

The Valvoline Company

Date Prepared: 01/14/02

MSDS No: 510.0336584-002.003I

AUTO CHROME & WIRE 1/26 OZ

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity

Product Name: AUTO CHROME & WIRE 1/26 OZ

General or Generic ID: AUTOMOTIVE DETAIL PRODUCT

Company

The Valvoline Company
P.O. Box 14000
Lexington, KY 40512

Telephone Numbers

Emergency: 1-800-274-5263
Information: 1-859-357-7206

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% (by weight)
PHOSPHORIC ACID	7664-38-2	6.0- 16.0
OXALIC ACID	144-62-7	1.0- 7.0
SURFACTANT	9016-45-9	1.0- 7.0
HYDROFLUORIC ACID	7664-39-3	0.8

3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye

Material is corrosive to eyes. May cause burns.

Skin

Can cause skin burns and other permanent skin damage. Both the liquid and vapor can cause severe burns which may not be immediately painful or visible. Pain may become gradually more severe, possibly taking 1-24 hours to become noticeable. These burns can be very deep, possibly causing bone damage, and are very slow to heal. Even solutions containing 2% or less hydrogen fluoride or other inorganic fluoride compounds can cause burns and tissue damage. Passage of this material through the skin may be harmful or fatal.

Swallowing

Swallowing this material may be harmful or fatal. Symptoms may include severe stomach and intestinal irritation, burns and tissue damage. Shock may occur.

Inhalation

Breathing of vapor or mist is possible. Breathing this material may be harmful or fatal. May cause severe irritation and burns to the nose, throat, and respiratory tract.

Symptoms of Exposure

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: mouth and throat irritation (soreness, dry or scratchy

feeling, cough), stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), cough, sneezing, tight feeling in the chest, headache, difficult breathing, irregular heartbeat, lung edema (fluid buildup in the lung tissue) acute kidney failure (sudden slowing or stopping of urine production), coma, and death.

Target Organ Effects

Repeated, prolonged overexposure to inorganic fluoride compounds may result in gastrointestinal disturbances, loss of weight, anemia (reduced number of red blood cells), diseases of the teeth, and skeletal fluorosis. Skeletal fluorosis is characterized by bone and joint pain, limited motion in the joints or spine, increased bone density which can cause the bones to become brittle, and hardening of ligaments. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals, and may aggravate preexisting disorders of these organs in humans: nervous system effects, blood abnormalities, liver abnormalities, kidney damage, Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans, and may aggravate preexisting disorders of these organs: cardiovascular effects, kidney damage.

Developmental Information

This material (or a component) has been shown to cause harm to the fetus in laboratory animal studies. The relevance of these findings to humans is uncertain.

Cancer Information

Based on the available information, this material cannot be classified with regard to carcinogenicity. This material is not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration.

Other Health Effects

Hydrofluoric acid has been shown to cause permanent changes in the DNA of insect germ cells. Changes in these cells can be passed to the next generation. The relevance of this finding to human health is uncertain.

Primary Route(s) of Entry

Inhalation, Skin absorption, Skin contact, Eye contact, Ingestion.

4. FIRST AID MEASURES

Eyes

If material gets into the eyes, immediately flush eyes gently with water for at least 15 minutes while holding eyelids apart. If symptoms develop as a result of vapor exposure, immediately move individual away from exposure and into fresh air before flushing as recommended above. Seek immediate medical attention.

Skin

Immediately flush contaminated skin with large quantities of cool running water for 5 minutes. Remove contaminated clothing while flushing contaminated skin. Immediately after washing, apply 2.5% calcium gluconate gel to all affected skin areas. (Note: If gel is not prepared within 5 minutes, continue flushing until gel is prepared.) The gel should be massaged into the affected skin by

personnel wearing gloves to prevent skin contamination during first aid. Gel should be applied every 15 minutes and massaged continuously. Instead of calcium gluconate treatment, the affected areas may be soaked in iced 0.13% benzalkonium chloride solution (Zephiran chloride). Use ice cubes rather than shaved ice to prevent frostbite. If it is not practical to immerse affected area, towels should be soaked with iced 0.13% benzalkonium chloride solution and used as compresses for the burned area. Compresses should be changed every 2-3 minutes and continued until pain is relieved or victim is seen by a physician. If neither calcium gluconate nor benzalkonium chloride is available, use an iced saturated water solution of magnesium sulfate (Epsom salts), or if that is not available, iced 70% alcohol or ice water. Local anesthetics should be avoided since relief of pain indicates success of the treatment.

