



MARTRON INC. SAFETY DATA SHEET MARTRON TRIBLACK 500A

Section 1: PRODUCT and COMPANY IDENTIFICATION

Product Identifier

Product Name MARTRON TRIBLACK 500A
Product Code MFC-001536

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

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
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Germ Cell Mutagenicity	Category 1
Carcinogenicity	Category 1B
Reproductive Toxicity	Category 1B
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

Classification according to 67/548/EEC
Full text of R-phrases: see Section 16

Hazard Symbols

T - Toxic
N - Dangerous for the environment

R-Code(s)

Carc. cat. 2; R49 - Muta. cat. 3; R68 - Repr. cat. 2; R60 - C; R35 - R42/43 - N; R50/53

Label Elements



Signal Word**DANGER****Hazard Statements**

H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341 - Suspected of causing genetic defects.
H350 - May cause cancer.
H360 - May damage fertility or the unborn child.
H410 - Very 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.
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P304+P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P280 - Wear eye protection/face protection.
P321 - Specific treatment (see Section 4).
P201 - Obtain special instructions before use.
P281 - Use personal protective equipment as required.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P202 - Do not handle until all safety precautions have been read and understood.

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.
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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.
P285 - In case of inadequate ventilation wear respiratory protection.
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 or doctor/physician.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention.
P321 - Specific treatment (see supplemental first aid instructions on this label).
P363 - Wash contaminated clothing before reuse.
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P281 - Use personal protective equipment as required
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P405 - Store locked up.
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 #	CAS #	Weight - %	Classification According to Directive 67/548/EEC or 1999/45/EC	Classification According to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
Chromium III Nitrate	Present	13548-38-4	5-15	-	No data available	No data available
Cobalt Sulfate	Present	10124-43-3	1-10	Xn; R22 R42/43 Carc.Cat.2; R49 N; R50-53 Repr.Cat.2; R60 Muta. Cat.3; R68	Acute Tox. 4 (H302) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) Muta. 2 (H341) Carc. 1B (H350i) Repr. 1B(H360F) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available
Nitric Acid	Present	7697-37-2	1-5	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

Inhalation

Remove victim to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen. Get medical attention.

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 immediately.

Self-Protection of the First Aider

Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most Important Symptoms and Effects, Both Acute and Delayed Symptoms

Toxic if swallowed. Skin irritation. Eye irritation. Inhalation irritation. Will cause severe skin burns and eye burns.

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

Keep victim under observation. Treat symptomatically.

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

Use extinguishing material suitable for surrounding fire. Water spray, foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media

No information available.

Special Hazards Arising from the Substance or Mixture

Contact with active metals may produce flammable hydrogen gas. Keep product and empty container away from heat and sources of ignition. May react with organic materials.

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. Do not touch or walk through spilled material. Avoid contact with skin, eyes and inhalation of vapors.

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. Prevent product from entering drains. Should not be released into the environment.

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.

General Hygiene Considerations

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

Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions

Keep container tightly closed in a dry 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.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Chromium III Nitrate 13548-38-4	TWA: 0.5 mg/m ³ Cr	TWA: 0.5 mg/m ³ Cr (vacated) TWA: 0.5 mg/m ³ Cr	IDLH: 25 mg/m ³ Cr (III) TWA: 0.5 mg/m ³ Cr
Cobalt Sulfate 10124-43-3	TWA: 0.02 mg/m ³ Co		
Nitric Acid 7697-37-2	STEL: 4 ppm TWA: 2 ppm	TWA: 2 ppm TWA: 5 mg/m ³ (vacated) TWA: 2 ppm (vacated) TWA: 5 mg/m ³ (vacated) STEL: 4 ppm (vacated) STEL: 10 mg/m ³	IDLH: 25 ppm TWA: 2 ppm TWA: 5 mg/m ³ STEL: 4 ppm STEL: 10 mg/m ³

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. If a splashing hazard exists, a face shield is recommended. 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.

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

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

Section 9: PHYSICAL and CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	Liquid
Appearance	Dark purple liquid
Odor	Slight
Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	< 2	
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	1.21 - 1.23
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 and contact with incompatible materials and excessive heat.

Incompatible Materials

Strong oxidizing agents. Active metals. Strong alkalis. Reducers. Tert-butyl hydroperoxide. Ammonium hexacyanoferrate. Cyanides, Sulfides. Combustible materials. Organic materials. Greases, oils.

Hazardous Decomposition Products

Thermal decomposition may generate oxides of sulfur, oxides of nitrogen, carbon monoxide, carbon dioxide, cobalt fumes and chromium 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. Respiratory hyper-sensitivity, asthma may appear.

Eye Contact

Corrosive to the eyes and may cause severe damage including blindness.

