SAFETY DATA SHEET

1. Identification

Product Identifier	**Acid Rinse Aid**
Other means of identification	
Product code	CU-5427
Recommended use	Rinse aid for automatic machines.
Recommended restrictions	None.
Manufacturer/supplier/distributor/importer information	
Company name	**Chemical Universe, Inc.**
Address	1133 Saline Street North Kansas City, MO 64116
Telephone	(816) 471-3602
Fax	(816) 474-3302
Emergency phone number	PERS 24-hour Emergency (800) 633-8253

2. Hazard(s) Identification

Physical hazards	Not classified.	
Health hazards	Skin Irritant Eye Irritant	Category 2 Category 2B
Environmental hazards	Not classified.	
OSHA defined hazards	Not listed.	
Label elements	None.	
Signal word	**WARNING**	
Hazard statement	Causes skin irritation. Causes eye irritation.	
Precautionary statement		
Prevention	Wash hands and exposed skin thoroughly after handling. Wear protective gloves.	
Response	**IF ON SKIN:** Wash with plenty water. Specific treatment (see Section 4 on the Safety Data Sheet) If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing before reuse. **IF IN EYES**: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.	
Storage	No prescriptive instruction	
Disposal	No prescriptive instruction	
Hazard(s) not otherwise classified (HNOC)	None.	
Supplemental information	None.	

3. Composition/information on ingredients

Mixture Component(s)		
Chemical name	**CAS number**	**%**
Polyoxypropylene-polyoxyethylene block copolymer	9003-11-6	10-15
Glycolic acid	79-14-1	1-5
Other components below reportable levels		80-89

4. First-aid measures

Inhalation	Move to fresh air if irritated.

Skin contact	Rinse with water.
Eye contact	Rinse with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur. Do not induce vomiting.
Most important symptoms/effects, acute and delayed	Dermatitis. Rash.
Indication of immediate medical attention and special treatment needed	Provide general support measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO_2).
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protecting clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Wear appropriate protective equipment and clothing during clean-up. Wear eye/face protection.
Methods and materials for containment and cleaning up	Caution – spillages may be slippery. Large spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Small spills: Wipe up with absorbent material (e.g. cloth, absorbent wipes). Clean surface thoroughly with water and dilute bicarbonate solution to remove residual contamination. Never return spills to original container for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into surface drainage paths and other areas not consistent with package labeling.

7. Handling and storage

Precautions for safe handling	Avoid contact with eye. Avoid prolonged exposure. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Do not store in extreme temperature conditions.

8. Exposure controls/personal protection

Occupational exposure limits

US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Ethylene oxide	PEL/WEL	1 mg/m³
	STEL	5 ppm

Components	Type	Value
Ethylene oxide	STEL	1 mg/m³

Biological limit values	Value	Specimen
Ethylene oxide	5 micrograms	Creatinine in urine

Appropriate engineering controls Emergency eye wash stations and showers should be readily accessible.

Individual protection measures, such as personal protective equipment

Eye/face protection Avoid contact with eyes.

Skin protection

Hand protection The use of gloves impervious to the specific material handled is advised to prevent skin contact. Users should check with manufacturers to confirm the breakthrough performance of their products. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Suggested protective materials: Nitrile and PVC rubber.

Other None.

Respiratory protection Respiratory protection not required for prescribed use of this product

Thermal hazards None.

General hygiene considerations When using do not smoke or use chewing tobacco. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking.

9. Physical and chemical properties

Appearance

Physical State Liquid

Color Blue

Odor Characteristic

Odor threshold Not available

pH 2-3

Melting/freezing point Not available

Initial boiling point and boiling range >212°F (100°C)

Flash point >385°F (196°C)

Evaporation rate Not available

Flammability Not available

Flammability Limits

Upper Not available

Lower Not available

Vapor pressure	Not available
Vapor density	Not available
Specific gravity (water=1)	1.04
Solubility in water	Soluble
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available

10. Stability and reactivity

Reactivity	This product is stable and non-reactive under normal conditions of use.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Extreme heat can cause product to decompose.
Incompatible materials	None.
Hazardous decomposition products	Carbon dioxide, carbon monoxide, oxides of nitrogen

11. Toxicological information

Information on likely routes of exposure	
Ingestion	Expected to be a low ingestion hazard.
Inhalation	Expected to be a low inhalation hazard.
Skin contact	Prolonged skin contact causes irritation.
Eye contact	Repeated and/or prolonged eye contact causes serious eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Dermatitis. Rash.
Acute toxicity	Not established.

