Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 02.15.2021

Revision date: 05.01.2023

F.W.C.

SECTION 1: Identification

Product Identifier

Product Name: F.W.C.

Product code: QW-0220

Recommended Use of the Product and Restriction on Use

Relevant Identified Uses: Acidic Detergent - Floor, Wall, Equipment Cleaning, Descaling

Uses Advised Against: Use caution on non-ferrous metals, chrome plating

Reasons Why Uses Advised Against: Could damage surfaces permanently.

Manufacturer or Supplier Details

Manufacturer:

United States

Quest Car Care Products
3333 Production Ct.
Zeeland, Michigan 49464
616-772-5100
www.questcarcare.com

Emergency Telephone Number:

United States

CHEMTREC
1-800-424-9300 (24 hrs)
1-800-262-8200 (24 hrs)
1-703-527-3887 (24 hrs (international))

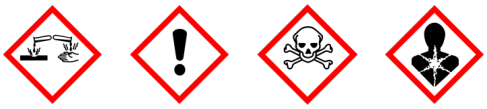
SECTION 2: Hazard(s) Identification

GHS Classification:

Corrosive to metals, category 1
Acute toxicity (oral), category 4
Acute toxicity (inhalation), category 3
Skin corrosion, category 1A
Serious eye damage, category 1
Respiratory sensitization, category 1
Specific target organ toxicity - single exposure, category 1
Specific target organ toxicity - repeated exposure, category 1

Label elements

Hazard Pictograms:



Signal Word: Danger

Hazard statements:

H290 May be corrosive to metals
H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
H370 Causes damage to organs (respiratory system) if swallowed or inhaled.
H372 Causes damage to organs (respiratory system) through prolonged or repeated exposure if swallowed or inhaled.
H302 Harmful if swallowed
H331 Toxic if inhaled

Precautionary Statements:

P260 Do not breathe dust/fume/gas/mist/vapors/spray
P264 Wash hands/skin thoroughly after contact with or handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection
P234 Keep only in original container
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P284 [In case of inadequate ventilation] Wear appropriate respiratory protection
P270 Do not eat, drink or smoke when using this product
P271 Use only outdoors or in a well-ventilated area
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/shower
P363 Wash contaminated clothing before reuse
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P310 Immediately call a POISON CENTER/911/PHYSICIAN IF: swallowed, eye contact, skin burns/rash or breathing difficulties.
P321 Specific treatment (see first aid procedures on the product label in section 4 of this SDS)
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P390 Absorb spillage to prevent material-damage
P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor/911 immediately.
P307+P311 IF exposed: Call a POISON CENTER or doctor/physician
P314 Get medical advice/attention if you feel unwell
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P330 Rinse mouth
P311 Call a POISON CENTER/911/PHYSICIAN IF: swallowed, eye contact, skin burns/rash or breathing difficulties.
P405 Store locked up
P406 Store in corrosive resistant/or heavy duty plastic container using a chemical resistant inner liner.
P403+P233 Store in a well-ventilated place. Keep container tightly closed
P501 Dispose of contents/container in accordance with local, state and federal regulations.

Hazards Not Otherwise Classified: None

SECTION 3: Composition/Information on Ingredients

Identification	Name	Weight %
CAS Number: 7732-18-5	Water	50-75
CAS Number: 7647-01-0	Hydrochloric Acid (muriatic acid)	5-10
CAS Number: 7664-93-9	Sulfuric acid	5-10
CAS Number: 7664-38-2	Orthophosphoric Acid	1-5

Additional Information:

Ingredients not listed above are considered trade secret.

SECTION 4: First Aid Measures

Description of First Aid Measures

General Notes:

Show this Safety Data Sheet to the doctor in attendance.

Show this Safety Data Sheet to the doctor in attendance. Take precautions to ensure your own safety before attempting rescue. Wear appropriate safety eyewear, gloves, protective clothing and respiratory protection to prevent exposure. See Section 8 of this SDS for personal protective equipment recommendations. Do not use the mouth to mouth method if victim has ingested or inhaled the product. Give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper device.

