



# MARTRON INC. SAFETY DATA SHEET MARTRON MICRO 24

## Section 1: PRODUCT and COMPANY IDENTIFICATION

### Product Identifier

**Product Name** MARTRON MICRO 24  
**Product Number** MFC-002537

### Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

**Recommended Use** Refer to the *Martron Inc.* Technical Data Bulletin for this product.  
For Industrial Use Only.

### Details of the Supplier

**Martron Inc.**  
1394-A Walkup Ave.  
Monroe, NC 28110  
704-289-1934

### Website

[www.martroninc.com](http://www.martroninc.com)

### Emergency Number

**CHEMTREC: 800-424-9300**

## Section 2: HAZARDS IDENTIFICATION

### Classification of the Substance or Mixture

#### Regulation (EC) No 1272/2008

Acute oral toxicity	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Chronic aquatic toxicity	Category 2

Classification according to 67/548/EEC

Full text of R-phrases: see Section 16

### Hazard Symbols

C - Corrosive

N - Dangerous for the environment

### R-Code(s)

C; R35 - N; R51/53

### Label Elements



### Signal Word

**DANGER**

**Hazard Statements**

H302 - Harmful if swallowed.  
 H314 - Causes severe skin burns and eye damage.  
 H411 - Toxic to aquatic life with long lasting effects.

**Precautionary Statements - EU (§28, 1272/2008)**

P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray.  
 P321 - Specific treatment (see Section 4).  
 P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P280 - Wear eye protection/face protection.  
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 - Immediately call a POISON CENTER or doctor/physician.

**Precautionary Statements**

P270 - Do not eat, drink or smoke when using this product.  
 P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
 P330 - Rinse mouth.  
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray.  
 P264 - Wash face, hands and any exposed skin thoroughly after handling.  
 P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
 P303+P361+P353 - IF ON SKIN (or hair): Remove/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.  
 P321 - Specific treatment (see supplemental first aid instructions on this label).  
 P405 - Store locked up.  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 - Immediately call a POISON CENTER or doctor/physician.  
 P273 - Avoid release to the environment.  
 P501 - Dispose of contents/container to an approved waste disposal plant.  
 P391 - Collect spillage.

**Other Hazards**

**Section 3: COMPOSITION / INFORMATION ON INGREDIENTS**

**Mixture**

Chemical Name	EC No	CAS No	Weight - %	Classification According to Directive 67/548/EEC or 1999/45/EC	Classification According to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
Phosphoric Acid	Present	7664-38-2	15-25	C; R34	Skin Corr. 1B (H314)	No data available
Calcium Nitrate	Present	10124-37-5	10-20	-	No data available	No data available
Zinc Oxide	Present	1314-13-2	5-15	N; R50-53	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available
Nitric Acid	Present	7697-37-2	5-15	C; R35 O; R8	Skin Corr. 1A (H314) Ox. Liq. 3 (H272)	No data available

**Full Text of R-Phrases** See Section 16

**Full Text of H- and EUH-Phrases** See Section 16

**Section 4: FIRST AID MEASURES****Description of First Aid Measures****General Advice**

Immediate medical attention is required.

**Inhalation**

Remove to fresh air. Call a physician or poison control center immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Skin Contact**

Immediately remove contaminated clothing and shoes. Flush skin thoroughly with cool water for at least 15 minutes. Wash skin with soap and water. Wash clothing. If irritation persists, get medical attention.

**Eye Contact**

Immediately flush eyes in a directed stream of water for at least 15 minutes while lifting the upper and lower eyelids intermittently to ensure complete irrigation. Get medical attention immediately.

**Ingestion**

If conscious and alert, rinse mouth with water. Dilute by giving 1 or 2 glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.

**Self-Protection of the First Aider**

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

**Most Important Symptoms and Effects, Both Acute and Delayed****Symptoms**

Inhalation irritation. Will result in severe eye irritation and possible injury. Harmful if swallowed. Causes skin irritation and possible burns.

**Indication of any Immediate Medical Attention and Special Treatment Needed****Note to Physicians**

Treat symptomatically. Keep victim under observation.

**Section 5: FIREFIGHTING MEASURES****Extinguishing Media****Suitable Extinguishing Media**

Water spray, carbon dioxide (CO<sub>2</sub>), dry chemical, alcohol foam.

**Unsuitable Extinguishing Media**

No information available.

**Special Hazards Arising from the Substance or Mixture**

Keep product and empty container away from heat and sources of ignition. If involved in a fire, product may generate irritating and toxic gases. Contact with active metals may produce flammable hydrogen gas. Dried product residue mixed with organics or clothing may be flammable.

**Advice for Firefighters**

Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece when fighting chemical fires. Move containers from fire area if it can be done without risk.

**Section 6: ACCIDENTAL RELEASE MEASURES****Personal Precautions, Protective Equipment and Emergency Procedures****Personal Precautions**

Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.

**For Emergency Responders**

Use personal protection recommended in Section 8.

**Environmental Precautions**

Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. Prevent product from entering drains.

**Methods and Material for Containment and Cleanup**

**Methods for Containment**

Prevent entry into waterways, sewers, basements or confined areas. Prevent further leakage or spillage if safe to do so.

**Methods for Cleanup**

Ventilate area. Wear protective equipment. Absorb spill with inert absorbent and place in a DOT-approved waste container. Prevent runoff from entering surface water. Comply with all regulations on spill reporting.

**Reference to Other Sections**

**Other Information**

See Section 12: ECOLOGICAL INFORMATION.

**Section 7: HANDLING and STORAGE**

**Precautions for Safe Handling**

**Advice on Safe Handling**

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Use only with adequate ventilation. Add product slowly to avoid splashing. Protect container from physical damage. Do not cut, grind, weld or drill on or near container.

**General Hygiene Considerations**

Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.

**Conditions for Safe Storage, Including Any Incompatibilities**

**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

**Specific End Use(s)**

**Risk Management Measures**

The information required is contained in this Safety Data Sheet (SDS).

**Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Phosphoric Acid 7664-38-2	STEL: 3 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> (vacated) TWA: 1 mg/m <sup>3</sup> (vacated) STEL: 3 mg/m <sup>3</sup>	IDLH: 1000 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>
Zinc Oxide 1314-13-2	STEL: 10 mg/m <sup>3</sup> respirable fraction TWA: 2 mg/m <sup>3</sup> respirable fraction	TWA: 5 mg/m <sup>3</sup> fume TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 5 mg/m <sup>3</sup> fume (vacated) TWA: 10 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated)	IDLH: 500 mg/m <sup>3</sup> Ceiling: 15 mg/m <sup>3</sup> dust TWA: 5 mg/m <sup>3</sup> dust and fume STEL: 10 mg/m <sup>3</sup> fume
Nitric Acid 7697-37-2	STEL: 4 ppm TWA: 2 ppm	TWA: 2 ppm (vacated) TWA: 2 ppm (vacated) TWA: 5 mg/m <sup>3</sup> (vacated) STEL: 4 ppm (vacated) STEL: 10 mg/m <sup>3</sup>	IDLH: 25 ppm TWA: 2 ppm TWA: 5 g/m <sup>3</sup> STEL: 4 ppm STEL: 10 mg/m <sup>3</sup>

ACGIH TLV *Threshold Limit Value.*  
 OSHA PEL *Permissible Exposure Limit.*  
 NIOSH IDLH *Immediately Dangerous to Life or Health.*

#### Exposure Guidelines

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir, 1992).

#### Engineering Controls

Showers. Eyewash stations. A system of local and/or general exhaust is recommended to keep employee exposures below the airborne exposure limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

#### Personal Protective Equipment (PPE)

##### Eye/Face Protection

Tight sealing safety goggles. It is generally recognized that contact lenses should not be worn when working with chemicals because contact lenses may contribute to the severity of an eye injury. If a splashing hazard exists, a face shield is recommended.

##### Skin Protection

Gloves made of plastic or rubber. Suitable protective clothing. Rubber boots.

##### Respiratory Protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

##### General Hygiene Considerations

Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.