Product Acid Rinse Aid (CAS mixture)		
Exposure Classification	**Route and Species**	**LD_{50}**
Acute	*Oral*, rat	>4,000 mg/kg estimated
Acute	*Inhalation,* rat	>320 mg/m3 (estimated)
*Estimates for product may be based on additional component data not shown		

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/ irritation	Causes serious eye irritation.
Respiratory sensitization	Not classified.
Skin sensitization	Not classified.
Germ cell mutagenicity	Not classified.
Carcinogenicity	Ethylene oxide IARC Category 1 Ethylene oxide NTP - Carcingenic
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not Listed.
Reproductive toxicity	Not classified.
Specific target organ toxicity – single exposure	Not classified.
Specific target organ toxicity – repeated exposure	Not classified.

Aspiration hazard Not considered an aspiration hazard.

12. Ecological information

Ecotoxicity		
Product Acid Rinse Aid (CAS mixture)		
Aquatic Receptor	**Species**	**Test Thresholds**
Fish	Oncorhynchus mykiss (rainbow trout)	LC_{50} (96-hr): >9,600 mg/L (estimated)
Fish	Fathead minnow (*Pimephales promelas)*	LC_{50} (96-hr): >870 mg/L (estimated)
Crustacea	Daphnia magna	EC50 (48-hr) >260 mg/L (estimated)
Algae	Pseudokirchnierella subcapita	NOEC 72-hr >32 mg/l (estimated)
*Estimates for product may be based on additional component data not shown		

Persistence and degradability Not available. Chemicals of this class are not expected to be persistent in an open, aerobic environment

Bio-accumulative potential Potential to bioaccumulate is low.

Mobility in soil Not available. Chemicals of these classes are highly water soluble and will partition readily to water and weakly to particles in low-clay soil matrices. They are expected to exhibit moderate to high mobility in saturated and semi-saturated soils

Other adverse effects Not available.

13. Disposal considerations

Disposal instructions Dispose of in accordance with local regulations.

Local disposal regulations None.

Waste from residues/unused product Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner. (see: Disposal instructions).

Contaminated packaging Empty containers should be rinsed with water and recycled.

14. Transport information

DOT Not regulated as dangerous goods.

15. Regulatory information

US federal regulations .

SARA 302 Extremely hazardous substance Not listed.

SARA 304 Emergency release notification Not listed.

SARA 311/312 Hazard Categories

Immediate Hazard - Yes

Delayed Hazard – No

Fire Hazard – No

Pressure Hazard – No

Reactivity Hazard – No

SARA 313 (TRI reporting) Not listed

California Proposition 65

WARNING: This product can expose you to chemicals ethylene oxide and propylene oxide, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

16. Other information, including date of preparation or last revision

Issue date	12/5/2018
Revision date	10/25/2019, 2/25/2020
Version #	3
HMIS® ratings	Health: 1 Flammability: 0 Physical hazard: 0

NFPA ratings	Health: 1 Flammability: 0 Instability: 0

Disclaimer	The information provided in this Safety Data Sheet is correct to the best of our knowledge, and have been obtained from resources believed to be reliable. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information related only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified by the text.
Revision information	Format change, e-Tox information update, Waste code and environmental fate information updated 10/25/2019 Change eye risk category from 1 to 2A (SDS equivalent product) Add Exclamation. Add corrosive to metal category 1 (SDS equivalent product). General format update; Refine composition table, amend physical data; Update toxicology thresholds and environmental fate information; Text clarification amendments Sections 5,6,8,9 and 12. PPE recommendation updated; California Proposition 65 notice; HMIS and NFPA pictograms added. 2/25/2020 – Removal of DOT hazardous material classification following assignment of revised formula incorporating glycolic acid. Removed physical hazard category and prevention language. Amend all hazard categories and language to mirror formula change Reference formula for CU product ID 5414. Amend HMIS/NFPA classifications. Add IARC and NTP carcinogenic status relative to EtO presence in trace amounts.