



# Safety Data Sheet

Quip makes it safe. Simply and Sensibly.

Creation Date: 30-Mar-2014

Revision Date: 11-Feb-2018

Revision Number: Rev 2

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

**Product Description:** ACIDULATE 45-C

Product ID: AD45C

Common Name: Acid Mixture

Chemical Name: Acid Mixture

Formula: Organic Acid Mixture

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Acid Cleaner/Scale Remover

Uses advised against Not Available

### 1.3. Details of the supplier of the safety data sheet

Company Quip Laboratories, Inc.

1500 Eastlawn Avenue

Wilmington, DE 19802

E-mail address thidell@quiplabs.com

### 1.4. Emergency telephone number

For information US call: 001-302-761-2600

Emergency Number CHEMTREC Tel. No.US:001-800-424-9300

**SECTION 2: HAZARDS IDENTIFICATION**

**2.1. Classification of the substance or mixture**



**Signal Word**

**Warning**

**Classification:**

**Serious Eye Damage/Eye Irritation**

**Category 2A**

**2.2. Label elements**

**Hazard Statements**

H319 - Causes serious eye irritation

**Precautionary Statements**

P264 - Wash face, hands and any exposed skin thoroughly after handling

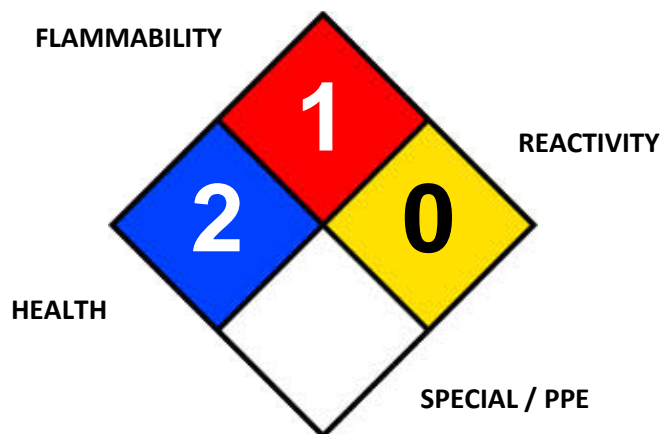
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/ attention

P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection

**2.3. Other hazards**

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)



### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS No.
Water	>65	7732-18-5
Citric Acid	15 - 40	77-92-9
Gluconic Acid	1 - 10	526-95-4

Reach Registration Number --

*For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16*

### SECTION 4: FIRST AID MEASURES

#### 4.1. Description of first aid measures

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.
<b>Ingestion</b>	Do not induce vomiting. Obtain medical attention.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention.
<b>Protection of First-aiders</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination

**4.2. Most important symptoms and effects, both acute and delayed**

No information available

**4.3. Indication of any immediate medical attention and special treatment needed**

**Notes to Physician**                      Treat symptomatically

**SECTION 5: FIREFIGHTING MEASURES**

**5.1. Extinguishing media**

**Suitable Extinguishing Media:**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Extinguishing media which must not be used for safety reasons:**

No information available.

**5.2. Special hazards arising from the substance or mixture**

No information available.

**Hazardous Combustion Products:**

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>).

**5.3. Advice for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**6.1. Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Use personal protective equipment.

**6.2. Environmental precautions**

Should not be released into the environment.

**6.3. Methods and material for containment and cleaning up**

Collect spillage and collect in suitable container for disposal.

**6.4. Reference to other sections**

Refer to protective measures listed in Sections 8 and 13.

**SECTION 7: HANDLING AND STORAGE**

**7.1. Precautions for safe handling**

Wear personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation.

**7.2. Conditions for safe storage, including any incompatibilities**

Keep containers tightly closed in a dry, cool and well-ventilated place.