Skin Contact

Contact causes irritation, redness and possible burns.

Ingestion

Harmful if swallowed. Ingestion causes irritation and burns to mouth, throat, esophagus and stomach. Ingestion causes abdominal pain, nausea, vomiting, flushing of the face and ears, mild hypertension, rash and ringing of the ears.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Chromium III Nitrate	3250 mg/kg (Rat)		
Cobalt Sulfate	424 mg/kg (Rat)		
Nitric Acid			= 67 ppm (Rat) 4 h = 130 mg/m ³ (Rat) 4 h

Chronic Toxicity

Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Chronic or severe exposure to cobalt compounds may produce goiter and reduced thyroid activity. Chronic exposure to cobalt compounds are associated with kidney, heart and lung damage. Under some circumstances methemoglobinemia occurs in individuals when nitrate is converted by bacteria in the stomach to nitrite. Nausea, dizziness, rapid heart-beat, irregular breathing, coma and death can occur if this conversion takes place.

Carcinogenicity

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

Chemical Name	ACGIH	IARC	NTP	OSHA
Chromium III Nitrate		Group 3		X
Cobalt Sulfate	A3	Group 2B	Reasonably Anticipated	X
Nitric Acid		Group 2A		X

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen with Unknown Relevance to Humans.

IARC (International Agency for Research on Cancer)

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Unclassifiable as to Carcinogenicity in Humans

Group 3 - Unclassifiable as to Carcinogenicity in Humans

NTP (National Toxicology Program)

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

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

X – Present

Target Organ Effects

Eyes, Respiratory system, Skin, Teeth, Reproductive System

Section 12: ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity

Very 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
Cobalt Sulfate	0.4 - 72: 72 h Pseudokirchneriella subcapitata mg/L EC50		
Nitric Acid		72: 96 h Gambusia affinis 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

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

Other Information

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., (Chromium Nitrate, Nitric Acid)
Hazard Class 8
UN/ID Number UN3264
Packing Group PGII
Emergency Response Guide Number 154

IMDG

UN/ID Number UN3264
Proper Shipping Name Corrosive liquid, acidic, inorganic, N.O.S., (Chromium Nitrate, Nitric Acid)
Hazard Class 8
Packing Group PGII

IATA

UN/ID Number UN3264
Proper Shipping Name Corrosive liquid, acidic, inorganic, N.O.S., (Chromium Nitrate, Nitric Acid)
Hazard Class 8
Packing Group PGII

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 #	Weight - %	SARA 313 – Threshold Values %
Chromium III Nitrate	13548-38-4	5-15	1.0
Cobalt Sulfate	10124-43-3	1-10	0.1
Nitric Acid	7697-37-2	1-5	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	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
Chromium III Nitrate		X		
Nitric Acid	1000 lb			X

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

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act.

Chemical Name	CAS #	Weight - %	CAA (Clean Air Act), Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)	Volatile Organic Compounds (VOC) - Clean Air Act	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Chromium III Nitrate	13548-38-4	5-15	X			
Cobalt Sulfate	10124-43-3	1-10	X			

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)
Nitric Acid	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Cobalt Sulfate	Carcinogen

US State Right-to-Know Regulations

Chemical name	Massachusetts	New Jersey	Pennsylvania
Chromium III Nitrate		X	X
Cobalt Sulfate		X	X
Nitric Acid	X	X	X

International Regulations

Chemical Name	Carcinogenicity	Exposure Limits
Chromium III Nitrate		Mexico: TWA 0.5 mg/m ³
Nitric Acid		Mexico: TWA 2 ppm Mexico: TWA 5mg/m ³ Mexico: STEL 4 ppm Mexico: STEL 10 mg/m ³

CANADA

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

Chemical Name	NPRI
Cobalt Sulfate	X

International Inventory Legend

NPRI - National Pollutant Release Inventory.

Section 16: OTHER INFORMATION

Full Text of R-Phrases Referred to Under Sections 2 and 3

- R49 - May cause cancer by inhalation
- R68 - Possible risk of irreversible effects
- R60 - May impair fertility
- R22 - Harmful if swallowed
- 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
- R42/43 - May cause sensitization by inhalation and skin contact

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

- H302 - Harmful if swallowed
- H317 - May cause an allergic skin reaction
- H341 - Suspected of causing genetic defects if inhaled
- H360F - May damage fertility
- H400 - Very toxic to aquatic life
- H410 - Very toxic to aquatic life with long lasting effects
- H301 - Toxic if swallowed
- H314 - Causes severe skin burns and eye damage
- H272 - May intensify fire; oxidizer

Issue Date	16-Jun-2014
Revision Date	Not Applicable
Revision Note	Not Applicable.

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

Disclaimer

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