

## Wright Etch

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Wright Etch

**Synonyms/Generic Names:** None

**Product Number:** 6026

**Product Use:** Industrial, Manufacturing or Laboratory use

**Manufacturer:** Columbus Chemical Industries, Inc.  
N4335 Temkin Rd.  
Columbus, WI. 53925

**For More Information:** 920-623-2140 (Monday-Friday 8:00-4:30)  
[www.columbuschemical.com](http://www.columbuschemical.com)

**In Case of Emergency Call:** CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

### 2. HAZARDS IDENTIFICATION

**Hazard Not Otherwise Classified (HNOC):** None

**Target Organ(s):** Teeth, Kidneys, Liver, Cardiovascular system

**Signal Word:** Danger

**Pictograms:**



**GHS Classification:**

Acute toxicity, Oral	Category 2
Acute toxicity, Inhalation	Category 2
Acute Toxicity, Dermal	Category 1
Skin corrosion	Category 1A
Serious eye damage	Category 1
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1A
Reproductive toxicity	Category 2
Specific target organ toxicity-repeated exposure	Category 1
Acute aquatic toxicity	Category 1

**GHS Label Elements, including precautionary statements:****Hazard Statements:**

H300	Fatal if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H340	May cause genetic defects.
H350	May cause cancer.
H361	Suspected of damaging fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.

**Precautionary Statements:**

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P262	do not get in eyes, on skin, or on clothing.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	In case of inadequate ventilation, wear respiratory protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do not induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep 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.
P321	Specific treatment is urgent (see first aid instruction on this label).
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.
P391	Collect spillage.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local regulations.

**Potential Health Effects**

<b>Eyes</b>	Causes eye burns.
<b>Inhalation</b>	May be harmful if inhaled. Material is extremely destructive to the mucous membranes and upper respiratory tract.
<b>Skin</b>	May be fatal if absorbed through skin. Causes skin burns.
<b>Ingestion</b>	May be fatal if swallowed.

**NFPA Ratings**

<b>Health</b>	3
<b>Flammability</b>	0
<b>Reactivity</b>	2
<b>Specific hazard</b>	Not Available

**HMIS Ratings**

<b>Health</b>	3
<b>Fire</b>	0
<b>Reactivity</b>	2

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Water	Balance	7732-18-5	231-791-2	H <sub>2</sub> O	18.00 g/mol
Acetic Acid	22-24	64-19-7	200-580-7	CH <sub>3</sub> COOH	60.05 g/mol
Chromium Trioxide	5-6	1333-82-0	215-607-8	CrO <sub>3</sub>	99.99 g/mol
Cupric Nitrate	<1	19004-19-4	221-838-5	Cu(NO <sub>3</sub> ) <sub>2</sub> •2½ H <sub>2</sub> O	232.59 g/mol
Hydrofluoric Acid	12-13	7664-39-3	231-634-8	HF	20.01 g/mol
Nitric Acid	10-12	7697-37-2	231-714-2	HNO <sub>3</sub>	63.01 g/mol

### 4. FIRST-AID MEASURES

<b>Eyes</b>	Immediately rinse with plenty of water and seek medical attention immediately. Cold water may be used. Keep the eyelids apart and away from the eyeballs during irrigation. Get medical attention immediately, preferably an eye specialist. Place ice pack on eyes until reaching emergency room.
<b>Inhalation</b>	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
<b>Skin</b>	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cold water may be used. Material is absorbed through the skin. Get medical attention immediately. While waiting for medical attention, it has been shown that flushing the affected area with water for one minute and then massaging HF Antidote Gel into the wound until there is a cessation of pain is a most effective first aid treatment. HF Antidote Gel contains Calcium Gluconate which combines with HF for insoluble Calcium Fluoride, thus preventing the extraction of calcium from the body tissue and bones. Another alternative first aid treatment, after thorough washing of the burned area, is to immerse the burned area in a solution of 0.2% iced aqueous Hyamine 1622 or 0.13% iced aqueous Zephiran Chloride. If immersion is impractical, towels could be soaked with one of the above solutions and used as compresses for the burn area. Hyamine 1622 is a trade name for Tetracaine Benzethonium Chloride. Zephiran is a trade name for Benzalkonium Chloride.
<b>Ingestion</b>	<b>Do Not Induce Vomiting!</b> Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

### 5. FIRE-FIGHTING MEASURES

<b>Suitable (and unsuitable) extinguishing media</b>	Product is not flammable. Use appropriate media for adjacent fire. Cool unopened containers with water.
<b>Special protective equipment and precautions for firefighters</b>	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
<b>Specific hazards arising from the chemical</b>	Emits toxic fumes (carbon oxides, chromium oxides, copper oxides, nitrogen oxides, hydrogen fluoride) under fire conditions. (See also Stability and Reactivity section).

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions, protective equipment and emergency procedures</b>	See section 8 for recommendations on the use of personal protective equipment.
<b>Environmental precautions</b>	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
<b>Methods and materials for containment and cleaning up</b>	Neutralize spill and absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols.

### Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Acetic Acid	10 ppm	PEL	OSHA
	25 mg/m <sup>3</sup>		
	10 ppm	TLV	ACGIH
	25 mg/m <sup>3</sup>		
	15 ppm	STEL	ACGIH
	37 mg/m <sup>3</sup>		
Chromium Trioxide	10 ppm	REL	NIOSH
	25 mg/m <sup>3</sup>		
	15 ppm	STEL	NIOSH
	37 mg/m <sup>3</sup>		
	0.05 mg/m <sup>3</sup> (Cr)	TLV	ACGIH
	0.1 mg/m <sup>3</sup> (CrO <sub>3</sub> )	STEL	OSHA
	0.001 mg/m <sup>3</sup> (Cr(VI))	REL	NIOSH
Cupric Nitrate, Hemipentahydrate	1 mg/m <sup>3</sup>	REL	NIOSH
Hydrofluoric Acid	0.5 ppm	TLV	ACGIH
	0.41 mg/m <sup>3</sup>		
	2 ppm	CEIL	ACGIH
	1.64 mg/m <sup>3</sup>		
	3 ppm	PEL	OSHA
	3 ppm	REL	NIOSH
	2.5 mg/m <sup>3</sup>		
	6 ppm	CEIL	NIOSH
	5 mg/m <sup>3</sup>		
Nitric Acid	2 ppm	TLV	ACGIH
	5.2 mg/m <sup>3</sup>		
	4 ppm	STEL	ACGIH

	10 mg/m <sup>3</sup>		
	2 ppm 5 mg/m <sup>3</sup>	PEL	OSHA
	2 ppm 5 mg/m <sup>3</sup>	REL	NIOSH
	4 ppm 10 mg/m <sup>3</sup>	STEL	NIOSH
	25 ppm	IDLH	OSHA

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CELL: Ceiling

### Personal Protection

<b>Eyes</b>	Wear chemical safety glasses or goggles with face shield.
<b>Inhalation</b>	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator. Handle under fume hood.
<b>Skin</b>	Wear nitrile or rubber gloves, and full body protection.
<b>Other</b>	Not Available

### Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Dark orange liquid.
Odor	Not Available
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	Not Available
Initial boiling point and boiling range	Not Available
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	Not Available
Vapor density	Not Available
Density	1.12-1.24
Solubility (ies)	Not Available
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable
<b>Possibility of Hazardous Reactions</b>	Will not occur.
<b>Conditions to Avoid</b>	
<b>Incompatible Materials</b>	Moisture, bases, organic material, metals, glass, ceramics, aluminum, stainless steel, carbonates, cyanides, sulfides. Reacts

	violently with acetic anhydride, ammonium hydroxide, arsenic trioxide, calcium oxide, potassium permanganate, sodium, sodium hydroxide, sulfuric acid.
<b>Hazardous Decomposition Products</b>	Carbon oxides, chromium oxides, copper oxides, nitrogen oxides, hydrogen fluoride.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

#### Acetic Acid

<b>Skin</b>	LD50 Dermal – rabbit – 1112 mg/kg
<b>Eyes</b>	Not Available
<b>Respiratory</b>	LC50 Inhalation – mouse – 1 hour – 5620 ppm
<b>Ingestion</b>	LD50 Oral – rat – 3310 mg/kg

#### Chromium Trioxide

<b>Skin</b>	LD50 – Rabbit – 57 mg/kg
<b>Eyes</b>	Not Available
<b>Respiratory</b>	LC50 – Rat – 21.7 mg/kg
<b>Ingestion</b>	LD50 – Rat – 80 mg/kg

#### Cupric Nitrate

<b>Skin</b>	Not Available
<b>Eyes</b>	Not Available
<b>Respiratory</b>	Not Available
<b>Ingestion</b>	LD50 – Rat – 794 mg/kg

#### Hydrofluoric Acid

<b>Skin</b>	Not Available
<b>Eyes</b>	Not Available
<b>Respiratory</b>	LC50- rat- 1 hour: 2240-2340 ppm
<b>Ingestion</b>	LD100- guinea pig– 80 mg/kg

#### Nitric Acid

<b>Skin</b>	Not Available
<b>Eyes</b>	Not Available
<b>Respiratory</b>	Not Available
<b>Ingestion</b>	LDLO Oral – Human – 430 mg/kg

### Carcinogenicity

<b>IARC</b>	1-Group 1: Carcinogenic to humans (chromium trioxide). 2A-Group 2A: Probably carcinogenic to humans (cupric nitrate hemipentahydrate).
<b>ACGIH</b>	A1: Confirmed for human (chromium trioxide).
<b>NTP</b>	Known to be human carcinogen (chromium trioxide).
<b>OSHA</b>	1910.1026 (chromium trioxide).

### Signs & Symptoms of Exposure

<b>Skin</b>	Irritation, redness.
<b>Eyes</b>	Irritation, redness, watering eyes.
<b>Respiratory</b>	Irritation, coughing.
<b>Ingestion</b>	Irritation, nausea, vomiting, diarrhea.

