JMN SPECIALTIES, INC.

Safety Data Sheet
AC 82176 Calcium Carbonate Dissolver

SECTION 1: Identification

1.1 GHS Product identifier

Product name	AC 82176 Calcium Carbonate Dissolver
Product number	AC 82176 Calcium Carbonate Dissolver
Brand	JMN

1.3 Recommended use of the chemical and restrictions on use

Recommended use: Industrial acidic cleaner formulated to dissolve calcium carbonate deposits and calcareous marine growth from subsea production equipment, wellhead components, shrouds, piping, and other compatible industrial equipment.
Restrictions on use: For industrial and professional use only. Use only for the identified applications and in accordance with established operating procedures. Not intended for household or consumer use.

1.4 Supplier's details

Name	JMN Specialties, Inc.
Address	1100 Victory Drive Westwego LA 70094 USA
Telephone	504-341-3749
Fax	504-341-5868
email	sales@jmnspecialties.com

1.5 Emergency phone number

US & Canada: (800) 255-3924
Outside USA +01-813-248-0585.

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200, 2024)

- Corrosive to metals (C.4.29), Cat. 1
- Skin corrosion/irritation (C.4.4), Cat. 1
- Eye damage/irritation (C.4.5), Cat. 1

2.2 GHS label elements, including precautionary statements

Pictograms

Signal word **DANGER**

Hazard statement(s)

H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage

Precautionary statement(s)

P234	Keep only in original packaging.
P390	Absorb spillage to prevent material damage.
P406	Store in a corrosive resistant/… container with a resistant inner liner.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands and clean any skin contact thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	If swallowed: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P363	Wash contaminated clothing before reuse.
P304+P340	If inhaled: Remove person to fresh air and keep comfortable for breathing.
P310	Immediately call a POISON CENTER/doctor/emergency room.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405	Store locked up.
P501	Dispose of container and unused contents in accordance with federal, state and local requirements.

2.3 Other hazards which do not result in classification

Contact with calcium carbonate and other carbonate-containing materials releases carbon dioxide. Rapid reaction may produce foaming, splashing, heat, and pressure if the Product is used in a closed or inadequately vented system. Do not mix with alkalis, oxidizing agents, hypochlorites, cyanides, sulfides, or other incompatible materials.

Statement regarding ingredients of unknown toxicity

0% (oral, dermal, inhalation)

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Component	Identification	Weight %	Classifications
Phosphoric acid	CAS no.: 7664-38-2 EC no.: 231-633-2 Index no.: 015-011-00-6	10 - 20 %	CLASSIFICATIONS: Skin corrosion/irritation (chapter 3.2), Cat. 1B. HAZARDS: H314 - Causes severe skin burns and eye damage. [SCLs/M-factors/ATEs]: Skin Corr. 1B; H314: C ≥ 25 %; Skin Irrit. 2; H315: 10 % ≤ C < 25 %; Eye Irrit. 2; H319: 10 % ≤ C < 25 %

Component	Identification	Weight %	Classifications
Acetic acid	CAS no.: 64-19-7 EC no.: 200-580-7 Index no.: 607-002-00-6	10 - 20 %	CLASSIFICATIONS: Flammable liquids (chapter 2.6), Cat. 3; Skin corrosion/irritation (chapter 3.2), Cat. 1A. HAZARDS: H226 - Flammable liquid and vapor; H314 - Causes severe skin burns and eye damage. [SCLs/M-factors/ATEs]: Skin Corr. 1A; H314: C ≥ 90 %; Skin Corr. 1B; H314: 25 % ≤ C < 90 %; Skin Irrit. 2; H315: 10 % ≤ C < 25 %; Eye Irrit. 2; H319: 10 % ≤ C < 25 %
Potassium phosphate Monobasic	CAS no.: 7778-77-0	10 - 20 %	CLASSIFICATIONS: Not classified. HAZARDS: Not classified as hazardous.

Trade secret statement (OSHA 1910.1200(i))
Any concentration shown as a range is to protect confidentiality or is due to batch variation. When not listed, mixtures may contain water [CAS No. 7732-18-5] to 100%. The chemical identity and/or percentage of composition of other components is being withheld as a trade secret.

