SAFETY DATA SHEET

FAST-SET

Section 1. Identification

Product: FAST-SET

Supplier: Illinois Products Corporation
423 Joseph Drive
South Elgin, IL 60177
Phone: 800-383-8183

Recommended use: Mortar accelerator admixture

Emergency telephone: 800-535-5053 Infotrac (24/7)

Section 2. Hazard Identification

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

Classification: Contact Hazard (skin) – Category 2
Contact Hazard (eye) – Category 2B
Acute Toxicity (inhalation) – No data / not classified
Acute Toxicity (oral) – Category 4
Acute Toxicity (dermal) – Not classified as acutely toxic for dermal exposure
Carcinogenicity – Not classified as a carcinogen per GHS, NTP, IARC, or OSHA

GHS Label Elements

Hazard Pictograms:

Signal Word: Warning

Hazard Statements: Causes skin irritation
Causes eye irritation
Harmful if swallowed
Wear eye and face protection
Wear protective gloves
Wash thoroughly after handling
Do not eat, drink, or smoke when using this product

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. Wear eye or face protection.

Response: Collect spillage. Get medical attention if feeling ill. Rinse skin with water. Wash with soap and water.

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

Section 3. Composition

Substance/mixture: Mixture

Other identification: None

CAS number: N/A
Product Code: N/A

Ingredient name	%	CAS Number
Calcium Chloride	90-92	10043-52-4
Water	4-6	7732-18-5
Potassium Chloride*	2-3	7447-40-7
Sodium Chloride*	1-2	7647-14-5

* - Potassium Chloride and Sodium Chloride are impurities from the naturally-occurring source material, brine solution.

There are no other ingredients (with current knowledge of supplier and in concentrations available) classified as hazardous to health or the environment.

Section 4. First Aid

Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses if doing so is possible. If irritation occurs, seek medical attention.

Inhalation: If inhalation of dust occurs and adverse effects result, remove victim to fresh air and keep at rest position comfortable for breathing. Call POISON CENTER or physician if feeling unwell.

Skin contact: Flush contaminated area with plenty of water. Remove contaminated clothing and wash before use. If irritation occurs, seek medical attention.

Ingestion: Wash out mouth with water. Remove victim to fresh air and keep at rest in position comfortable for breathing. Call POISON CENTER or physician if feeling unwell.

Symptoms / Effects (acute and delayed)

Eye contact: Eye irritation. Direct abrasion of cornea from solid, erythema and burn from reaction with water, conjunctival swelling and cornea opacification from hypertonic solution and heat.

Inhalation: Inhaling dust may cause irritation to upper respiratory tract.

Skin contact: Skin irritation. Direct abrasion of skin from solid, erythema and burn from reaction with water, Prolonged contact and occlusion may cause more sever symptoms. Damage is localized to contact area.

Ingestion: Consumption of solids or hypertonic solutions may cause nausea, vomiting, and increased thirst.

Indication of immediate medical attention and special treatment

Notes to physician: Due to irritant properties resulting from heat created as solid material dissolves in water, swallowing may result in burns/ulcerations of mucous membranes. If burn is present, treat as any thermal burn after decontamination. Treatment of exposure should be directed at the control of symptoms and the condition of the patient.

Specific treatments: None

Protections of first aiders: No action shall be taken involving any personal risk or without suitable training. At minimum, reating personnel should utilize PPE sufficient for prevention of bloodborne pathogen transmission. If potential for exposure exists, refer to section 8 for specific PPE.

Section 5. Fire-Fighting Measures

Fire Hazard: This material does not burn.

Extinguishing Media: Use extinguishing media appropriate to contain surrounding fire.

Fire fighting: Keep unnecessary personnel away, isolate hazard area, and deny entry. This material does not burn. Fight fire for other material that is burning. Water should be applied in large quantities as fine spray. Wear NIOSH approved positive-pressure self contained breathing apparatus operated in pressure demand mode. Wear protective fire fighting clothing. Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self contained breathing apparatus. If not available, wear full chemical resistant clothing with breathing apparatus and fight fire from remote location. For PPE in post fire or non fire clean up situations, refer to relevant sections.

Hazardous combustion products: Formed under fire conditions: Hydrogen chloride gas, calcium oxide

Section 6. Accidental Release Measures

Personnel precautions: Isolate area. Keep unnecessary and unprotected personnel from entering area. Spilled material may cause a slipping hazard on some surfaces. Use appropriate safety equipment.

Methods and materials for containment and clean up

Spill: Contain spilled material if possible. Collect in suitable and properly labeled containers. Flush residue with plenty of water.

Environmental: Prevent large spills from entering into soil, ditches, sewers, waterways, and/or groundwater.

Section 7. Handling & Storage

Precautions for safe handling:

Heat developed during diluting or dissolving is high. Use cool water when diluting or dissolving (temperature below 80°F, 27°C). Avoid contact with eyes, skin, and clothing. Do not swallow. Wash thoroughly after handling.

