.

Specific Methods: Cool material exposed to heat with water and move it if no risk is involved.

6. Accidental Release Measures

**Personal Precautions,
Protective Equipment and
Emergency Procedures:
Methods and materials for
Containment and Cleaning up:**

See Section 8 of the SDS for Personal Protective Equipment

Vacuum up the spilled material, Vacuums used for this purpose should be equipped with HEPA Filters. Containers must be labeled. Collect in approved containers and seal securely. For waste disposal, see Section 13 of the SDS.

Environmental Precautions:

Avoid discharge to drains, sewers, and other water systems.

7. Handling and Storage

Precautions for Safe Handling:

Minimize dust production when mixing, or opening and closing container. Avoid inhalation of dust. Wear appropriate personal protective equipment. Wash hands after handling. Observe good industrial hygiene practices and use appropriate lifting techniques.

**Conditions for Safe Storage,
Including any Incompatibilities:**

Store in a cool, dry, well-ventilated place. Store away from incompatible materials. Avoid contact with acids, water, and moisture.

8. Exposures Controls/Personal Protection

**Occupational Exposure Limits:
US. OSHA Table Z-1 Limits for Air Contaminants**

Components	Type	Value	Form
Earth Stone (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS26499-65-0)	PEL	5 mg/m3	Respirable fraction
		15mg/m3	Total Dust

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Earth Stone (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS26499-65-0)	TWA	10 mg/m3	Inhalable fraction

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Earth Stone (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS26499-65-0)	TWA	5 mg/m3	Respirable
		10 mg/m3	Total

Biological Limits Values:

No biological exposure limits noted for the ingredients.

Appropriate Engineering Controls:

Provide sufficient ventilation for the operations causing dust formation. Observe occupational exposure limits and minimize the risk of exposure.

Individual Protection Measures, Such as Personal Protective Equipment:

Eye/Face Protection:

Wear approved safety goggles.

Skin Protection

Hand Protection:

It is a good industrial hygiene to minimize skin contact. For prolonged or repeated skin contact use suitable protective gloves.

Other:

Normal work clothing (long sleeved shirts and long Pants) is recommended.

Respiratory Protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use, and limitations. Use positive pressure, air-supplied respirator for uncontrolled releases or when air purifying respirator may be exceeded. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use.

Thermal Hazards:

None

General Hygiene

Consideration:

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment separately from regular was. Observe any medical surveillance requirements.

9. Physical and Chemical Properties

Appearance

Physical State:

Solid

Form:

Powder

Color:

White to off-white

Odor:	Low to no odor.
Odor Threshold:	Not applicable
pH:	6 - 8
Melting Point/Freezing Point:	Not applicable
Initial Boiling Point and Boiling Range:	Not applicable
Flash Point:	Not applicable
Evaporation Rate:	Not applicable
Flammability (solid, gas):	Not applicable
Upper/Lower Flammability or Explosive Limits	
Flammability limit - lower (%):	Not applicable
Flammability limit - upper (%):	Not applicable
Explosive Limit – lower (%):	Not applicable
Explosive Limit –upper (%):	Not applicable
Vapor Pressure:	Not applicable
Vapor Density:	Not applicable
Relative Density:	2.96 (H ₂ O=1)
Solubility(ies)	
Solubility (water):	0.15 – 0.4 g/100 g (H ₂ O)
Partition Coefficient (n-octanol/water):	
	Not applicable
Auto-Ignition Temperature:	Not applicable
Decomposition Temperature:	2642° F (1450° C)
Viscosity:	Not applicable
Other Information	
Bulk Density:	55 – 70 lb/ft ³
Particle Size:	Varies
VOX (weight %):	0%

10. Stability and Reactivity

Reactivity:	Not available
Chemical Stability:	Material is stable under normal conditions.
Possibility of Hazardous Reactions:	Hazardous polymerization does not occur.
Conditions to Avoid:	When mixed with water this product can become very hot. Encasing or making molds of any body part can cause serious burns that may require surgical removal of affected tissue and even amputation of encased body part.
Incompatible Materials:	Acids. Exposure to water and acids must be supervised because the reactions are vigorous and produce large amounts of heat.
Hazardous Decomposition Products:	Calcium oxides. Sulfur Oxides.