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice

Immediate medical attention is required following eye contact, significant skin contact, inhalation of mist, or ingestion. Show this Safety Data Sheet to the attending medical personnel. First-aid providers must protect themselves from exposure by wearing appropriate gloves, protective clothing, and eye and face protection. Do not enter a contaminated area without appropriate respiratory protection when airborne mist or vapor may be present.

If inhaled

Remove the affected person to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, trained personnel may administer oxygen. If breathing has stopped, begin artificial respiration using an appropriate barrier device. Do not use mouth-to-mouth resuscitation if the affected person has ingested or inhaled the Product. Immediately call a POISON CENTER or physician.

In case of skin contact

Immediately remove contaminated clothing, shoes, and leather goods. Flush affected skin with large amounts of water for at least 15 minutes. Do not attempt to neutralize on the skin. Immediately call a POISON CENTER or physician. Wash contaminated clothing before reuse and discard contaminated leather articles that cannot be adequately decontaminated.

In case of eye contact

Immediately rinse cautiously with clean, lukewarm water for at least 30 minutes. Hold the eyelids open and away from the eye to ensure thorough rinsing. Remove contact lenses, if present and easy to do. Continue rinsing during transport for medical treatment. Immediately call a POISON CENTER or ophthalmologist.

If swallowed

Immediately rinse the mouth with water. Do NOT induce vomiting. If the affected person is conscious and able to swallow, give small amounts of water. Never give anything by mouth to an unconscious or convulsing person. Do not attempt chemical neutralization. Immediately call a POISON CENTER or physician.

Personal protective equipment for first-aid responders

Responders should wear appropriate protective gloves, chemical-resistant clothing, and eye/face protection to prevent secondary exposure. Avoid direct contact with contaminated clothing or body fluids.

4.2 Most important symptoms/effects, acute and delayed

Causes severe skin burns and serious eye damage. Eye contact may cause intense pain, tearing, redness, corneal injury, and possible permanent loss of vision. Skin contact may cause pain, redness, blistering, ulceration, and deep tissue damage. Inhalation of mist or vapor may cause coughing, choking, sore throat, respiratory irritation, breathing difficulty, and possible delayed pulmonary effects. Ingestion may cause severe burns of the mouth, throat, esophagus, and stomach, with abdominal pain, nausea, vomiting, and possible perforation. Symptoms may be delayed following significant exposure.

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

Provide immediate medical evaluation and symptomatic and supportive treatment. Chemical burns should be treated promptly by qualified medical personnel. Following inhalation, observe for delayed respiratory effects. Following ingestion, do not induce vomiting and do not administer neutralizing agents. Consider consultation with a poison center or medical toxicologist. There is no known specific antidote.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Suitable Extinguishing Media: This product is non-combustible and does not burn under normal conditions. In the event of a fire involving surrounding materials, use extinguishing media appropriate for the conditions present, including water spray, water fog, dry chemical, carbon dioxide (CO_2), or alcohol-resistant foam. Water spray may be used to cool fire-exposed containers and equipment. Although the product itself does not support combustion, extinguishing measures should be selected based on the materials involved in the surrounding fire.
Unsuitable Extinguishing Media: No specific extinguishing media are known to be unsuitable. Do not use a solid water stream directly on spilled material, as splashing may spread corrosive liquid.

5.2 Specific hazards arising from the chemical

The Product is a nonflammable, water-based acidic liquid. Heating may release irritating or corrosive vapors. Containers exposed to fire may develop pressure and rupture. Contact with certain metals may generate flammable hydrogen gas. Contact with carbonate-containing materials may release carbon dioxide and cause foaming or pressure buildup in inadequately vented containers. Thermal decomposition may produce carbon oxides, phosphorus oxides, potassium compounds, and other irritating or corrosive fumes.

5.3 Special protective actions for fire-fighters

Firefighters should wear full structural firefighting protective clothing and a positive-pressure, self-contained breathing apparatus. Approach the fire from upwind and avoid contact with the Product and contaminated runoff. Use water spray to cool fire-exposed containers. Do not allow water to enter sealed containers. Dike and collect firefighting water when this can be accomplished safely. Prevent contaminated runoff from entering drains, sewers, surface water, or soil. Move undamaged containers away from the fire area if this can be done without risk.