## Section 9: PHYSICAL and CHEMICAL PROPERTIES

#### Information on Basic Physical and Chemical Properties

Physical State	Liquid
Appearance	Clear liquid
Odor	Slight
Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	< 1	
Melting Point/Freezing Point	Not established	
Boiling Point/Boiling Range	Not established	
Flash Point	Not applicable	
Evaporation Rate	Not established	
Flammability (solid, gas)	Not applicable	
Flammability Limits in Air		
Upper Flammability Limit	Not applicable	
Lower Flammability Limit	Not applicable	
Vapor Pressure	Not established	
Vapor Density	Not established	
Specific Gravity	1.40 - 1.65	
Water Solubility	Completely soluble	
Solubility(ies)	No information available	
Partition Coefficient (n-octanol/water)	Not applicable	
Auto-Ignition Temperature	Not applicable	
Decomposition Temperature	Not established	
Kinematic Viscosity	No information available	
Dynamic Viscosity	No information available	
<u>Other information</u>		
VOC Content (%)	Not applicable	

## Section 10: STABILITY and REACTIVITY

### Reactivity

Stable at normal temperatures and pressure.

### Chemical Stability

Stable under normal conditions.

### Possibility of Hazardous Reactions

#### Hazardous Polymerization

Hazardous polymerization does not occur.

### Possibility of Hazardous Reactions

None under normal processing.

### Conditions to Avoid

Avoid storage with incompatible materials, freezing temperatures and excessive heat.

### Incompatible Materials

Combustible materials. Cyanides, Sulfides. Alkalis, Active metals, Organic materials, Ammonia, Hydrazine's, Reducing Agents.

### Hazardous Decomposition Products

Thermal decomposition may generate. Carbon monoxide, Carbon dioxide (CO<sub>2</sub>), Oxides of zinc, Oxides of phosphorus, Oxides of nitrogen, smoke and fumes. Will react with cyanide salts to generate poisonous hydrogen cyanide gas. Will react with sulfides to produce poisonous hydrogen sulfide gas.

## Section 11: TOXICOLOGICAL INFORMATION

### Acute Toxicity

#### Product Information

##### Inhalation

Vapors and mists are corrosive to the nose, throat and mucous membranes. Bronchitis, pulmonary edema and chemical pneumonitis may occur. Irritation, coughing, chest pain and difficulty in breathing may occur with brief exposure while prolonged exposure may result in more severe irritation and tissue damage.

##### Eye Contact

Liquid and mists are corrosive to the eyes. Brief contact of vapors will be severely irritating. Brief contact can cause severe eye damage and prolonged contact may cause permanent eye injury which may be followed by blindness.

##### Skin Contact

Mists and liquid are corrosive to the skin. Liquid and mists will burn the skin. Prolonged liquid contact will burn or destroy surrounding tissue. Death may accompany burns which extend over large portions of the body.

##### Ingestion

Vapors, mists and liquid are extremely corrosive to the mouth and throat. Swallowing the liquid burns the tissues, causes severe abdominal pain, nausea, vomiting and collapse. Swallowing large quantities can cause death.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Phosphoric Acid	1530 mg/kg (Rat)	= 2730 mg/kg (Rabbit)	> 850 mg/m <sup>3</sup> (Rat) 1 h
Calcium Nitrate	302 mg/kg (Rat)		
Zinc Oxide	5000 mg/kg (Rat)		
Nitric Acid			= 67 ppm (Rat) 4 h = 130 mg/m <sup>3</sup> (Rat) 4 h

### Chronic Toxicity

Chronic acid exposure may cause erosion of teeth, lesions on the skin, bronchial irritation, coughing and

pneumonia. Long term exposures seldom occur due to the corrosive properties of the acid(s). May cause adverse liver effects.

### Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen

Chemical Name	ACGIH	IARC	NTP	OSHA
Calcium Nitrate		Group 2A		X
Nitric Acid		Group 2A		X

### IARC (International Agency for Research on Cancer)

Group 2A - Probably Carcinogenic to Humans

### OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

### Target Organ Effects

Eyes, Respiratory system, Skin, Teeth

## Section 12: ECOLOGICAL INFORMATION

### Toxicity

#### Ecotoxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Daphnia and Other Aquatic Invertebrates
Phosphoric Acid		3 - 3.5: 96 h <i>Gambusia affinis</i> mg/L LC50	4.6: 12 h <i>Daphnia magna</i> mg/L EC50
Calcium Nitrate		10000: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static	2355: 120 h <i>Daphnia magna</i> mg/L LC50
Nitric Acid		72: 96 h <i>Gambusia affinis</i> mg/L LC50	

#### Persistence and Degradability

No information available.

#### Bio-Accumulative Potential

Chemical Name	Partition coefficient
Nitric Acid	-2.3

#### Mobility in Soil

No information available.

#### Results of PBT and vPvB Assessment

No information available.

