

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## METAL RESTORER, 286 mL

Version 4.5      Revision Date: 10/31/2023      SDS Number: 10670654-00011      Date of last issue: 04/11/2023  
Date of first issue: 12/23/2009

---

### SECTION 1. IDENTIFICATION

Product name : METAL RESTORER, 286 mL

Product code : 893.1211

Other means of identification : No data available

#### Manufacturer or supplier's details

Company name of supplier : Würth Canada Limited

Address : 345 Hanlon Creek Blvd  
GUELPH, ON N1C 0A1

Telephone : +1 (905) 564 6225

Telefax : +1 (905) 564 3671

Emergency telephone : Emergencies involving a spill, fire, explosion or exposure:  
CHEMTREC (24/7): 1-800-424-9300  
Transport related emergencies:  
CANUTEC (24/7): 1-613-996-6666 or \* 666 (cell)

Urgences impliquant un déversement, incendie, explosion ou exposition:

CHEMTREC (24/7): 1-800-424-9300

Urgences liées au transport:

CANUTEC (24/7): 1-613-996-6666 ou \* 666 (cellulaire)

E-mail address : prodsafe@wurth.ca

#### Recommended use of the chemical and restrictions on use

Recommended use : Metal polish  
Cleaning agent  
Detergent  
Dishwashing product

Restrictions on use : Not applicable

---

### SECTION 2. HAZARDS IDENTIFICATION

#### GHS classification in accordance with the Hazardous Products Regulations

Skin corrosion : Category 1

Serious eye damage : Category 1

#### GHS label elements

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## METAL RESTORER, 286 mL

Version 4.5      Revision Date: 10/31/2023      SDS Number: 10670654-00011      Date of last issue: 04/11/2023  
Date of first issue: 12/23/2009

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H314 Causes severe skin burns and eye damage.

Precautionary Statements :

**Prevention:**

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves, protective clothing, eye protection and face protection.

**Response:**

P301 + P330 + P331 + P310 IF SWALLOWED: Rinse mouth.

Do NOT induce vomiting. Immediately call a POISON CENTER.

P303 + P361 + P353 + P310 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

Immediately call a POISON CENTER.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER.

P363 Wash contaminated clothing before reuse.

**Storage:**

P405 Store locked up.

**Disposal:**

P501 Dispose of contents and container to an approved waste disposal plant.

**Other hazards**

None known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

**Components**

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
Aluminum oxide	Dialuminum trioxide	1344-28-1	$\geq 30 - < 60$ *
Glycerine	1,2,3-Propanetriol	56-81-5	$\geq 10 - < 30$ *
Citric acid monohydrate	1,2,3-propanetricar-	5949-29-1	$\geq 5 - < 10$ *

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## METAL RESTORER, 286 mL

Version 4.5      Revision Date: 10/31/2023      SDS Number: 10670654-00011      Date of last issue: 04/11/2023  
Date of first issue: 12/23/2009

	boxylic acid		
Sulfuric acid, aluminum salt (3:2), tetradecahydrate	No data available	16828-12-9	$\geq 1 - < 5$ *
Alcohols, C9-16, ethoxylated	Ethoxylated C9-16 alcohols	97043-91-9	$\geq 1 - < 5$ *

\* Actual concentration or concentration range is withheld as a trade secret

### SECTION 4. FIRST AID MEASURES

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
When symptoms persist or in all cases of doubt seek medical advice.
- If inhaled : If inhaled, remove to fresh air.  
If not breathing, give artificial respiration.  
If breathing is difficult, give oxygen.  
Get medical attention immediately.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.  
Get medical attention immediately.  
Wash clothing before reuse.  
Thoroughly clean shoes before reuse.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.  
If easy to do, remove contact lens, if worn.  
Get medical attention immediately.
- If swallowed : If swallowed, DO NOT induce vomiting.  
If vomiting occurs have person lean forward.  
Call a physician or poison control center immediately.  
Rinse mouth thoroughly with water.  
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : Causes serious eye damage.  
Causes severe burns.  
Causes digestive tract burns.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- Notes to physician : Treat symptomatically and supportively.

### SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray  
Alcohol-resistant foam

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## METAL RESTORER, 286 mL

Version	Revision Date:	SDS Number:	Date of last issue: 04/11/2023
4.5	10/31/2023	10670654-00011	Date of first issue: 12/23/2009

---

- Carbon dioxide (CO<sub>2</sub>)  
Dry chemical
- Unsuitable extinguishing media : None known.
- Specific hazards during fire fighting : Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Carbon oxides  
Metal oxides  
Sulfur oxides
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Use water spray to cool unopened containers.  
Remove undamaged containers from fire area if it is safe to do so.  
Evacuate area.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.
- 

### SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
- Environmental precautions : Avoid release to the environment.  
Prevent further leakage or spillage if safe to do so.  
Prevent spreading over a wide area (e.g., by containment or oil barriers).  
Retain and dispose of contaminated wash water.  
Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material.  
For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container.  
Clean up remaining materials from spill with suitable absorbent.  
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.  
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.
- 

### SECTION 7. HANDLING AND STORAGE

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## METAL RESTORER, 286 mL

Version 4.5      Revision Date: 10/31/2023      SDS Number: 10670654-00011      Date of last issue: 04/11/2023  
Date of first issue: 12/23/2009

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.
- Advice on safe handling : Do not get on skin or clothing.  
Do not breathe vapors or spray mist.  
Do not swallow.  
Do not get in eyes.  
Wash skin thoroughly after handling.  
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment  
Keep container tightly closed.  
Take care to prevent spills, waste and minimize release to the environment.
- Conditions for safe storage : Keep in properly labeled containers.  
Store locked up.  
Keep tightly closed.  
Store in accordance with the particular national regulations.  
Reacts with many metals to liberate hydrogen gas which can form explosive mixtures with air. Hydrogen, a highly flammable gas, can accumulate to explosive concentrations inside drums, or any types of steel containers or tanks upon storage.
- Materials to avoid : Do not store with the following product types:  
Strong oxidizing agents  
Self-reactive substances and mixtures  
Organic peroxides  
Explosives

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Aluminum oxide	1344-28-1	TWA	10 mg/m <sup>3</sup>	CA AB OEL
		TWA (Respirable)	1 mg/m <sup>3</sup> (Aluminum)	CA BC OEL
		TWAEV (respirable dust)	5 mg/m <sup>3</sup>	CA QC OEL
		TWA (Respirable particulate matter)	1 mg/m <sup>3</sup> (Aluminum)	ACGIH
Glycerine	56-81-5	TWA (Mist)	10 mg/m <sup>3</sup>	CA AB OEL
		TWA (Mist)	10 mg/m <sup>3</sup>	CA BC OEL
		TWA (Respirable mist)	3 mg/m <sup>3</sup>	CA BC OEL

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## METAL RESTORER, 286 mL

Version 4.5      Revision Date: 10/31/2023      SDS Number: 10670654-00011      Date of last issue: 04/11/2023  
Date of first issue: 12/23/2009

		TWAEV (Mist)	10 mg/m <sup>3</sup>	CA QC OEL
Sulfuric acid, aluminum salt (3:2), tetradecahydrate	16828-12-9	TWA	2 mg/m <sup>3</sup> (Aluminum)	CA AB OEL
		TWAEV (respirable dust)	5 mg/m <sup>3</sup>	CA QC OEL

**Engineering measures** : Minimize workplace exposure concentrations.  
If sufficient ventilation is unavailable, use with local exhaust ventilation.

### Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type : Combined particulates and organic vapor type

### Hand protection

Material : Nitrile rubber  
Break through time : >= 480 min  
Glove thickness : >= 0.5 mm  
Protective index : Class 6

Remarks : Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:  
Chemical resistant goggles must be worn.  
If splashes are likely to occur, wear:  
Face-shield

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.  
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.  
When using do not eat, drink or smoke.  
Wash contaminated clothing before re-use.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## METAL RESTORER, 286 mL

Version 4.5      Revision Date: 10/31/2023      SDS Number: 10670654-00011      Date of last issue: 04/11/2023  
Date of first issue: 12/23/2009

---

Appearance : liquid

Color : white

Odor : characteristic

Odor Threshold : No data available

pH : 1.6  
Concentration: 100 %

Melting point/freezing point : No data available

Initial boiling point and boiling range : 100 °C

Flash point :  $\geq 250$  °C

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : No data available

Relative vapor density : No data available

Density : 1.5 g/cm<sup>3</sup> (20 °C)

Solubility(ies)  
Water solubility : partly miscible

Partition coefficient: n-octanol/water : Not applicable

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity  
Viscosity, kinematic : No data available

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## METAL RESTORER, 286 mL

Version	Revision Date:	SDS Number:	Date of last issue: 04/11/2023
4.5	10/31/2023	10670654-00011	Date of first issue: 12/23/2009

---

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Heat of combustion : < 34 kJ/g

Particle size : Not applicable

---

### SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Can react with strong oxidizing agents.

Conditions to avoid : None known.