Further information

Evacuate unnecessary personnel and isolate the affected area. Acid-resistant chemical protective clothing may be required where direct contact with the Product is possible. Dispose of fire debris and contaminated extinguishing water in accordance with applicable regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate unnecessary personnel and isolate the affected area. Keep personnel upwind of the release. Avoid contact with the skin, eyes, and clothing. Do not breathe mist, vapors, or spray. Provide adequate ventilation. Wear acid-resistant gloves, protective clothing, chemical splash goggles, and a face shield. Where ventilation is inadequate or airborne concentrations may exceed applicable exposure limits, use appropriate respiratory protection. Emergency responders should wear chemical-protective equipment suitable for corrosive acidic liquids. Stop the leak if this can

be done safely. Do not touch damaged containers or spilled material without appropriate protective equipment. Use caution because contact with metals may generate flammable hydrogen gas.

6.2 Environmental precautions

Prevent uncontrolled release into drains, sewers, soil, groundwater, and surface water. Dike the spill to prevent migration. Notify the appropriate authorities if the Product enters waterways, sewers, or the environment in a quantity requiring reporting. Controlled subsea application must be conducted only in accordance with the approved operating procedure and applicable environmental requirements.

6.3 Methods and materials for containment and cleaning up

Contain the spill using acid-resistant barriers, dikes, or compatible absorbent material. Recover free liquid by pumping it into a labeled, corrosion-resistant container. Absorb remaining liquid with dry sand, clay, vermiculite, or another noncombustible absorbent compatible with acidic materials. Do not use combustible absorbents such as sawdust. Place collected material in a compatible container for treatment or disposal. Trained personnel may cautiously neutralize small residual amounts using an appropriate commercial acid-neutralizing agent. Neutralization may generate heat, carbon dioxide, and foaming; add the neutralizing material slowly and provide adequate ventilation. Confirm an acceptable pH before final cleanup or disposal. Wash the affected area with water only after the bulk Product has been recovered and the wash water can be contained.

Reference to other sections

See protective measures in Sections 7 and 8. Disposal considerations in Section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

For industrial and professional use only. Read and understand this Safety Data Sheet before handling the Product. Avoid contact with the eyes, skin, and clothing. Do not breathe mist, vapors, or spray. Use only with adequate ventilation. Wear the personal protective equipment specified in Section 8. Keep the Product in compatible, corrosion-resistant equipment. Use acid-resistant pumps, hoses, valves, fittings, and transfer lines. Avoid contact with incompatible metals. Contact with certain metals may generate flammable hydrogen gas. Do not mix with alkalis, oxidizing agents, hypochlorites, cyanides, sulfides, or other incompatible materials. Contact with calcium carbonate and other carbonate-containing materials releases carbon dioxide and may cause heat, foaming, splashing, or pressure buildup. Do not conduct treatment in a sealed or inadequately vented system. Keep containers closed when not in use. Open containers slowly and carefully. Do not eat, drink, smoke, or use tobacco products while handling the Product. Wash hands and exposed skin thoroughly after handling. Remove contaminated clothing and wash it before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Store in the original, properly labeled, corrosion-resistant container in a cool, dry, well-ventilated area. Recommended storage temperature: 5–40°C (41–104°F). Protect from excessive heat, direct sunlight, freezing, and physical damage. Keep containers tightly closed and upright when not in use. Store away from alkalis, oxidizing agents, hypochlorites, cyanides, sulfides, reactive metals, and other incompatible materials. Provide suitable secondary containment. Do not store in unlined metal containers. Inspect containers periodically for leakage, swelling, corrosion, or damage. Empty containers may retain corrosive residue. Do not reuse, cut, weld, drill, grind, or expose empty containers to heat or flame unless they have been properly cleaned and confirmed safe.

Specific end use(s)

This Product is intended for the controlled removal of calcium carbonate deposits and calcareous marine growth from compatible subsea production equipment and other industrial equipment. Subsea application should use an approved containment shroud and controlled ROV-operated pumping procedure. The treatment area must remain adequately vented to prevent carbon dioxide pressure buildup. Use only in accordance with an approved field procedure and applicable environmental requirements.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

CAS: 64-19-7 (EC: 200-580-7)

Acetic acid
ACGIH (USA): 15 ppm STEL inhalation; 10 ppm TWA inhalation; AU/SWA (AU): 15 ppm; 37 mg/m3 STEL inhalation; 10 ppm; 25 mg/m3 TWA inhalation; Cal/OSHA (USA): 40 ppm C inhalation; 10 ppm, 25 mg/m3 PEL inhalation; 10 ppm, (ST) 15 ppm, (C) 40 ppm PEL inhalation; 15 ppm, 37 mg/m3 STEL inhalation; EU/OSHA (EU): 25 mg/m3 IOELV-LTEL inhalation; 10 ppm IOELV-LTEL inhalation; 50 mg/m3 IOELV-STEL inhalation; 20 ppm IOELV-STEL inhalation; NIOSH (US): 10 ppm, (ST) 15 ppm REL inhalation; 15 ppm, 37 mg/m3 ST inhalation; 10 ppm, 25 mg/m3 TWA inhalation; OSHA (USA): 10 ppm, 25 mg/m3 TWA inhalation; US/OSHA (US): 10 ppm PEL inhalation; 25 mg/m3 PEL inhalation

CAS: 7664-38-2 (EC: 231-633-2)
Phosphoric acid
ACGIH (USA): 1 mg/m3, (ST) 3 mg/m3 TLV® inhalation; AU/SWA (AU): 3 mg/m3 STEL inhalation; 1 mg/m3 TWA inhalation; Cal/OSHA (USA): 1 mg/m3, (ST) 3 mg/m3 PEL inhalation; 1 mg/m3, (ST) 3 mg/m3 PEL inhalation; EU/OSHA (EU): 1 mg/m3 IOELV-LTEL inhalation [Orthophosphoric acid]; 2 mg/m3 IOELV-STEL inhalation [Orthophosphoric acid]; NIOSH (USA): 1 mg/m3, (ST) 3 mg/m3 REL inhalation; 1 mg/m3, (ST) 3 mg/m3 REL inhalation; OSHA (USA): 1 mg/m3 PEL inhalation; US/OSHA (US): 1 mg/m3 PEL inhalation

8.2 Appropriate engineering controls

Provide adequate general ventilation and local exhaust ventilation wherever mist, vapor, or spray may be generated. Enclose pumping and transfer operations when practical. Design process equipment to minimize splashing and aerosol formation. Maintain airborne concentrations below applicable occupational exposure limits. Use corrosion-resistant pumps, hoses, valves, fittings, transfer lines, and ventilation components. Ensure that tanks, shrouds, and treatment systems are adequately vented because contact with calcium carbonate releases carbon dioxide. Provide readily accessible emergency eyewash stations and safety showers in all areas where the Product is handled.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Pictograms

Eye/face protection
Wear indirectly vented chemical splash goggles together with a full-face shield. A face shield is supplemental protection and must not be used as a substitute for chemical splash goggles.

Skin protection
Wear acid-resistant chemical-protective gloves such as butyl rubber, neoprene, nitrile rubber, or PVC. Select glove material and thickness based on the manufacturer's chemical-resistance and breakthrough-time data. Inspect gloves before use and replace them immediately if damaged or contaminated internally.

Body protection
Body protection and hygiene measures: Wear an acid-resistant chemical-protective body suit, apron, and chemical-resistant boots when splashing or significant contact is possible. Remove contaminated clothing immediately and wash it before reuse. Discard contaminated leather articles that cannot be adequately decontaminated. Wash hands and exposed skin thoroughly after handling and before eating, drinking, smoking, using tobacco products, or leaving the work area. Do not take contaminated clothing home.

Respiratory protection
Respiratory protection is not normally required when adequate engineering controls maintain airborne concentrations below applicable exposure limits. If mist or vapor may exceed an exposure limit, use a NIOSH-approved full-face respirator equipped with acid-gas cartridges and a P100 particulate filter. Use a positive-pressure supplied-air respirator or self-contained breathing apparatus for emergencies, spill response, confined spaces, unknown concentrations, oxygen-deficient atmospheres, or conditions exceeding the limitations of an air-purifying respirator. Respirator use must comply with OSHA 29 CFR 1910.134.

Thermal hazards

No special thermal protective equipment is normally required. Reaction with carbonate-containing materials or alkalis may generate heat. Use protective equipment appropriate for the expected reaction temperature and splash potential.

Control banding approach
CB4 – Use containment and seek specialist advice. The Product is corrosive and requires a high level of exposure control during manufacturing, transfer, pumping, sampling, spill response, and equipment maintenance.

Environmental exposure controls
Prevent uncontrolled releases into drains, sewers, soil, groundwater, and surface water. Use closed transfer systems, secondary containment, and appropriate spill-control measures. Controlled subsea application must comply with the approved operating procedure and all applicable environmental requirements.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Clear, low-viscosity liquid
Color	Colorless to pale yellow
Odor	Mild acidic or vinegar-like odor
Odor threshold	Not determined for the Product
Melting point/freezing point	Not determined
Boiling point or initial boiling point and boiling range	~212°F (~100°C)
Flammability	The Product is not expected to sustain combustion
Lower and upper explosion limit/flammability limit	Not applicable
Flash point	Nonflammable aqueous acidic mixture
Explosive properties	Product is not explosive
Auto-ignition temperature	Nonflammable aqueous acidic mixture
Decomposition temperature	Not determined
Oxidizing properties	Not oxidizing
pH	1.5–2.5
Kinematic viscosity	Not determined; low-viscosity, readily pumpable liquid
Solubility	Completely soluble in water
Partition coefficient n-octanol/water (log value)	Not applicable to the mixture
Vapor pressure	Not determined
Evaporation rate	< 1 (estimated)
Density and/or relative density	1.17–1.20

Relative vapor density	Not determined
Particle characteristics	Not applicable for this product

Further safety characteristics (supplemental)
VOC Content: Calculated approximately 14.8% by weight, based on the acetic acid content.

SECTION 10: Stability and reactivity

10.1 Reactivity
The Product is a reactive acidic liquid. It reacts with calcium carbonate and other carbonate-containing materials, releasing carbon dioxide and generating soluble or readily removable reaction products. Reaction with strong alkalis may generate considerable heat. Contact with certain metals may release flammable hydrogen gas.

10.2 Chemical stability
Stable under normal conditions of storage, handling, and use. Product remains stable when stored in properly closed, corrosion-resistant containers and protected from incompatible materials. No hazardous polymerization will occur.

10.3 Possibility of hazardous reactions
Hazardous polymerization will not occur. Hazardous reactions may occur if the Product is mixed with strong alkalis, oxidizing agents, hypochlorites, cyanides, sulfides, reactive metals, or other incompatible materials. Reaction with carbonate-containing materials may produce heat, foaming, splashing, and carbon dioxide pressure buildup. Do not use or store the Product in a sealed or inadequately vented system when contact with carbonate deposits may occur. Contact with hypochlorites may release hazardous chlorine-containing gases. Contact with sulfides may release toxic hydrogen sulfide gas. Contact with cyanides may release highly toxic hydrogen cyanide gas.

10.4 Conditions to avoid
Avoid excessive heat, direct sunlight, freezing, contamination, incompatible materials, and use in closed or inadequately vented systems. Avoid conditions that generate mist, spray, or uncontrolled pressure.

10.5 Incompatible materials
Strong alkalis, alkaline buffers, strong oxidizing agents, hypochlorites, cyanides, sulfides, reactive metals, zinc, galvanized materials, and other materials susceptible to acidic attack.

10.6 Hazardous decomposition products
Under normal storage and handling conditions, hazardous decomposition products are not expected. Heating or fire may produce carbon oxides, phosphorus oxides, potassium compounds, acidic vapors, and other irritating or corrosive fumes. Contact with incompatible metals may generate hydrogen gas. Reaction with carbonate-containing materials releases carbon dioxide.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Based on available data for the components and the corrosive nature of the mixture, this product is not classified for acute toxicity by oral, dermal, or inhalation exposure. However, exposure may result in severe local tissue injury due to corrosivity.
Estimated Acute Toxicity:
Oral ATE: >2,000 mg/kg (calculated)
Dermal ATE: >2,000 mg/kg (estimated)
Inhalation ATE: Not determined. The Product has relatively low volatility under normal conditions; however, pumping, spraying, or other operations that generate acid mist may cause severe respiratory irritation or corrosive injury.

Skin corrosion/irritation
Category 1. Causes severe skin burns. Classified as Skin Corrosion.

Serious eye damage/irritation
Category 1. Causes serious eye damage. Classified as Serious Eye Damage.

Respiratory or skin sensitization
The Product is not expected to cause respiratory or skin sensitization based on available component information.

Germ cell mutagenicity
The Product is not expected to be mutagenic based on available component information.

Carcinogenicity
The Product is not expected to be carcinogenic. No component present at 0.1% or greater is identified as a carcinogen by IARC, NTP, or OSHA.

Reproductive toxicity
The Product is not expected to cause reproductive or developmental toxicity based on available component information.

Summary of evaluation of the CMR properties
Carcinogenicity: No component present at 0.1% or greater is identified as a carcinogen by IARC, NTP, or OSHA.
Germ cell mutagenicity: The Product is not expected to cause germ cell mutagenicity based on available component data.
Reproductive toxicity: The Product is not expected to cause reproductive or developmental toxicity based on available component data.
No component is classified as carcinogenic, mutagenic, or toxic to reproduction at a concentration that would require classification of the Product.
Assessment basis: The complete Product has not been tested on animals. Toxicological conclusions are based on available component data, applicable GHS mixture-classification principles, pH, acid reserve, and professional judgment. The corrosivity classification is based on the known properties of the acidic system, the estimated Product pH, and the classifications of its components.

Specific target organ toxicity (STOT) - single exposure
Not classified. Exposure to mists or aerosols may cause irritation or burns to the respiratory tract, including coughing, sore throat, difficulty breathing, and chest discomfort.

Specific target organ toxicity (STOT) - repeated exposure
Based on available data, this product is not classified for specific target organ toxicity following repeated exposure. Safe handling on a long-term basis should emphasize avoidance of repeated acute exposure, as prolonged or repeated contact may result in local effects including irritation or corrosive injury to the eyes, skin, and respiratory tract. This product may aggravate pre-existing eye, skin, or respiratory conditions.

Aspiration hazard
Not classified. Due to its physical properties and corrosive nature, aspiration into the lungs is not expected to be the primary hazard. Ingestion remains hazardous because of corrosive injury to the gastrointestinal tract.

Additional information
Toxicological information for the complete Product is based on the known hazards of the components, concentration-based calculations, pH, acid reserve, and professional judgment. The absence of complete mixture testing should not be interpreted as an absence of hazard.

SECTION 12: Ecological information

Toxicity
The complete Product has not been tested. Based on available component information, the Product is not classified as hazardous to the aquatic environment. However, an uncontrolled concentrated release may harm aquatic organisms by causing a significant reduction in receiving-water pH.

Fish: No LC_{50} value has been established for the complete Product. Available component data generally indicate low to moderate acute aquatic toxicity, with observed effects strongly influenced by test-solution pH.
Aquatic invertebrates: No EC_{50} value has been established for the complete Product. Available component data indicate that adverse effects are expected primarily from acidity at elevated concentrations.
Aquatic plants and algae: No EC_{50} value has been established for the complete Product. Phosphate released in significant quantities may act as a nutrient and contribute to excessive algae or plant growth in nutrient-limited waters.
Chronic aquatic toxicity: No chronic toxicity data are available for the complete Product. The components are not expected to bioaccumulate or produce chronic toxicity through organic persistence.

Persistence and degradability
The organic acid component is expected to biodegrade readily. Monopotassium phosphate and other inorganic potassium and phosphate ions are not subject to biodegradation. These inorganic components are expected to dissociate, dilute, react, or become incorporated into naturally occurring ionic and mineral cycles. The statement that the inorganic components do not biodegrade should not be interpreted to mean that they are persistent organic pollutants.

Bioaccumulative potential
The organic acid component has a low potential for bioaccumulation. Potassium and phosphate ions are naturally occurring inorganic ions and are not expected to bioaccumulate in the manner associated with persistent organic chemicals.

Mobility in soil
The Product is completely soluble in water and is expected to have high mobility in soil until it is diluted, neutralized, adsorbed, or reacted with minerals. Phosphate may bind to soil, sediment, calcium, iron, or aluminum compounds. Potassium ions are expected to remain mobile in water or participate in ion-exchange processes.

Results of PBT and vPvB assessment
Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria. Not fulfilling vPvB (very persistent, very bioaccumulative) criteria.

Endocrine disrupting properties
No component is known to have endocrine-disrupting properties at the concentrations present in the Product.

Other adverse effects
An uncontrolled release may temporarily lower the pH of receiving water and harm aquatic organisms. Large phosphate releases may contribute to nutrient enrichment and eutrophication. Environmental effects will depend upon the quantity released, dilution, buffering capacity, water chemistry, and local environmental conditions. Controlled subsea application must comply with the approved operating procedure and applicable environmental requirements.