**7.3. Specific end use(s)**

Use in industrial applications

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1. Control parameters**

**Exposure limits**

List source(s):

**Biological limit values:**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Component	STD	TWA		STEL		Notes
Citric Acid	WEL		N/A		N/A	
Gluconic Acid	WEL		N/A		N/A	

WEL = Workplace Exposure Limit

**Ingredient Comments**

STEL = Short Term Exposure

TWA = Time Weighted Average

## **8.2. Exposure controls**

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety practice  
**Engineering Measures:** Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas

### **Personal protective equipment**



**Eye Protection:** Safety glasses with side-shields or face shield  
**Hand Protection:** Protective gloves. Polyvinyl chloride (PVC)  
**Skin and body protection:** Wear appropriate protective gloves and clothing to prevent skin exposure  
**Respiratory Protection:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced  
**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety practice  
**Environmental exposure controls :** No information available.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

### **9.1. Information on basic physical and chemical properties**

**Appearance** Clear

Acidulate 45-C  
Product ID: AD45C

## SAFETY DATA SHEET

<b>Physical State</b>	Liquid
<b>Odor</b>	Acidic Odor
<b>Odor Threshold</b>	No data available
<b>pH (10% soln.)</b>	1.25 - 1.75
<b>Melting Point/Range</b>	No data available
<b>Softening Point</b>	No data available
<b>Boiling Point/Range</b>	Greater than 220°F
<b>Flash Point</b>	No data available
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid,gas)</b>	No information available.
<b>Explosion Limits</b>	No data available.
<b>Vapor Pressure</b>	No data available
<b>Vapor Density</b>	Not applicable
<b>Specific Gravity / Density</b>	1.16
<b>Bulk Density</b>	No data available
<b>Water Solubility</b>	Soluble
<b>Solubility in other solvents</b>	No information available.
<b>Partition Coefficient (n- octanol/water)</b>	No data available
<b>Autoignition Temperature</b>	No data available
<b>Decomposition temperature</b>	No data available
<b>Viscosity</b>	No data available
<b>Explosive Properties Oxidizing Properties</b>	No data available

### 9.2. Other information

Molecular Formula	Not Available
Molecular Weight	Not Availabl

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Chemical stability

Stable under normal conditions.

### 10.2. Possibility of hazardous reactions

<b>Hazardous Polymerization:</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions:</b>	None under normal processing.

**10.3. Materials to avoid**

Chlorine containing compounds

**10.4. Incompatible materials**

Strong oxidizing agents. Strong acids. Strong bases.

**10.5. Hazardous decomposition products**

None known

**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1. Information on toxicological effects**

(a) acute toxicity;

Oral Based on available data, the classification criteria are not met

Dermal Based on available data, the classification criteria are not met

Inhalation Based on available data, the classification criteria are not met

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Citric Acid	3000 mg/kg ( Rat )	>2 g/kg ( Rat )	
Gluconic Acid	7630 mg/kg ( Rat )		

(b) skin corrosion/irritation; Based on available data, the classification criteria are not met

(c) serious eye damage/irritation; Category 2

(d) respiratory or skin sensitization;

Respiratory Based on available data, the classification criteria are not met

Skin Based on available data, the classification criteria are not met

(e) germ cell mutagenicity; Based on available data, the classification criteria are not met

(f) carcinogenicity; Based on available data, the classification criteria are not met

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; Based on available data, the classification criteria are not met

(h) STOT-single exposure; Based on available data, the classification criteria are not met

(i) STOT-repeated exposure; Based on available data, the classification criteria are not met

Target Organs Skin, Respiratory system, Eyes

(j) aspiration hazard; Not applicable Solid

Other Adverse Effects See actual entry in RTECS for complete information The toxicological properties have not been fully investigated.

Symptoms / effects, both acute and delayed No information available.



**SECTION 12: ECOLOGICAL INFORMATION**

**12.1. Toxicity**

Ecotoxicity effects

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Citric Acid	Leuciscus idus: LC50 = 440-760 mg/L/96h	EC50 = 120 mg/L/72h		Photobacterium phosphoreum: EC50 = 14 mg/L/15 min

**12.2. Persistence and degradability**

Persistence:

Product is biodegradable  
Soluble in water, Persistence is unlikely, based on information available.

**12.3. Bioaccumulative potential**

Bioaccumulation is unlikely

**12.4. Mobility in soil**

The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility. Highly mobile in soils.

**12.5. Results of PBT and vPvB assessment**

Substance is not considered persistent, bioaccumulative And toxic (PBT) / very persistent and very Bioaccumulative (vPvB).

**12.6. Other adverse effects**

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

Persistent Organic Pollutant

This product does not contain any known or suspected substance

Ozone Depletion Potential

This product does not contain any known or suspected substance

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1. Waste treatment methods**

Federal, state and local disposal laws and regulations will determine the proper waste disposal/recycling/reclamation/treatment procedure. Disposal requirements are dependent on the hazard classification and will vary by location and the type of disposal selected. All waste materials should be reviewed to determine the applicable hazards (testing may be necessary).

## SECTION 14: TRANSPORT INFORMATION

**IMDG/IMO** Not regulated

- 14.1. UN number:** Not regulated  
**14.2. Proper shipping name:** Not regulated  
**14.3. Transport hazard class(es):** Not regulated  
**14.4. Packing group:** Not Applicable

**ADR** Not regulated

- 14.1. UN number:** Not regulated  
**14.2. Proper shipping name:** Not regulated  
**14.3. Transport hazard class(es):** Not regulated  
**14.4. Packing group:** Not Applicable

**IATA** Not regulated

- 14.1. UN number:** Not regulated  
**14.2. Proper shipping name:** Not regulated  
**14.3. Transport hazard class(es):** Not regulated  
**14.4. Packing group:** Not Applicable

- 14.5. Environmental hazards** No hazards identified  
**14.6. Special precautions for user** No special precautions required  
**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable, packaged goods

## SECTION 15: REGULATORY INFORMATION

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**US FEDERAL REGULATIONS:**

**TSCA:** In TSCA (Toxic Substances Control Act)

**SARA 311 and 312 HAZARD CATEGORIES:**

Immediate (Acute): Yes	Delayed (Chronic): No	Fire: No
Reactivity: No	Sudden Release of Pressure: No	

**SARA SECTION 313 NOTIFICATION:**

This product does not contain toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

**CAA 602 OZONE DEPLETING SUBSTANCES (ODS):**

This product neither contains nor is manufactured with an ozone depleting substance subject to the labeling requirements of the Clean Air Act Amendments 1990 and 40 CFR Part 82.

**VOLATILE ORGANIC COMPOUNDS (VOC):** Not Applicable.

**US STATE REGULATIONS:**

**VOLATILE ORGANIC COMPOUNDS (CARB):** Not Applicable.

**CANADIAN REGULATIONS:** N/A  
**DSL/NDL:** N/A  
**WHMIS CLASSIFICATION:** N/A

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment.

Take note of Dir 94/33/EC on the protection of young people at work.

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

**15.2. Chemical safety assessment**

A Chemical Safety Assessment/Report (CSA/CSR) has not been completed.

**SECTION 16: OTHER INFORMATION**

**Full text of R-phrases referred to under sections 2 and 3**

R36 - Irritating to eyes

**Full text of H-Statements referred to under sections 2 and 3**

H319 - Causes serious eye irritation

**Legend**

CAS - Chemical Abstracts Service

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

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Existing and Evaluated Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japan Existing and New Chemical Substances AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

ACGIH - American Conference of Industrial Hygiene

DNEL - Derived No Effect Level

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

PNEC - Predicted No Effect Concentration

RPE - Respiratory Protective Equipment

LD50 - Lethal Dose 50%

LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

EC50 - Effective Concentration 50%

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

OECD - Organisation for Economic Co-operation and Development      ATE - Acute Toxicity Estimate

BCF - Bioconcentration factor

VOC - Volatile Organic Compounds

**Key literature references and sources for data**

Suppliers safety data sheet,

Chemadvisor - LOLI,

Merck index,

Acidulate 45-C  
Product ID: AD45C

## SAFETY DATA SHEET

RTECS

### **Training Advice**

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

The information in this Safety Data Sheet should be provided to all who use, handle, transport, or otherwise are exposed to this product. This information has been prepared for the guidance of plant engineering, operations, management and persons working with or handling this product. The information presented in this SDS is premised upon proper handling and anticipated uses, and is for the material without chemical additions/alterations. Additionally, if this Safety Data Sheet is more than three years old, please contact this supplier at the phone number above Section 1 to make sure this sheet is current.

PREPARED BY: T. Hidell

DATE: 2/11/2018

Supersedes: 9/4/2014

The information and recommendations contained herein are based upon data believed to be correct. No warranty, expressed or implied, is made.