Incompatible materials : Oxidizing agents  
Bases

Hazardous decomposition products : No hazardous decomposition products are known.

---

### SECTION 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

Inhalation  
Skin contact  
Ingestion  
Eye contact

#### Acute toxicity

Not classified based on available information.

#### Product:

Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg  
Method: Calculation method

#### Components:

##### Aluminum oxide:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 2.3 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist



# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## METAL RESTORER, 286 mL

Version 4.5      Revision Date: 10/31/2023      SDS Number: 10670654-00011      Date of last issue: 04/11/2023  
Date of first issue: 12/23/2009

---

### **Glycerine:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 (Guinea pig): > 5,000 mg/kg

### **Citric acid monohydrate:**

Acute oral toxicity : LD50 (Mouse): 5,400 mg/kg

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

### **Sulfuric acid, aluminum salt (3:2), tetradecahydrate:**

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg  
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 5 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg  
Remarks: Based on data from similar materials

### **Alcohols, C9-16, ethoxylated:**

Acute oral toxicity : LD50 (Rat): > 300 - 2,000 mg/kg  
Remarks: Based on data from similar materials

### **Skin corrosion/irritation**

Causes severe burns.

### **Components:**

#### **Aluminum oxide:**

Species : Rabbit  
Result : No skin irritation

#### **Glycerine:**

Species : Rabbit  
Result : No skin irritation

#### **Citric acid monohydrate:**

Species : Rabbit  
Result : No skin irritation

#### **Sulfuric acid, aluminum salt (3:2), tetradecahydrate:**

Species : Rabbit

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## METAL RESTORER, 286 mL

Version 4.5      Revision Date: 10/31/2023      SDS Number: 10670654-00011      Date of last issue: 04/11/2023  
Date of first issue: 12/23/2009

---

Method : OECD Test Guideline 404  
Result : No skin irritation  
Remarks : Based on data from similar materials

### **Alcohols, C9-16, ethoxylated:**

Species : Rabbit  
Result : No skin irritation  
Remarks : Based on data from similar materials

### **Serious eye damage/eye irritation**

Causes serious eye damage.

### **Components:**

#### **Aluminum oxide:**

Species : Rabbit  
Result : No eye irritation

#### **Glycerine:**

Species : Rabbit  
Result : No eye irritation

#### **Citric acid monohydrate:**

Species : Rabbit  
Result : Irritation to eyes, reversing within 21 days

#### **Sulfuric acid, aluminum salt (3:2), tetradecahydrate:**

Species : Rabbit  
Result : Irreversible effects on the eye  
Method : OECD Test Guideline 405  
Remarks : Based on data from similar materials

#### **Alcohols, C9-16, ethoxylated:**

Species : Rabbit  
Result : Irreversible effects on the eye  
Remarks : Based on data from similar materials

### **Respiratory or skin sensitization**

#### **Skin sensitization**

Not classified based on available information.

#### **Respiratory sensitization**

Not classified based on available information.

### **Components:**

#### **Aluminum oxide:**

Test Type : Draize Test  
Routes of exposure : Skin contact

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## METAL RESTORER, 286 mL

Version 4.5      Revision Date: 10/31/2023      SDS Number: 10670654-00011      Date of last issue: 04/11/2023  
Date of first issue: 12/23/2009

---

Species : Guinea pig  
Result : negative

Routes of exposure : Inhalation  
Species : Mouse  
Result : negative

### **Sulfuric acid, aluminum salt (3:2), tetradecahydrate:**

Test Type : Local lymph node assay (LLNA)  
Routes of exposure : Skin contact  
Species : Mouse  
Method : OECD Test Guideline 429  
Result : negative  
Remarks : Based on data from similar materials

### **Alcohols, C9-16, ethoxylated:**

Test Type : Maximization Test  
Routes of exposure : Skin contact  
Species : Guinea pig  
Result : negative  
Remarks : Based on data from similar materials

### **Germ cell mutagenicity**

Not classified based on available information.

### **Components:**

#### **Aluminum oxide:**

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative  
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 474  
Result: negative

#### **Glycerine:**

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test  
Result: negative

Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

Test Type: Chromosome aberration test in vitro  
Result: negative

Test Type: DNA damage and repair, unscheduled DNA syn-

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## METAL RESTORER, 286 mL

Version 4.5      Revision Date: 10/31/2023      SDS Number: 10670654-00011      Date of last issue: 04/11/2023  
Date of first issue: 12/23/2009

---

thesis in mammalian cells (in vitro)  
Result: negative

### **Citric acid monohydrate:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

Test Type: in vitro micronucleus test  
Result: positive

Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow  
cytogenetic test, chromosomal analysis)  
Species: Rat  
Application Route: Ingestion  
Result: negative

### **Sulfuric acid, aluminum salt (3:2), tetradecahydrate:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative  
Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative  
Remarks: Based on data from similar materials

Test Type: in vitro micronucleus test  
Method: OECD Test Guideline 487  
Result: negative  
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo  
cytogenetic assay)  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 474  
Result: negative  
Remarks: Based on data from similar materials

### **Alcohols, C9-16, ethoxylated:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative  
Remarks: Based on data from similar materials

### **Carcinogenicity**

Not classified based on available information.

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## METAL RESTORER, 286 mL

Version 4.5      Revision Date: 10/31/2023      SDS Number: 10670654-00011      Date of last issue: 04/11/2023  
Date of first issue: 12/23/2009

---

### Components:

#### **Aluminum oxide:**

Species : Rat  
Application Route : inhalation (dust/mist/fume)  
Exposure time : 6- 12 Months  
Result : negative  
Remarks : Based on data from similar materials

#### **Glycerine:**

Species : Rat  
Application Route : Ingestion  
Exposure time : 2 Years  
Result : negative

### **Reproductive toxicity**

Not classified based on available information.

### Components:

#### **Aluminum oxide:**

Effects on fertility : Test Type: One-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Result: negative  
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development  
Species: Rat  
Application Route: Ingestion  
Result: negative  
Remarks: Based on data from similar materials

#### **Glycerine:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development  
Species: Rat  
Application Route: Ingestion  
Result: negative

#### **Citric acid monohydrate:**

Effects on fetal development : Test Type: Embryo-fetal development  
Species: Rat  
Application Route: Ingestion  
Result: negative

#### **Sulfuric acid, aluminum salt (3:2), tetradecahydrate:**

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## METAL RESTORER, 286 mL

Version 4.5      Revision Date: 10/31/2023      SDS Number: 10670654-00011      Date of last issue: 04/11/2023  
Date of first issue: 12/23/2009

---

Effects on fertility : Test Type: Two-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Result: negative  
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Two-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Result: negative  
Remarks: Based on data from similar materials

### STOT-single exposure

Not classified based on available information.

#### Components:

##### **Citric acid monohydrate:**

Assessment : May cause respiratory irritation.

### STOT-repeated exposure

Not classified based on available information.

#### Components:

##### **Aluminum oxide:**

Assessment : No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or less.

### Repeated dose toxicity

#### Components:

##### **Aluminum oxide:**

Species : Rat  
NOAEL : 0.07 mg/l  
Application Route : inhalation (dust/mist/fume)  
Exposure time : 6 Months

##### **Glycerine:**

Species : Rat  
NOAEL : 0.167 mg/l  
LOAEL : 0.622 mg/l  
Application Route : inhalation (dust/mist/fume)  
Exposure time : 13 Weeks

Species : Rat  
NOAEL : 8,000 - 10,000 mg/kg  
Application Route : Ingestion  
Exposure time : 2 y

Species : Rabbit

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## METAL RESTORER, 286 mL

Version	Revision Date:	SDS Number:	Date of last issue: 04/11/2023
4.5	10/31/2023	10670654-00011	Date of first issue: 12/23/2009

---

NOAEL : 5,040 mg/kg  
Application Route : Skin contact  
Exposure time : 45 Weeks

### Citric acid monohydrate:

Species : Rat  
NOAEL : 4,000 mg/kg  
LOAEL : 8,000 mg/kg  
Application Route : Ingestion  
Exposure time : 10 Days

### Sulfuric acid, aluminum salt (3:2), tetradecahydrate:

Species : Rat, female  
: > 100 mg/kg  
Application Route : Ingestion  
Exposure time : 53 Days  
Method : OECD Test Guideline 422  
Remarks : Based on data from similar materials

### Aspiration toxicity

Not classified based on available information.