SECTION 13: Disposal considerations

Disposal methods

Product disposal
Dispose of unused Product, spilled material, treatment residues, and contaminated absorbents in accordance with applicable federal, state, and local regulations. Do not dispose of the concentrated Product into drains, sewers, soil, surface water, or groundwater. The Product may exhibit the RCRA characteristic of corrosivity and may require management as D002 corrosive hazardous waste. The waste generator is responsible for evaluating the waste at the time of disposal and assigning all applicable federal and state waste codes based on the Product's condition, use, contamination, and applicable regulations.

Packaging disposal
Empty containers may retain corrosive Product residue and vapor. Do not reuse containers unless they have been professionally cleaned and reconditioned. Do not cut, weld, drill, grind, puncture, or expose empty containers to heat or flame. Drain containers thoroughly and keep them closed pending recycling, reconditioning, or disposal.

Dispose of contaminated packaging through an approved waste-management facility in accordance with applicable regulations.

Waste treatment
Recover and reuse the Product when practical. Treatment or neutralization should be performed only by trained personnel at an authorized facility using appropriate equipment and controls. Neutralization may generate heat, carbon dioxide, foaming, and splashing. Add neutralizing material slowly and confirm the final pH before disposal. Dilution alone is not an acceptable substitute for proper waste treatment. Treatment residues may contain potassium, phosphate, acetate, calcium, and other salts produced during use or neutralization.

Sewage disposal
Do not discharge the concentrated Product or untreated waste to sanitary or industrial sewer systems. Any discharge of treated wastewater must be specifically authorized by the receiving facility and must comply with applicable pH, phosphate, chemical oxygen demand, and other discharge limitations.

Other disposal recommendations
Controlled subsea use and disposal of spent treatment solution must comply with the approved operating procedure, discharge authorization, and environmental requirements applicable to the operating location. The waste generator remains responsible for determining the appropriate classification, treatment, transportation, and disposal method. Consult the appropriate regulatory authority or licensed waste contractor when requirements are uncertain.

SECTION 14: Transport information

DOT (US)
UN number: UN3265
Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (acetic acid, phosphoric acid)
Hazard class: 8
Packing group: II
Hazard label: Corrosive
Marine pollutant: No
Reportable quantity: Not applicable to the proposed package sizes; no individual hazardous substance is present at or above its reportable quantity in a package.

IMDG
UN number: UN3265
Proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (acetic acid, phosphoric acid)
Hazard class: 8
Packing group: II
Marine pollutant: No
EmS: F-A, S-B

IATA
UN number: UN3265
Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (acetic acid, phosphoric acid)
Hazard class: 8
Packing group: II
Environmental hazard: No

SECTION 15: Regulatory information

Component	CAS no.	RTK (US) for state:	TSCA (US)[1]	CA Prop. 65[2]	pfas[3]
Phosphoric acid	7664-38-2	MA, NJ, PA, RI	P	-	-
Acetic acid	64-19-7	MA, NJ, PA, RI	P	-	-
Potassium phosphate Monobasic	7778-77-0	-	P	-	-

[1] "P"—Public list, "C"—Confidential list. [2] "c"—cancer, "r"—reproductive harm. [3] "pfas"—Per- and polyfluoroalkyl substances.

Regulation	Applicability
States Right To Know Components	Acetic acid (CAS 64-19-7) and phosphoric acid (CAS 7664-38-2) are listed under applicable Massachusetts, New Jersey, Pennsylvania, and Rhode Island right-to-know or hazardous-substance requirements.
SARA 302 Components	The Product does not contain any component listed as an Extremely Hazardous Substance under 40 CFR Part 355.
SARA 311/312 Hazards	Skin Corrosion or Irritation • Serious Eye Damage or Eye Irritation • Corrosive to Metals
SARA 313 Components	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
US EPA TSCA Inventory Status	All components of the Product are listed as active on the TSCA Chemical Substance Inventory or are exempt from inventory requirements.
CERCLA	Acetic acid (CAS 64-19-7) and phosphoric acid (CAS 7664-38-2) each have a reportable quantity of 5,000 lb (2,270 kg). No proposed individual package contains either substance at or above its reportable quantity.
California Proposition 65 List	This Product does not contain any chemical known to the State of California to cause cancer, birth defects, or other reproductive harm at a concentration requiring a Proposition 65 warning.
Canadian Domestic Substances List (DSL)	Acetic acid (CAS 64-19-7), Phosphoric acid, monopotassium salt CAS number: 7778-77-0, and phosphoric acid (CAS 7664-38-2) are listed
Australian Inventory of Industrial Chemicals	Acetic acid (CAS 64-19-7), Phosphoric acid, monopotassium salt CAS number: 7778-77-0, and phosphoric acid (CAS 7664-38-2) are listed
Water hazard class (WGK, Germany)	Chemical name: Acetic acid, CAS number: 64-19-7 WGK hazard class: WGK 1 - Slightly hazardous to water
Water hazard class (WGK, Germany)	Chemical name: Potassium phosphate Monobasic, CAS number: 7778-77-0 WGK hazard class: WGK 1 - Slightly hazardous to water

15.2 Chemical Safety Assessment

A Chemical Safety Assessment (CSA) has not been carried out for this mixture. (Under EU REACH, CSAs are performed for substances; this product is a mixture formulated from registered substances.)

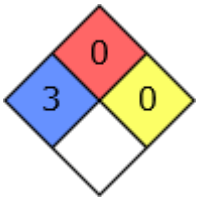
Annex: Voluntary Chemical Safety Assessment (summary)
Ingestion: Accidental ingestion may cause severe corrosive burns to the mouth, throat, esophagus, and stomach. Do not induce vomiting or attempt chemical neutralization. Rinse the mouth, give small amounts of water only if the affected person is conscious and able to swallow, and obtain immediate medical attention.
Eye Contact: Eye contact may cause severe pain, corneal burns, permanent eye injury, or loss of vision. Wear chemical splash goggles together with a full-face shield. Following exposure, begin continuous water irrigation immediately and obtain urgent medical attention.
Skin Contact: Skin contact may cause severe burns, blistering, ulceration, and deep tissue injury. Wear acid-resistant gloves, protective clothing, and chemical-resistant footwear. Immediately remove contaminated clothing and rinse affected skin with water for at least 20 minutes. Obtain immediate medical attention.
Respiratory Issues: The Product has relatively low volatility under normal conditions; however, pumping, spraying, agitation, or spill response may generate acidic mist or vapor capable of causing severe respiratory irritation or corrosive injury. Use adequate ventilation and avoid breathing mist, vapor, or spray. Use appropriate respiratory protection when engineering controls cannot maintain exposure below applicable limits.
Assessment conclusion: When used in a controlled, adequately vented system by trained personnel wearing appropriate protective equipment, occupational exposure can be effectively managed. The treatment area must

remain vented because reaction with calcium carbonate releases carbon dioxide and may cause foaming, splashing, or pressure buildup.
Disclaimer: This voluntary assessment is based on the proposed formulation, available component data, estimated physical properties, applicable mixture-classification principles, and professional judgment. It does not replace the complete Safety Data Sheet, workplace risk assessment, field operating procedure, environmental authorization, or regulatory requirements. Actual conditions of use remain outside the control of JMN Specialties, Inc., and the user is responsible for determining the suitability of the Product and implementing appropriate safeguards.

HMIS Rating

AC 82176 Calcium Carbonate Dissolver	
HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	H

NFPA Rating



SECTION 16: Other information

This Safety Data Sheet has been revised as of the issue date indicated in the footer. Changes may include updates to composition, hazard classification, physical and chemical properties, toxicological information, and regulatory data. Previous versions should be discarded. Users are advised to review the entire document to ensure awareness of current information.

16.1 Further information/disclaimer

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, the Company makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the recipients will make their own determination as to its suitability for their intended purposes prior to use. The conditions of use, handling, storage, and disposal of this product are beyond the control of the Company and may involve variables and conditions that cannot be anticipated. The user is solely responsible for determining safe and appropriate conditions of use, including compatibility with other materials and compliance with all applicable federal, state, and local regulations. This product may react with other materials or under certain conditions to produce hazardous or unintended results. It is the responsibility of the user to evaluate and control such risks prior to use. The information provided in this Safety Data Sheet is based on current knowledge and is intended solely as guidance for safe handling, use, processing, storage, transportation, and disposal. It is not to be construed as a guarantee, product specification, or quality specification and does not establish a legally binding contractual relationship. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE WITH RESPECT TO THE INFORMATION OR THE PRODUCT TO WHICH THE INFORMATION REFERS.

16.2 Preparation information

Prepared in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200), as revised in 2024, and aligned with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS), Revision 7.