<b>Chronic Toxicity</b>	Adverse reproductive effects. Affect genetic material. May cause cancer. May cause fluorosis or hypocalcaemia.
<b>Teratogenicity</b>	May alter genetic material.
<b>Mutagenicity</b>	Mutagenic for mammalian somatic cells, bacteria, and yeast.
<b>Embryotoxicity</b>	May cause reproductive disorders.
<b>Target Organ(s)</b>	Inhalation–Causes respiratory damage through repeated exposure. Teeth, Kidneys, Liver, Cardiovascular system

<b>Reproductive Toxicity</b>	May cause reproductive damage (male and female).
<b>Respiratory/Skin Sensitization</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Acetic Acid

<b>Aquatic Vertebrate</b>	LC50 - Oncorhynchus mykiss (rainbow trout) - > 1,000 mg/l - 96 h
<b>Aquatic Invertebrate</b>	EC50 - Daphnia magna (Water flea) - > 300.82 mg/l - 48 h
<b>Terrestrial</b>	Not Available

#### Chromium Trioxide

<b>Aquatic Vertebrate</b>	LC50 – Tilapia mossambica – 21-141 mg/L – 96h LC50 – Leuciscus idus – 100 mg/L – 48h
<b>Aquatic Invertebrate</b>	EC50 – Daphnia magna – 0.8 mg/L – 48h
<b>Terrestrial</b>	Not Available

#### Cupric Nitrate

<b>Aquatic Vertebrate</b>	LC50 – Other fish – 0.29 mg/L – 96h
<b>Aquatic Invertebrate</b>	Not Available
<b>Terrestrial</b>	Not Available

#### Hydrofluoric Acid

<b>Aquatic Vertebrate</b>	Not Available
<b>Aquatic Invertebrate</b>	Not Available
<b>Terrestrial</b>	Not Available

#### Nitric Acid

<b>Aquatic Vertebrate</b>	LC50 – Gambusia affinis – 72 mg/L – 96h
<b>Aquatic Invertebrate</b>	Not Available
<b>Terrestrial</b>	Not Available

<b>Persistence and Degradability</b>	Not Available
<b>Bioaccumulative Potential</b>	Not Available
<b>Mobility in Soil</b>	Not Available
<b>PBT and vPvB Assessment</b>	Not Available
<b>Other Adverse Effects</b>	Very toxic to aquatic life. Do not release to the environment.

## 13. DISPOSAL CONSIDERATIONS

<b>Waste Product or Residues</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residue.
<b>Product Containers</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

## 14. TRANSPORTATION INFORMATION

US DOT	UN3289, Toxic liquid, corrosive, inorganic, n.o.s., (chromium trioxide and hydrofluoric acid), 6.1, (8), pg II
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TDG	UN3289, TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S., (CHROMIUM TRIOXIDE AND HYDROFLUORIC ACID), 6.1, (8), PG II
IMDG	UN3289, TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S., (CHROMIUM TRIOXIDE AND HYDROFLUORIC ACID), 6.1, (8), PG II
Marine Pollutant	No
IATA/ICAO	UN3289, Toxic liquid, corrosive, inorganic, n.o.s., (chromium trioxide and hydrofluoric acid), 6.1, (8), pg II

## 15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA Active inventory.
DSL / NDSL	Listed on the DSL inventory: Acetic Acid, Chromium Trioxide, Hydrofluoric Acid, Nitric Acid
California Proposition 65	Not Listed
Rhode Island: Hazardous Substance List	Listed: Acetic Acid, Chromium Trioxide, Hydrofluoric Acid, Nitric Acid
Massachusetts: Toxic or Hazardous Substance List, Right to Know	Listed: Acetic Acid, Chromium Trioxide, Hydrofluoric Acid, Nitric Acid
Pennsylvania: Hazardous Substance List	Listed: Acetic Acid, Chromium Trioxide, Hydrofluoric Acid, Nitric Acid
New Jersey: Right to Know Hazardous Substance List	Listed: Acetic Acid, Chromium Trioxide, Hydrofluoric Acid, Nitric Acid
SARA 302	Listed: Hydrofluoric Acid, Nitric Acid
SARA 304	Listed: Hydrofluoric Acid, Nitric Acid
SARA 311	Acute Health Hazard, Chronic Health Hazard.
SARA 312	Acute Health Hazard, Chronic Health Hazard.
SARA 313	Listed: Hydrofluoric Acid, Nitric Acid
WHMIS Canada	Class B3: Flammable and combustible material – Combustible liquid. Class C: Oxidizing material. Class D1A: Poisonous and infectious material – Immediate and serious effects – Very toxic. Class D2A: Poisonous and infectious material – Other effects – Very toxic. Class E: Corrosive material.

## 16. OTHER INFORMATION

Revision	Date
Original	02/08/2013
Revision 1	02/04/2016
Revision 2	10/05/2022



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