---

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

#### Aluminum oxide:

#### Ecotoxicology Assessment

Chronic aquatic toxicity : No toxicity at the limit of solubility.

#### Glycerine:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 54,000 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 1,955 mg/l  
aquatic invertebrates Exposure time: 48 h

Toxicity to microorganisms : NOEC (Pseudomonas putida): > 10,000 mg/l  
Exposure time: 16 h  
Method: DIN 38 412 Part 8

#### Citric acid monohydrate:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 1,535 mg/l  
aquatic invertebrates Exposure time: 24 h

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## METAL RESTORER, 286 mL

Version 4.5      Revision Date: 10/31/2023      SDS Number: 10670654-00011      Date of last issue: 04/11/2023  
Date of first issue: 12/23/2009

---

### **Sulfuric acid, aluminum salt (3:2), tetradecahydrate:**

- Toxicity to fish : LL50 (Danio rerio (zebra fish)): > 0.1 mg/l  
Exposure time: 96 h  
Remarks: No toxicity at the limit of solubility.
- Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 0.1 mg/l  
Exposure time: 48 h  
Remarks: No toxicity at the limit of solubility.
- Toxicity to algae/aquatic plants : EL50: > 0.1 mg/l  
Remarks: No toxicity at the limit of solubility.

### **Ecotoxicology Assessment**

- Chronic aquatic toxicity : No toxicity at the limit of solubility.

### **Alcohols, C9-16, ethoxylated:**

- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l  
Exposure time: 48 h  
Remarks: Based on data from similar materials
- Toxicity to fish (Chronic toxicity) : EC10: > 0.1 - 1 mg/l  
Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10: > 0.1 - 1 mg/l  
Remarks: Based on data from similar materials

### **Persistence and degradability**

#### **Components:**

##### **Glycerine:**

- Biodegradability : Result: Readily biodegradable.  
Biodegradation: 92 %  
Exposure time: 30 d  
Method: OECD Test Guideline 301D

##### **Citric acid monohydrate:**

- Biodegradability : Result: Readily biodegradable.  
Biodegradation: 97 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

##### **Alcohols, C9-16, ethoxylated:**

- Biodegradability : Result: rapidly biodegradable  
Remarks: Based on data from similar materials



# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## METAL RESTORER, 286 mL

Version	Revision Date:	SDS Number:	Date of last issue: 04/11/2023
4.5	10/31/2023	10670654-00011	Date of first issue: 12/23/2009

---

### Bioaccumulative potential

#### Components:

##### Glycerine:

Partition coefficient: n-octanol/water : log Pow: -1.75

##### Citric acid monohydrate:

Partition coefficient: n-octanol/water : log Pow: -1.72

##### Mobility in soil

No data available

##### Other adverse effects

No data available

---

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Do not dispose of waste into sewer.

Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.  
If not otherwise specified: Dispose of as unused product.

---

## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### UNRTDG

Not regulated as a dangerous good

#### IATA-DGR

Not regulated as a dangerous good

#### IMDG-Code

Not regulated as a dangerous good

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### Domestic regulation

#### TDG

Not regulated as a dangerous good

#### Special precautions for user

Not applicable

---

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## METAL RESTORER, 286 mL

Version	Revision Date:	SDS Number:	Date of last issue: 04/11/2023
4.5	10/31/2023	10670654-00011	Date of first issue: 12/23/2009

### SECTION 15. REGULATORY INFORMATION

**Volatile organic compounds (VOC) content** CANADIAN ENVIRONMENTAL PROTECTION ACT, 1999 - Guidelines for VOC in Consumer Products  
VOC content: 0 % / 0 g/l

**The ingredients of this product are reported in the following inventories:**

DSL : All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).

### SECTION 16. OTHER INFORMATION

#### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
CA AB OEL : Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)  
CA BC OEL : Canada. British Columbia OEL  
CA QC OEL : Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants  
ACGIH / TWA : 8-hour, time-weighted average  
CA AB OEL / TWA : 8-hour Occupational exposure limit  
CA BC OEL / TWA : 8-hour time weighted average  
CA QC OEL / TWA EV : Time-weighted average exposure value

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation,

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## METAL RESTORER, 286 mL

Version	Revision Date:	SDS Number:	Date of last issue: 04/11/2023
4.5	10/31/2023	10670654-00011	Date of first issue: 12/23/2009

---

Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Revision Date : 10/31/2023  
Date format : mm/dd/yyyy

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

CA / Z8