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, or smoking. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for storage: Store in a dry place. Protect from atmospheric moisture. Keep lid tightly closed. Keep separate from incompatible substances.

Incompatibilities/ Materials to avoid: Heat is generated when mixed with water or aqueous acids. Spattering or boiling can occur. Avoid contact with bromide trifluoride, 2-furan percarboxylic acid, zinc, methal vinyl ether. Attacks metals in the presence of moisture and may release flammable hydrogen gas. Reaction of bromide impurity with oxidizing metals may generate trace levels of impurities such as bromates.

Section 8. Exposure Controls / Personal Protection

Component	OSHA Final PEL TWA	OSHAL Final PEL STEL	OSHA Final PEL Ceiling
Particles not otherwise regulated (PNOR) 00-00-001	15 mg/m^3 (total) 5 mg/m^3 (respirable)	-------	-------

Appropriate engineering controls: Use local exhaust ventilation or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limits or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Hygiene measures: Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking, using the lavatory, or at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection: Wear safety glasses with side shields. For dusty operations or when handling solutions of this material, use chemical goggles.

Hand protection: Use gloves chemically resistant to this material. If hands are cut or scratched, use gloves chemically resistant to this material even for brief exposure. Examples of preferred glove barrier materials include: Neoprene, polyvinyl chloride, nitrile/butadiene rubber.

Body protection: Wear clean, body-covering clothing.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no exposure limits or guidelines, wear respiratory protection when adverse effects have been experienced or where indicated by risk assessment. In dusty or misty atmospheres, use an approved particulate respirator. Effective types of respirators include: HEPA N95.

Section 9. Physical and Chemical Properties

Physical state: Solid
Color: White powder
Odor: Odorless
Odor threshold: No data available
pH: Not applicable to solids

melting point:	772° C (1,422°F)
Boiling point:	Not applicable to solids
Flash point:	NA
Burning time:	NA
Burning rate:	NA
Evaporation rate:	NA
Flammability (solid/gas):	NA
Lower and upper explosive (flammable) limits:	NA
Vapor pressure:	Negligible at ambient temperature
Vapor density:	NA
Relative density:	Not applicable to solids
Solubility:	Readily soluble
Partition coefficient n-octanol/water:	No data available
Auto-ignition temp:	NA
Decomposition temp:	NA
SADT:	NA
Viscosity:	NA
Hygroscopic:	Yes

Section 10. Stability & Reactivity

Reactivity: Hygroscopic. Liberates large amounts of heat when dissolving in water or aqueous acids.

Chemical stability: This product is stable at normal temperatures and pressures.

Conditions to avoid: Avoid moisture.

Incompatible materials: Reactive or incompatible with the following: Oxidizing materials, acids, and alkalis. Avoid contact with bromide trifluoride, 2-furan percarboxylic acid, zinc, methal vinyl ether. Attacks metals in the presence of moisture and may release flammable hydrogen gas. Reaction of bromide impurity with oxidizing metals may generate trace levels of impurities such as bromates

Hazardous: decomposition products: Formed under fire conditions: Hydrogen chloride gas, calcium oxide.

Hazardous polymerization: Will not occur.

Section 11. Toxicological Information

Information on toxicological effects

Component toxicity data

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Calcium Chloride 10043-52-4	1000 mg/kg (rat)	2630 mg/kg (rat)	-------
Potassium Chloride 7447-40-7	2600 mg/kg (rat)	-------	-------
Sodium Chloride 7647-14-5	3 g/kg (rat)	10 g/kg (rat)	42 g/m^3 (1 hour, rat)

Potential Acute health effects:

Eye contact: Dust may cause severe eye irritation with corneal injury

Inhalation: Dust may cause irritation to upper respiratory tract.

Skin contact: Brief contact is essentially nonirritating to skin. Prolonged contact may cause skin irritation or burn. Not classified as corrosive to skin according to DOT guidelines. May cause more severe response if skin is damp, abraded.

Ingestion: Low toxicity if swallowed. Small amounts swallowed incidentally as result of normal handling operations are unlikely to cause injury. Swallowing large amounts may cause local mucosal damage to esophagus and stomach. Swallowing may result in gastrointestinal irritation or damage.

Symptoms related to physical, chemical, and toxicological characteristics

Eye contact: Adverse symptoms may include:
pain or irritation
watering
redness
conjunctival swelling
cornea opacification

Inhalation: Irritation to upper respiratory tract

Skin contact: Irritation
Abrasion from solid
Erythema
Burn from reaction to water

Ingestion: Consumption of solids or hypertonic solutions can cause:
Nausea
Vomiting
Increased thirst

Delayed and immediate effects, chronic effects from short and long term exposure

Chronic exposures to calcium chloride that cause irritation may cause a chronic dermatitis or mucosal membrane problem. For the minor component of potassium chloride: In animals, effects have been reported on the following organs after ingestion: GI tract, heart, and kidney. Dose levels producing these effects were many times higher than any does levels expected from exposure to this material. Sodium chloride: Medical experience with sodium chloride has shown a strong association between elevated blood pressure and prolonged dietary overuse. Related effects could occur in kidneys.