#### Other Adverse Effects

No information available

## Section 13: DISPOSAL CONSIDERATIONS

### Waste Treatment Methods

#### Waste from Residues/Unused Products

Consult appropriate federal, state and local regulatory agencies to ascertain proper disposal procedures. Do not discharge into waterways or sewer systems. Disposal will depend on the nature of waste material.

#### Contaminated Packaging

Do not reuse container. Since empty containers retain product residues, all labeled hazardous precautions

must be observed. Do not repackage product.

#### Waste Codes/Waste Designations According to EWC/AVV

Waste codes should be assigned by the user based on the application for which the product was used.

### Section 14: TRANSPORT INFORMATION

#### DOT (US)

**Proper Shipping Name** Corrosive liquid, acidic, inorganic, N.O.S., (Phosphoric Acid, Nitric Acid)  
**Hazard Class** 8  
**UN/ID Number** UN3264  
**Packing Group** PG II  
**Marine Pollutant** No  
**Emergency Response Guide Number** 154

#### IMDG

**UN/ID Number** UN3264  
**Proper Shipping Name** Corrosive liquid, acidic, inorganic, N.O.S., (Phosphoric Acid, Nitric Acid)  
**Hazard Class** 8  
**Packing Group** PG II  
**Marine Pollutant** No

#### IATA

**UN/ID Number** UN3264  
**Proper Shipping Name** Corrosive liquid, acidic, inorganic, N.O.S., (Phosphoric Acid, Nitric Acid)  
**Hazard Class** 8  
**Packing Group** PG II

### Section 15: REGULATORY INFORMATION

#### International Inventories

All of the components in this product are on or exempt from the following inventories: U.S.A. (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Japan (ENCS), China (IECSC), Korea (ECL), Philippines (PICCS), Australia (AICS)

#### International Inventory Legend

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

#### US Federal Regulations

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical Name	CAS No	Weight - %	SARA 313 – Threshold Values %
Calcium Nitrate	10124-37-5	10-20	1.0
Zinc Oxide	1314-13-2	5-15	1.0
Nitric Acid	7697-37-2	5-15	1.0



**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	No
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	No

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA – Reportable Quantities	CWA – Toxic Pollutants	CWA – Priority Pollutants	CWA – Hazardous Substances
Phosphoric Acid	5000 lb.			X
Zinc Oxide		X		
Nitric Acid	1000 lb.			X

**CAA (Clean Air Act), Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contain any substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act.

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Phosphoric Acid	5000 lb.		RQ 5000 lb final RQ RQ 2270 kg final RQ
Nitric Acid	1000 lb.	1000 lb.	RQ 1000 lb final RQ RQ 454 kg final RQ

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**US State Right-to-Know Regulations**

Chemical Name	Massachusetts	New Jersey	Pennsylvania
Phosphoric Acid	X	X	X
Calcium Nitrate		X	
Zinc Oxide	X	X	X
Nitric Acid	X	X	X

**International Regulations**

Chemical Name	Carcinogenicity	Exposure Limits
Phosphoric Acid		Mexico: TWA 1 mg/m <sup>3</sup> Mexico: STEL 3 mg/m <sup>3</sup>
Zinc Oxide		Mexico: TWA 5 mg/m <sup>3</sup> Mexico: TWA 10 mg/m <sup>3</sup> Mexico: STEL 10 mg/m <sup>3</sup>
Nitric Acid		Mexico: TWA 2 ppm Mexico: TWA 5 mg/m <sup>3</sup> Mexico: STEL 4 ppm Mexico: STEL 10 mg/m <sup>3</sup>

**CANADA**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the Safety Data Sheet (SDS) contains all the information required by the CPR.

**Section 16: OTHER INFORMATION****Full Text of R-Phrases Referred to Under Sections 2 and 3**

R22 - Harmful if swallowed

R34 - Causes burns

R35 - Causes severe burns

R8 - Contact with combustible material may cause fire

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

**Full Text of H-Statements Referred to Under Sections 2 and 3**

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

H314 - Causes severe skin burns and eye damage

H272 - May intensify fire; oxidizer

<b>Issue Date</b>	25-Nov-2014
<b>Revision Date</b>	Not Applicable
<b>Revision Note</b>	Not Applicable.

**This Safety Data Sheet (SDS) complies with the requirements of Regulation (EC) No. 1907/2006****Disclaimer**

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