11. Toxicological Information

Information on Likely Routes of Exposure

Ingestion:	Ingestion may cause irritation and stomach discomfort.
Inhalation:	Airborne dust may irritate throat and upper respiratory systems causing coughing.
Skin Contact:	Under normal conditions of intended use, this product does not pose a skin hazard.
Eye Contact:	Direct contact with airborne particulates may cause temporary irritation.

Symptoms Related to the Physical, Chemical and Toxicological Characteristics:

Dust may irritate eyes and mucous membranes of the nose, throat and upper respiratory system causing sneezing and/or coughing.

Information on toxicological Effects

Acute Toxicity: Not expected to be a hazard under normal conditions of intended use.

Serious Eye Damage/Eye Irritation:

Direct contact with eyes may cause temporary irritation.

Respiratory or Skin Sensitization

Respiratory Sensitization: Not expected to cause respiratory sensitization based on non-skin sensitization history.

Skin Sensitization: Not a skin sensitizer. Earth Stone has displayed little sensitization potential.

Germ Cell Mutagenicity: No evidence of mutagenicity found in Ames bacterial Tests.

Carcinogenicity: This material is not classified as a carcinogen by IARC, ACGIH NTP, or OSHA.

Reproductive Toxicity: Not expected to be a reproductive hazard.

Specific Target Organ Toxicity-

Single Exposure: No data available, but none expected.

Repeated Exposure: No data available, but none expected.

Aspiration Hazard: Due to the physical form of the product it is not an aspiration hazard.

Chronic Effects: No other specific acute or chronic health impact noted.

12. Ecological Information

Ecotoxicity: The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Earth Stone	(Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)	
Aquatic		
Fish	LC50	Fathead minnow (Pimephales promelas) 1970 mg/l 96 hours
Persistence and Degradability:	Calcium sulfate dissolves in water forming calcium and sulfate ions.	
Bioaccumulative Potential:	Bioaccumulation is not expected.	
Mobility in Soil:	No data available.	
Other Adverse Effects:	None expected.	

13. Disposal Considerations

Disposal Instructions:	Dispose in accordance with applicable federal, state, and local regulations. Recycle responsibly.
Local Disposal Regulations:	Dispose of in accordance with local regulations.
Hazardous Waste Code:	Not regulated.
Waste from Residues/unused Products:	Dispose of in accordance with local regulations.
Contaminated Packaging:	Dispose of in accordance with local regulations.

14. Transport Information

DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.

Transport in Bulk According to Annex II or MAEPOL 73/78 and The IBC Code:	Not applicable. This product is a solid. Therefore, bulk transport is governed by IMSBC code.
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15. Regulatory Information

US Federal Regulations:	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200 (OSHA) and 8 CCR § 5194 AL/OSHA).
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-10500

Not listed

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard Categories

Immediate Hazard: No

Delayed Hazard: No

Fire Hazard: No

Pressure Hazard: No

Reactivity Hazard: No

SARA 302 Extremely Hazardous Substance: Not listed

SARA 311/312 Hazardous Chemical: No

SARA 313 (TRI Reporting): Not regulated.

Other Federal Regulations:

Clean Air Act (CAA) Section 112 Hazardous Air Pollutant (HAPs) List:

Not regulated

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention
(40 CFR 68.130):**

Not regulated

Safe Drinking Water Act (SDWA): Not regulated

US State Regulation

US Massachusetts RTK – Substance List

Earth Stone (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)

US New Jersey Worker and Community Right-to-Know Act

Earth Stone (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)

US Pennsylvania Worker and Community Right-to-Know Law

Earth Stone (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)

US Rhode Island RTK

Not Regulated

US California Proposition 65

This product does not contain a chemical known to the State of California to cause Cancer, birth defects or other reproductive harm.

US California Proposition 65 – Carcinogens & Reproductive Toxicity Listed Substance

Not Listed.

16. Other Information, Including Date of Preparation or Last Revision

Issue Date: January 1, 2019

Revision Date:

Version #: 2

Further Information:

Earth Stone is classified as a hazardous substance but is generally considered a safe material for routine use. When Earth Stone Is used responsibly it is not considered as a dangerous material. However, when mixed with water this product can become very hot. DO NOT attempt to make a cast enclosing any part of the body. Encasing any body part can cause serious burns and even Amputation Of the encased body part.

NFPA Ratings:

Health: 1

Flammability: 0

Physical Hazard: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

HMIS Ratings:

Health: 0

Flammability: 0

Physical Hazard: 0

NFPA Ratings:



Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type.

The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.