GHS Health Hazards:

Acute Toxicity – Oral: Category 4 – Harmful if swallowed

Acute Toxicity – Dermal: Not classified as cutely toxic for dermal exposure

Acute Toxicity – Inhalation: No data. Not classified.

Contact Hazard – skin: Category 2 – Causes skin irritation

Contact Hazard – eye: Category 2B – Causes eye irritation

Carcinogenicity: Not classified as carcinogen per GHS, NTP, IARC, or OSHA

Mutagenicity: Not classified as mutagen per GHS criteria. Calcium Chloride – In vitro toxicity studies negative. Potassium chloride: In vitro toxicity studies were positive, how relevance to humans is unknown. Sodium Chloride – In vitro toxicity studies were predominantly negative.

Section 12. Ecological Information

Aquatic Toxicity: Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/LL50 > 100mg/L in the most sensitive species tested.

Freshwater fish toxicity:

Calcium Chloride	LC50	Bluegill	8350-10650 mg/L
Potassium Chloride	LC50	Rainbow Trout	96 hours, 4236 mg/L
Sodium Chloride	LC50	Fathead Minnow	10610 mg/L

Invertebrate Toxicity:

Calcium Chloride	LC50	Water Flea	759-3005 mg/L
Potassium Chloride	EC50	Water Flea	24 hours, 590 mg/L
	LC50	Water Flea	96 hours, 3470 mg/L
Sodium Chloride	LC50	Water Flea	4571 mg/L

Other Toxicity: Sodium Chloride, OECD 209 Test, activated sludge, respiration inhibition: > 1000 mg/L

Biodegradation: Material is inorganic and not subject to biodegradation.

Persistence: Calcium chloride is not believed to persist in the environment because it is readily dissociated into calcium and chloride ions in water. Calcium chloride released into the environment is thus likely to be distributed into water in the form of calcium and chloride ions. Calcium ions may remain in soil by binding to soil particulate or by forming stable salts with other ions. Chloride ions are mobile and eventually drain into surface water. Both ions originally exist in nature, and their concentrations in surface water will depend on various factors such as geological parameters, weathering, and human activities.

Bioconentration: Nobioconcentration is expected because of the relatively high water solubility. Potential for mobility in soil is high (Koc between 0 and 50). Partitioning from water to n-octanol is not applicable.

Bioaccumulative Potential: Calcium Chloride and its dissociated forms (calcium and chloride ions) are ubiquitous in the environment. Calcium and chloride ions can also be found as constituents in organisms. Considering its dissociation properties, calcium chloride is not expected to accumulate in living organisms.

Mobility in soil: Calcium Chloride is not expected to be absorbed into soil due to its dissociation properties and high solubility in water. It is expected to dissociate into calcium and chloride free ions or may form stable inorganic or organic salts with other counter ions, leading to different fates between calcium and chloride ions in soil and water components. Calcium ions may bind to soil particulate or may form stable inorganic salts with sulfate and carbonate ions. The chloride ion is mobile in soil and eventually drains into surface water because it is readily dissolved in water.

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 comply with the requirements of the 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers.

Section 14. Transport Information

Land Transport:	US DOT 49 CFR 172.101 – Not regulated
Maritime Transport:	Not regulated
Canadian Transportation of dangerous goods:	Not regulated

Section 15. Regulatory Information

US Federal Regulations:

OSHA Regulatory Status:	Considered hazardous by OSHA Hazard Communication standard (29 CFR 1910.1200)
CERCLA sections: 102a/103 Hazardous Substances	Not Regulated
SARA EHS Chemical: (40 CFR 355.30)	Not Regulated
SARA 311/312:	Acute Health Hazard
EPCRA Section 313: (40 CFR 372.65)	To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.
California Prop. 65:	This product is not listed, but it may contain impurities/trace elements known to the state of California to cause cancer or reproductive toxicity as listed under Proposition 65 State Drinking Water and Toxic Enforcement Act. **WARNING:** This product (when used in aqueous formulations with a chemical oxidizer such as ozone) may react to form calcium bromate, a chemical known to the state of California to cause cancer.
US Inventory Status:	TSCA: All components are listed or exempt TSCA 12(b): This product is not subject to export notification
Canadian Regulations:	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and this SDS contains all the information required by the Controlled Products Regulations.

Section 16. Other Information

History:

Date of issue:	6/1/15
Date of previous issue:	1/1/13 (Formerly MSDS)
Version:	1
Prepared by:	Illinois Products Corporation 423 Joseph Drive South Elgin, IL 60177 847-289-2800

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