GET MEDICAL ATTENTION AS SOON AS POSSIBLE.

NOTE - Calcium gluconate gel can be prepared by mixing a 10 milliliter ampule of calcium gluconate with a 2-ounce tube of K-Y jelly (Johnson & Johnson). After a jar of this mixture has been opened and used, it should be discarded to prevent bacterial or chemical contamination.

Swallowing

Seek immediate medical attention. Do not induce vomiting. If individual is conscious and alert, immediately rinse mouth with water and give milk to drink (one-half to one glassful), chewable calcium carbonate tablets, or milk of magnesia. The calcium in milk and the magnesium in milk of magnesia will act as an antidote in cases of hydrofluoric acid ingestion. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

Note to Physicians

This product contains hydrofluoric acid (HF). Acute local effects from HF exposure are concentration-dependent. If untreated or exposure is prolonged, even dilute solutions of HF can cause delayed toxicity following penetration to subcutaneous tissue. Acute systemic toxicity is largely dependent upon the total amount of fluoride ion absorbed. Thus ingestion, skin contact or significant inhalation can cause severe systemic effects including electrolyte (calcium, magnesium, potassium) and acid-base abnormalities with resulting cardiovascular effects. Exposure of >5% of the body surface area with any concentration of HF may predispose the patient to development of hypocalcemia. Chronic exposure to less than acutely toxic amounts of HF is a low toxicity hazard. Repeated exposure and absorption of 10-80 mg of fluoride per day may produce systemic fluorosis. Following ingestion, inactivate oxalate by giving calcium as a dilute solution of calcium lactate, lime water, finely pulverized chalk, plaster, and/or milk. Gastric lavage is controversial due to possible corrosion in the esophagus or stomach. Systemic effects may be due to formation of a complex between oxalic acid and calcium which is insoluble at physiological pH and can be deposited in the brain and renal tubules, causing nervous system disturbances and kidney damage. Resultant hypocalcemia may be responsible for the muscular and cardiovascular effects, although hypovolemic shock from gastroenteritis or hemorrhage may also

cause cardiovascular collapse. Intravenous administration of calcium gluconate or calcium chloride may be required if hypocalcemia or hypocalcemic tetany occur. Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, lung (for example, asthma-like conditions), liver, kidneys, nervous system, blood-forming system, cardiovascular system, bone.

5. FIRE FIGHTING MEASURES

Flash Point

> 212.0 F (100.0 C)

Explosive Limit

No data

Autoignition Temperature

No data

Hazardous Products of Combustion

May form: acid vapors, carbon dioxide and carbon monoxide, formic acid, hydrogen fluoride, phosphorous compounds, various hydrocarbons.

Fire and Explosion Hazards

No data

Extinguishing Media

regular foam, carbon dioxide, dry chemical.

Fire Fighting Instructions

Wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

NFPA Rating

Health - 4, Flammability - 0, Reactivity - 0

6. ACCIDENTAL RELEASE MEASURES

Small Spill

Absorb liquid on vermiculite, floor absorbent or other absorbent material. Persons not wearing proper personal protective equipment should be excluded from area of spill.

Large Spill

Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be taken up on sand, clay, earth, floor absorbent, or other absorbent material and shoveled into containers.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Storage

Not applicable

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection

Chemical splash goggles and face shield (8" min.) in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. (Consult your industrial hygienist.)

Skin Protection

Wear impervious gloves (consult your safety equipment supplier). To prevent skin contact, wear impervious clothing and boots.

