

Cycle 5 Rust Sour

UNI-KEM CHEMICALS, INC

802 Wm. Leigh Drive
Tullytown, PA 19007
Phone—800-752-1120
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GENERAL DESCRIPTION: CYCLE 5 RUST REMOVING SOUR is designed to completely neutralize linen being washed so that the pH of the finished product is within an acceptable range of the skin pH, thus preventing alkaline or acidic irritation to the skin. CYCLE 5 reduces "rejects" by aiding in removing alkali residual and mineral deposits such as lime and iron which cause graying and yellowing of linen.

PHYSICAL PROPERTIES:

Chemical Composition	Alkalinity neutralizing agents Rust inhibitors and destainers.
Appearance	Clear Liquid
pH	2.1
pH of 1% solution	3.4
Specific Gravity	1.016 (8.46) lbs/gal
Solubility	Complete and fast
Penetration	Immediate
Neutralization	Controlled
Foam	None
Stability	1 year @ ambient temperature
Phosphorus Content	None

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions.



INSTRUCTIONS FOR USE:

CYCLE 5 should be added during the final rinse cycle of the formula with a 90oF to 120oF water temperature and a low water level. Sour or Sour/Soft rinses should be 3 to 5 minutes in duration. If a chlorine bleach is used in the formula, the bleach and sour cycles should be separated by at least two rinses. CYCLE 5 is specially formulated to be used with an automated injector system for ease and convenience. The use of

CYCLE 5 at 2 to 4 ounces per hundred pounds of work will deliver the proper pH. A pH indicator may be used to check the correct level of sour for various loads. Different fabrics may require different levels of CYCLE 5 for example, towels retain more alkali than sheets and would require more sour. The optimum pH is 5.5 to 6.5.

HANDLING PRECAUTIONS:

CAUTION: FIRST AID

KEEP OUT OF REACH OF CHILDREN.

Acidic liquid. Contact with skin and eyes may cause severe irritation. Harmful if swallowed. Flood with water if splashed in eyes. Flush with water for 15 minutes and consult a physician immediately. If ingested, drink large amounts of milk, milk of magnesia or gelatin, or if these are not available, drink large amounts of water. DO NOT induce vomiting. Obtain prompt medical attention. Consult Material Safety Data Sheet for further information on product acceptability.

PACKAGING:

2.5 gal plastic pail - 28 lbs net/60 lbs gross
5 gal plastic pail - 57 lbs net/60 lbs gross
15 gal plastic drum - 170 lbs net/176 lbs gross

Code: C5CY

SAFETY DATA SHEET

Issuing Date 07-Aug-2013

Revision Date 07-Aug-2013

Revision Number 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

GHS product identifier

Product Name CYCLE 5

Other means of identification

Product Code(s) CYCLE 5

UN-Number UN1778

Synonyms CYCLE 5

Recommended use of the chemical and restrictions on use

Recommended Use Institutional laundry detergent

Uses advised against No information available

Supplier's details

Supplier Address

Uni-Kem Chemicals, Inc.
802 Wm. Leigh Drive
Tullytown, PA
19007
TEL: 800-752-1200

Emergency telephone number

Emergency Telephone Number CHEM-TEL, INC.
24 Hour Emergency Contact 1-800-255-3924

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)

Acute Oral Toxicity	Category 4
Skin Corrosion/Irritation	Category 1 Subcategory 1B
Serious Eye Damage/Eye Irritation	Category 1

GHS Label elements, including precautionary statements

Emergency Overview

Signal Word Danger

Hazard Statements

- Harmful if swallowed
- Causes severe skin burns and eye damage

**Appearance** Clear, Green**Physical State** Liquid.**Odor** No information available**Precautionary Statements****Prevention**

- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Do not breathe dust/fume/gas/mist/vapors/spray
- Wear protective gloves/protective clothing/eye protection/face protection.

General Advice

- Immediately call a POISON CENTER or doctor/physician.

Eyes

- 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 or doctor/physician.

Skin

- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
- Wash contaminated clothing before reuse.

Inhalation

- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Ingestion

- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- Rinse mouth
- Do NOT induce vomiting.

Storage

- Store locked up.

Disposal

- Dispose of contents/container to an approved waste disposal plant.

Hazard Not Otherwise Classified (HNOC)

Not applicable

Other information

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS**Synonyms**

CYCLE 5

Chemical Name	CAS-No	Weight %	Trade secret
Fluorosilicic acid	16961-83-4	15-30	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of necessary first-aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
Skin Contact	Wash off immediately with soap and plenty of water. Remove and wash contaminated clothing before re-use. Immediate medical attention is required.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.
Ingestion	Drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Immediate medical attention is required.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects No information available.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media None

Specific Hazards Arising from the Chemical

No information available

Explosion Data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Stop leak if you can do it without risk. If spilled, take caution, as material can cause surfaces to become very slippery.
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Environmental Precautions

Environmental Precautions	Dispose of contents/container to an approved waste disposal plant.
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Methods and materials for containment and cleaning up

Methods for Containment	Stop leak if you can do it without risk
Methods for Cleaning Up	Contain spill, dilute with water and neutralize as required. Wash away small spills with plenty of water.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling

Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. Use only in area provided with appropriate exhaust ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Do not eat, drink or smoke when using this product. Do not take internally. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store at room temperature. Keep from freezing. Keep container closed when not in use. Keep out of the reach of children.