Show this Safety Data Sheet to the doctor in attendance. This product is toxic by one or more routes of exposure (inhalation, ingestion, skin contact). Take precautions to ensure your own safety before attempting rescue. Wear appropriate safety eyewear, gloves, protective clothing and respiratory protection to prevent exposure. See Section 8 of this SDS for personal protective equipment recommendations. Do not use the mouth to mouth method if victim has ingested or inhaled the product. Give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper device.

After Inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If experiencing respiratory symptoms, seek medical advice/attention.

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If symptoms develop or persist, seek medical advice/attention.

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If exposed, seek medical advice/attention.

After Skin Contact:

Treatment is urgent. Seek emergency medical treatment. Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse.

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several

minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention.

After Eye Contact:

Immediately rinse eyes with plenty of gently flowing lukewarm water for 15 minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. Seek immediate medical attention, preferably from an ophthalmologist.

Rinse eyes with plenty of water for several minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. If symptoms develop or persist, seek medical advice/attention.

Rinse eyes with plenty of water for several minutes. Remove contact lenses, if present and easy to do so. Protect unexposed eye. If symptoms develop or persist, seek medical advice/attention.

After Swallowing:

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. Seek immediate medical attention.

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. If symptoms develop or persist, seek medical advice/attention.

Most Important Symptoms and Effects, Both Acute and Delayed

Acute Symptoms and Effects:

Exposure to skin may result in redness, pain, burning, inflammation and tissue damage. Exposure to eyes may result in irritation, redness, pain, inflammation, itching, burning, tearing, corneal damage and loss of vision. Exposure via inhalation may result in cough, sore throat, burning sensation and shortness of breath. Exposure via ingestion may result in burns of the mouth and throat, abdominal pain, burning sensation in the throat and chest, nausea, vomiting, shock or collapse.

Eye contact may result in irritation, redness, pain, inflammation, itching, burning, tearing, corneal damage and loss of vision.

Products that are corrosive to metals are often corrosive to the skin, eyes and the respiratory tract.

Inhalation exposure may cause allergy, asthma symptoms or breathing difficulties. Symptoms may include cough, chronic phlegm, shortness of breath, wheezing and chest tightness. Symptoms may be delayed.

Causes damage to organs. Effects are dependent on exposure (dose, concentration, contact time).

Acute oral exposure may lead to dizziness, drowsiness, headache, breathing difficulties, nausea, vomiting, abdominal pain, and lowering of consciousness. Adverse effects are dependent on exposure (dose, concentration, contact time).

Acute inhalation exposure may lead to dizziness, drowsiness, headache, breathing difficulties, nausea, vomiting, abdominal pain, and lowering of consciousness. Adverse effects are dependent on exposure (dose, concentration, contact time).

Delayed Symptoms and Effects:

Effects are dependent on exposure (dose, concentration, contact time).

Causes damage to organs through prolonged or repeated exposure. Effects are dependent on exposure (dose, concentration, contact time).

Symptoms of exposure may be delayed.

Immediate Medical Attention and Special Treatment

Specific Treatment:

If exhibiting symptoms of exposure, seek prompt medical attention.

In case of eye contact, seek prompt medical attention while rinsing is continued.

In case of skin contact, seek prompt medical attention while rinsing is continued.

In case of ingestion, seek prompt medical attention.

Notes for the Doctor:

Treat symptomatically.

SECTION 5: Firefighting Measures

Extinguishing Media

Suitable Extinguishing Media:

Water mist/fog, carbon dioxide, dry chemical or alcohol resistant foam.

Unsuitable Extinguishing Media:

Do not use water jet.

Specific Hazards During Fire-Fighting:

Thermal decomposition may produce irritating/toxic fumes/gases.

Contact with metals may evolve flammable hydrogen gas. Thermal decomposition may produce irritating/toxic fumes/gases.

Special Protective Equipment for Firefighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode.

Special precautions:

Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts. Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution.

DO NOT GET WATER INSIDE CONTAINERS. Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts. Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution.

SECTION 6: Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures:

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Avoid contact with skin, eyes and clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling.

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Do not get on skin, eyes or on clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling. Remove contaminated clothing and launder before reuse.

Evacuate unnecessary personnel and prevent entry. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Do not get on skin, eyes or on clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling. Remove contaminated clothing with proper techniques in order to prevent contact with skin or eyes. Place contaminated clothing in a sealed container for future disposal.

Environmental Precautions:

Prevent further leakage or spillage if safe to do so. Prevent from reaching drains, sewers and waterways. Discharge into the environment must be avoided.

Methods and Material for Containment and Cleaning Up:

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable corrosive resistant containers for future disposal. Do not get water in containers as reaction with water or moist air may release toxic, corrosive or flammable gases. Dispose of in accordance with all applicable regulations (see Section 13).

Harmful if swallowed. Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Avoid breathing dust, mist, fumes, vapors or spray. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Toxic if inhaled. Put on appropriate personal protective equipment, including a self-contained breathing apparatus (see Section 8) before entering area of spill or leak. Avoid breathing dust, mist, fumes, vapors or spray. Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Reference to Other Sections:

For personal protective equipment see Section 8. For disposal see Section 13.

SECTION 7: Handling and Storage

Precautions for Safe Handling:

Use appropriate personal protective equipment (see Section 8). Prevent skin contact. Do not get in eyes. Use only with adequate ventilation. Do not add water to the corrosive product. If it is necessary to mix a corrosive product with water, do so slowly adding the corrosive to cold water, in small amounts, and stir frequently. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use. Keep only in original packaging.

Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Do not get in eyes. Avoid contact with skin and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Toxic if inhaled. Do not handle material unless wearing appropriate personal protective equipment, including respiratory protection (see Section 8). Use only with adequate ventilation. Do not breathe mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Open container slowly to prevent dispersal of material into the air. Prevent contact with skin, eyes and clothing. Handle with caution. Do not handle broken or punctured containers. Immediately report spills, leaks or problems with hazard control measures. Wash thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Conditions for Safe Storage, Including Any Incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight and away from exit paths. Store in a corrosion-resistant container with a resistant inner liner. Inspect containers and storage area regularly for signs of leak and damage. Store containers at a convenient height for handling, below eye level if possible.

High shelving increases the risk of dropping containers, personal injury and exposure. Ensure that appropriate fire fighting and spill-clean up equipment is readily available. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Store separately. Keep container tightly sealed. Store away from incompatible materials (See Section 10).
Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10).
Store in cool, dry, well-ventilated location out of direct sunlight and away from exit paths. Inspect containers and storage area regularly for signs of leak and damage. Store containers at a convenient height for handling, below eye level if possible. High shelving increases the risk of dropping containers, personal injury and exposure. Ensure that appropriate fire fighting and spill-clean up equipment is readily available. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Store separately. Keep container tightly sealed. Store away from incompatible materials (See Section 10).

SECTION 8: Exposure Controls/Personal Protection

Only those substances with limit values have been included below.

Occupational Exposure Limit Values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Hydrochloric Acid (muriatic acid)	7647-01-0	Ceiling Limit: 2 ppm
	Sulfuric acid	7664-93-9	8-Hour TWA: 0.2 mg/m³ (thoracic fraction)
	Orthophosphoric Acid	7664-38-2	8-Hour TWA: 1 mg/m³
	Orthophosphoric Acid	7664-38-2	15-Minute STEL: 3 mg/m³
OSHA	Hydrochloric Acid (muriatic acid)	7647-01-0	Ceiling Limit: 7 mg/m³ (5 ppm)
	Hydrochloric Acid (muriatic acid)	7647-01-0	Ceiling Limit: 7 mg/m³ (5 ppm)
	Sulfuric acid	7664-93-9	8-Hour TWA-PEL: 1 mg/m³
	Orthophosphoric Acid	7664-38-2	8-Hour TWA-PEL: 1 mg/m³
NIOSH	Hydrochloric Acid (muriatic acid)	7647-01-0	Ceiling Limit: 7 mg/m³ (5 ppm)
	Hydrochloric Acid (muriatic acid)	7647-01-0	IDLH: 50 ppm
	Hydrochloric Acid (muriatic acid)	7647-01-0	IDLH: 50 ppm
	Hydrochloric Acid (muriatic acid)	7647-01-0	Ceiling Limit: 7 mg/m³ (5 ppm)
	Sulfuric acid	7664-93-9	REL-TWA: 1 mg/m³ (10 hr)
	Sulfuric acid	7664-93-9	IDLH: 15 mg/m³
	Orthophosphoric Acid	7664-38-2	REL-TWA: 1 mg/m³ (up to 10 hr)
	Orthophosphoric Acid	7664-38-2	15-Minute STEL: 3 mg/m³
	Orthophosphoric Acid	7664-38-2	IDLH: 1000 mg/m³
United States(California)	Hydrochloric Acid (muriatic acid)	7647-01-0	8-Hour TWA: 0.3 ppm
	Hydrochloric Acid (muriatic acid)	7647-01-0	Ceiling Limit: 2 ppm
	Hydrochloric Acid (muriatic acid)	7647-01-0	Ceiling Limit: 2 ppm
	Hydrochloric Acid (muriatic acid)	7647-01-0	PEL: 0.45 mg/m³ (0.3 ppm)
	Hydrochloric Acid (muriatic acid)	7647-01-0	REL: 2100 ug/m³ (Acute Inhalation)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Hydrochloric Acid (muriatic acid)	7647-01-0	REL: 9 ug/m³ (Chronic Inhalation)
	Sulfuric acid	7664-93-9	8-Hour TWA-PEL: 0.1 mg/m³
	Sulfuric acid	7664-93-9	15-Minute STEL: 3 mg/m³
	Orthophosphoric Acid	7664-38-2	8-Hour TWA-PEL: 1 mg/m³
	Orthophosphoric Acid	7664-38-2	15-Minute STEL: 3 mg/m³

Biological Limit Values:

No biological exposure limits noted for the ingredient(s).

Information on Monitoring Procedures:

Not determined or not applicable.

Appropriate Engineering Controls:

Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

Toxic if inhaled. Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

Personal Protection Equipment

Eye and Face Protection:

Use safety glasses with side shields or goggles. Consider the use of a face shield for splash protection. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Safety glasses or goggles. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Use safety glasses with side shields or goggles. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Skin and Body Protection:

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. 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. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Full body protection should be worn. 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. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. 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. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

Respiratory Protection:

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn.

General Hygienic Measures:

When handling chemical products, do not eat, drink or smoke. Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Perform routine housekeeping.

SECTION 9: Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Appearance	Strawlike Liquid
Odor	Sharply Acrid
Odor threshold	Not determined or not available.
pH	<1.0
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	None
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Vapor density	Not determined or not available.
Density	Not determined or not available.
Relative density	1.05-1.10
Solubilities	Water
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

SECTION 10: Stability and Reactivity

Reactivity:

Not reactive under recommended handling and storage conditions.

Chemical Stability:

Stable under recommended handling and storage conditions.

Possibility of Hazardous Reactions:

Hazardous reactions are not anticipated under recommended conditions of handling and storage.

Conditions to Avoid:

Avoid generation of aerosols and mists, extreme heat, open flames, hot surfaces, sparks, ignition sources

and incompatible materials.
Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.
Avoid confined spaces, extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

Incompatible Materials:
None known.

Hazardous Decomposition Products:
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological Information

Acute Toxicity

Assessment:
Harmful if swallowed.
Toxic if inhaled.

Product Data: No data available.

Substance Data:

Name	Route	Result
Hydrochloric Acid (muriatic acid)	inhalation	LC50 Rat: 1562 ppmV (4 h [Gas])
	dermal	LD50 Rabbit: >5000 mg/m³
Sulfuric acid	oral	LD50 Rat: 2140 mg/kg
Orthophosphoric Acid	inhalation	LC50 Rat: 1.689 mg/L (1 hr)
	oral	LD50 Rat: 1530 mg/kg
	dermal	LD50 Rabbit: 2740 mg/kg

Skin Corrosion/Irritation

Assessment:
Causes severe skin burns and eye damage.

Product Data:
No data available.

Substance Data:

Name	Result
Hydrochloric Acid (muriatic acid)	Causes severe skin burns.
Sulfuric acid	Causes severe skin burns.
Orthophosphoric Acid	Causes severe skin burns.

Serious Eye Damage/Irritation

Assessment:
Causes serious eye damage.

Product Data:
No data available.

Substance Data:

Name	Result
Hydrochloric Acid (muriatic acid)	Causes serious eye damage.
Sulfuric acid	Causes serious eye damage.

Name	Result
Orthophosphoric Acid	Causes serious eye damage.

Respiratory or Skin Sensitization

Assessment:

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Product Data:

No data available.

Substance Data: No data available.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.

Substance Data:

Name	Species	Result
Hydrochloric Acid (muriatic acid)		Mists of this strong inorganic acids may cause cancer.

International Agency for Research on Cancer (IARC):

Name	Classification
Hydrochloric Acid (muriatic acid)	Group 3
	Group 3
Water	Not Applicable
Sulfuric acid	Group 1
Orthophosphoric Acid	Not Applicable

National Toxicology Program (NTP):

Name	Classification
Hydrochloric Acid (muriatic acid)	Not Applicable
	Not Applicable
Water	Not Applicable
Sulfuric acid	Known to be human carcinogens
Orthophosphoric Acid	Not Applicable

OSHA Carcinogens: Not applicable

Germ Cell Mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Reproductive Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Specific Target Organ Toxicity (Single Exposure)

Assessment:

Causes damage to organs.

Product Data:
No data available.
Substance Data:

Name	Result
Hydrochloric Acid (muriatic acid)	May cause respiratory irritation.

Specific Target Organ Toxicity (Repeated Exposure)
Assessment:
Causes damage to organs through prolonged or repeated exposure.
Product Data:
No data available.
Substance Data:

Name	Result
Sulfuric acid	Repeated or prolonged inhalation may damage the lungs. Risk of tooth erosion upon repeated or prolonged exposure to an aerosol of this substance.
Orthophosphoric Acid	Repeated and/or prolonged exposure may have effects on the upper respiratory tract and lungs. This may result in chronic inflammation and reduced lung function.

Aspiration toxicity
Assessment: Based on available data, the classification criteria are not met.
Product Data:
No data available.
Substance Data: No data available.
Information on Likely Routes of Exposure:
No data available.
Symptoms Related to the Physical, Chemical, and Toxicological Characteristics:
No data available.
Other Information:
No data available.

SECTION 12: Ecological Information

Acute (Short-Term) Toxicity
Assessment: Based on available data, the classification criteria are not met.
Product Data: No data available.
Substance Data:

Name	Result
Hydrochloric Acid (muriatic acid)	Aquatic Invertebrates LC50 Carcinus maenas: 240 mg/L (48 h)
Sulfuric acid	Aquatic Plants EC50 Algae: >100 mg/L (72 hr [growth rate])
	Fish LC50 Lepomis macrochirus: >16 - <28 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: >100 mg/L (48 hr [mobility])
Orthophosphoric Acid	Aquatic Invertebrates EC50 Daphnia magna: > 100 mg/L (48 hr [immobilization])
	Aquatic Plants EC50 Desmodesmus subspicatus: > 100 mg/L (72 hr [growth rate])

Chronic (Long-Term) Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.

Substance Data: No data available.

Persistence and Degradability

Product Data: No data available.

Substance Data:

Name	Result
Hydrochloric Acid (muriatic acid)	Substance is non degradable and persistent in the aquatic and terrestrial environment.
Orthophosphoric Acid	Degradation studies are not applicable to inorganic substances.

Bioaccumulative Potential

Product Data: No data available.

Substance Data:

Name	Result
Hydrochloric Acid (muriatic acid)	Not expected to bioaccumulate (log Kow = -2.65).
Orthophosphoric Acid	Bioaccumulation studies are not applicable to inorganic substances.

Mobility in Soil

Product Data: No data available.

Substance Data: No data available.

Results of PBT and vPvB assessment

Product Data:

PBT assessment: This product does not contain any substances that are assessed to be a PBT.

vPvB assessment: This product does not contain any substances that are assessed to be a vPvB.

Substance Data:

PBT assessment:

Hydrochloric Acid (muriatic acid)	The substance is not PBT.
Sulfuric acid	PBT assessment does not apply to inorganic substances.
Orthophosphoric Acid	PBT assessment does not apply to inorganic substances.

vPvB assessment:

Hydrochloric Acid (muriatic acid)	The substance is not vPvB.
Sulfuric acid	vPvB assessment does not apply to inorganic substances.
Orthophosphoric Acid	vPvB assessment does not apply to inorganic substances.

Other Adverse Effects: No data available.

SECTION 13: Disposal Considerations

Disposal Methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

Contaminated packages:

Not determined or not applicable.

SECTION 14: Transport Information

United States Transportation of Dangerous Goods (49 CFR DOT)

UN Number	1760
UN Proper Shipping Name	Corrosive Liquids, N.O.S. (Hydrochloric Acid, Sulfuric Acid, Phosphoric Acid)
UN Transport Hazard Class(es)	8 
Packing Group	II
Environmental Hazards	None
Special Precautions for User	None

International Maritime Dangerous Goods (IMDG)

UN Number	1760
UN Proper Shipping Name	Corrosive Liquids, N.O.S. (Hydrochloric Acid, Sulfuric Acid, Phosphoric Acid)
UN Transport Hazard Class(es)	8 
Packing Group	II
Environmental Hazards	None
Special Precautions for User	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN Number	1760
UN Proper Shipping Name	Corrosive Liquids, N.O.S. (Hydrochloric Acid, Sulfuric Acid, Phosphoric Acid)
UN Transport Hazard Class(es)	8 
Packing Group	II
Environmental Hazards	None
Special Precautions for User	None

SECTION 15: Regulatory Information

United States Regulations

Inventory Listing (TSCA): All ingredients are listed-active or exempt.

Significant New Use Rule (TSCA Section 5): None of the ingredients are listed.

Export Notification under TSCA Section 12(b): None of the ingredients are listed.

SARA Section 302 Extremely Hazardous Substances:

7647-01-0	Hydrochloric Acid (muriatic acid)	Listed
7664-93-9	Sulfuric acid	Listed

SARA Section 313 Toxic Chemicals:

7647-01-0	Hydrochloric Acid (muriatic acid)	Listed
7664-93-9	Sulfuric acid	Listed

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CERCLA:

7647-01-0	Hydrochloric Acid (muriatic acid)	Listed	5,000 Lbs.
7664-93-9	Sulfuric acid	Listed	1000 lbs
7664-38-2	Orthophosphoric Acid	Listed	5000 lbs

RCRA: None of the ingredients are listed.

Section 112(r) of the Clean Air Act (CAA):

7647-01-0	Hydrochloric Acid (muriatic acid)	Listed
7664-93-9	Sulfuric acid	Listed

Massachusetts Right to Know:

7647-01-0	Hydrochloric Acid (muriatic acid)	Listed
7647-01-0	Hydrochloric Acid (muriatic acid)	Listed
7664-93-9	Sulfuric acid	Listed
7664-38-2	Orthophosphoric Acid	Listed

New Jersey Right to Know:

7647-01-0	Hydrochloric Acid (muriatic acid)	Listed
7647-01-0	Hydrochloric Acid (muriatic acid)	Listed
7664-93-9	Sulfuric acid	Listed
7664-38-2	Orthophosphoric Acid	Listed

New York Right to Know:

7647-01-0	Hydrochloric Acid (muriatic acid)	Listed
7647-01-0	Hydrochloric Acid (muriatic acid)	Listed
7664-93-9	Sulfuric acid	Listed
7664-38-2	Orthophosphoric Acid	Listed

Pennsylvania Right to Know:

7647-01-0	Hydrochloric Acid (muriatic acid)	Listed
7647-01-0	Hydrochloric Acid (muriatic acid)	Listed
7664-93-9	Sulfuric acid	Listed
7664-38-2	Orthophosphoric Acid	Listed

California Proposition 65:

⚠**WARNING:** This product can expose you to Strong inorganic acid mists containing sulfuric acid; which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

Additional information: Not determined.

SECTION 16: Other Information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 0-0-0

HMIS: 3-0-0-X
Initial Preparation Date: 02.15.2021
Revision date: 05.01.2023

End of Safety Data Sheet