Respiratory Protections

If workplace exposure limit(s) of product or any component is exceeded (See Exposure Guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (consult your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

Engineering Controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

Exposure Guidelines

Component

PHOSPHORIC ACID (7664-38-2)

OSHA VPEL 1.000 mg/m3 - TWA
OSHA VPEL 3.000 mg/m3 - STEL
ACGIH TLV 1.000 mg/m3 - TWA
ACGIH TLV 3.000 mg/m3 - STEL

OXALIC ACID (144-62-7)

OSHA VPEL 1.000 mg/m3 - TWA
OSHA VPEL 2.000 mg/m3 - STEL
ACGIH TLV 1.000 mg/m3 - TWA
ACGIH TLV 2.000 mg/m3 - STEL

SURFACTANT (9016-45-9)

No exposure limits established

HYDROFLUORIC ACID (7664-39-3)

OSHA VPEL 3.000 ppm - TWA as F
OSHA VPEL 6.000 ppm - STEL as F
ACGIH TLV 2.600 mg/m3 - Ceiling
ACGIH TLV 3.000 ppm - Ceiling as F

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point

(for component) 212.0 F (100.0 C)

Vapor Pressure

(for component) 17.500 mmHg

Specific Vapor Density

No data

Specific Gravity

1.090 @ 70.00 F

Liquid Density

9.080 lbs/gal @ 70.00 F

1.090 kg/l @ 21.00 C

Percent Volatiles (Including Water)

No data

Evaporation Rate

SLOWER THAN ETHYL ETHER

Appearance

CLEAR

State

LIQUID

Physical Form

No data

Color

COLORLESS TO LIGHT YELLOW

Odor

PINE

pH

2.7 - 2.8

10. STABILITY AND REACTIVITY

Hazardous Polymerization

Product will not undergo hazardous polymerization.

Hazardous Decomposition

May form: acid vapors, ammonia, carbon dioxide and carbon monoxide, hydrogen fluoride, various hydrocarbons, Ammonia released due to decomposition forms flammable mixtures in air between 16% and 25%.

Chemical Stability

Stable.

Incompatibility

Avoid contact with: alkalies, cyanides, halogens, strong alkalies strong oxidizing agents, strong reducing agents, Acid reacts with

most metals to release hydrogen gas which can form explosive mixtures with air.

11. TOXICOLOGICAL INFORMATION

No data

12. ECOLOGICAL INFORMATION

No data

13. DISPOSAL CONSIDERATION

Waste Management Information

Dispose of in accordance with all applicable local, state and federal regulations.

14. TRANSPORT INFORMATION

DOT Information - 49 CFR 172.101

DOT Description:

CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S,8,UN3264,III

Container/Mode:

CASES/SURFACE - NO EXCEPTIONS

NOS Component:

PHOSPHORIC ACID

RQ (Reportable Quantity) - 49 CFR 172.101

Product Quantity (lbs) Component

7994	AMMONIUM BIFLUORIDE
12012	HYDROGEN FLUORIDE
45444	PHOSPHORIC ACID

15. REGULATORY INFORMATION

US Federal Regulations

CERCLA RQ - 40 CFR 302.4

Component

Component

PHOSPHORIC ACID

5000

HYDROGEN FLUORIDE

100

SARA 302 Components - 40 CFR 355 Appendix A

Section 302 Component(s)

TPQ (lbs)

RQ (lbs)

HYDROGEN FLUORIDE

100

100

Section 311/312 Hazard Class - 40 CFR 370.2

Immediate(X) Delayed(X) Fire() Reactive() Sudden

Release of Pressure()

SARA 313 Components - 40 CFR 372.65
Section 313 Component(s)

CAS Number

HYDROGEN FLUORIDE

7664-39-3

International Regulations

Inventory Status

Not determined

State and Local Regulations

California Proposition 65

None

New Jersey RTK Label Information

PHOSPHORIC ACID

7664-38-2

OXALIC ACID

144-62-7

HYDROGEN FLUORIDE

7664-39-3

Pennsylvania RTK Label Information

PHOSPHORIC ACID

7664-38-2

ETHANEDIOIC ACID

144-62-7

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

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