Incompatible Products

Ferrous metals. Chlorine-based bleaching agents. Alkaline. Do not mix with anything but water

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Fluorosilicic acid 16961-83-4	TWA: 2.5 mg/m ³ F	TWA: 2.5 mg/m ³ F TWA: 2.5 mg/m ³ dust (vacated) TWA: 2.5 mg/m ³	TWA: 2.5 mg/m ³ F

Appropriate engineering controls

Engineering Measures

Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Chemical splash goggles.

Skin and Body Protection

Rubber gloves. Latex gloves

Respiratory Protection

Particle filtering face piece

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Appearance	Clear Green
Odor	No information available	Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks/ - Method</u>
pH	2.0	(4 % solution)
Melting Point/Range	No data available	None known
Boiling Point/Boiling Range	> 100 °C / > 212 °F	None known
Flash Point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
upper flammability limit	No data available	

lower flammability limit	No data available	
Vapor Pressure	No data available	None known
Vapor Density	No data available	None known
Relative Density	No data available	None known
Specific Gravity	1.049	None known
Water Solubility	100%	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known
Viscosity	5 cps	None known

Flammable Properties Not flammable

Explosive Properties No data available

Oxidizing Properties No data available

Other information

VOC Content (%) No data available

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Incompatible products.

Incompatible materials

Ferrous metals. Chlorine-based bleaching agents. Alkaline. Do not mix with anything but water

Hazardous decomposition products

Hydrofluoric acid.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Avoid breathing vapors or mists. Vapors may irritate throat and respiratory system.
Eye Contact	Causes serious eye damage.
Skin Contact	Causes severe skin burns.
Ingestion	Harmful if swallowed.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	90 mL/kg (Rat)	-	-

Fluorosilicic acid	= 125 mg/kg (Rat)	-	= 1.11 mg/L (Rat) 1 h
			-

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Delayed and immediate effects and also chronic effects from short and long term exposure

Sensitization No information available.
Mutagenic Effects No information available.
Carcinogenicity Contains no ingredient listed as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Fluorosilicic acid		Group 3		

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration Hazard No information available.

Numerical measures of toxicity - Product

The following values are calculated based on chapter 3.1 of the GHS document:

LD50 Oral 462 mg/kg; Acute toxicity estimate
LD50 Dermal 24299 mg/kg; Acute toxicity estimate

12. ECOLOGICAL INFORMATION**Ecotoxicity**

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Fluorosilicic acid 16961-83-4		LC50 96 h: = 65 mg/L static (Poecilia reticulata) LC50 96 h: = 28.7 mg/L static (Pimephales promelas)		

Persistence and Degradability No information available.

Bioaccumulation No information available.

Chemical Name	Log Pow

Other Adverse Effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of in accordance with federal, state, and local regulations

Contaminated Packaging Do not re-use empty containers.

Chemical Name	California Hazardous Waste
Fluorosilicic acid	Toxic Corrosive

14. TRANSPORT INFORMATION**DOT**

UN-Number UN1778
Proper shipping name Fluorosilicic acid

Hazard Class	8
Packing Group	II
Description	UN1778, Fluorosilicic acid, 8, II
Emergency Response Guide Number	154

TDG

UN-Number	UN1778
Proper Shipping Name	Fluorosilicic acid
Hazard Class	8
Packing Group	II
Description	UN1778, Fluorosilicic acid, 8, II

UN-Number	UN1778
Proper Shipping Name	Fluorosilicic acid
Hazard Class	8
Packing Group	II
Description	UN1778, Fluorosilicic acid, 8, II

ICAO

UN-Number	UN1778
Proper shipping name	Fluorosilicic acid
Hazard Class	8
Packing Group	II
Description	UN1778, Fluorosilicic acid, 8, II

IATA

UN-Number	UN1778
Proper Shipping Name	Fluorosilicic acid
Hazard Class	8
Packing Group	II
ERG Code	8L
Description	UN1778, Fluorosilicic acid, 8, II

IMDG/IMO

UN-Number	UN1778
Proper Shipping Name	Fluorosilicic acid
Hazard Class	8
Packing Group	II
EmS No.	F-A, S-B
Description	UN1778, Fluorosilicic acid, 8, II

UN-Number	UN1778
Proper Shipping Name	Fluorosilicic acid
Hazard Class	8
Packing Group	II
Classification Code	C1
Description	UN1778, Fluorosilicic acid, 8, II

ADR

UN-Number	UN1778
Proper Shipping Name	Fluorosilicic acid
Hazard Class	8
Packing Group	II
Classification Code	C1
Tunnel Restriction Code	(E)
Description	UN1778, Fluorosilicic acid, 8, II, (E)
ADR/RID-Labels	8

Proper Shipping Name	Fluorosilicic acid
Hazard Class	8
Packing Group	II
Classification Code	C1
Description	UN1778, Fluorosilicic acid, 8, II
Limited Quantity	1 L

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL	Complies
EINECS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend

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

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

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

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

"X" designates that the ingredients are listed on the state right to know list.

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Fluorosilicic acid	X	X	X		X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazard 3	Flammability 0	Instability 0	Physical and Chemical Hazards -
<u>HMIS</u>	Health Hazard 3	Flammability 0	Physical Hazard 0	Personal Protection X

Prepared By	Product Stewardship 23 British American Blvd. Latham, NY 12110 1-800-572-6501
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General Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet

