



SAFETY DATA SHEET

Product: MARC 342 A.R.C. MULTI-PURPOSE ACID REPLACEMENT CONCENTRATE
Form R04132

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER AND NAME: **MARC 342 A.R.C. MULTI-PURPOSE ACID REPLACEMENT CONCENTRATE**

SDS DATE: 01/04/2019

SUPPLIER: Mid-American Research Chemical Corp. ADDRESS: P. O. Box 927 Columbus, NE 68602-0927
PHONE: 402-564-7104 FAX: 402-563-1290
EMERGENCY PHONE: InfoTrac 1-800-535-5053
E-MAIL: marc@marc1.com WEBSITE: www.marc1.com

RECOMMENDED USE: Descaler.

PREPARED BY: MARC

SECTION 2: HAZARDS IDENTIFICATION

CLASSIFICATION: Corrosive to metals – Category 1. Serious eye damage/irritation – Category 1. Acute toxicity – Category 4.



SIGNAL WORD AND HAZARD STATEMENTS - DANGER: May be corrosive to metals. Causes serious eye damage. Harmful if swallowed. **PRECAUTIONARY STATEMENTS - Prevention:** Keep in original container. Wear eye or face protection. Wash hands thoroughly after handling. Do not eat, drink, or smoke when using this product. Response: Absorb spillage to prevent material damage. IF SWALLOWED: Call a Poison Center or a doctor/physician if you feel unwell. Rinse mouth. 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. Storage: Store in corrosive resistant containers such as fiberglass, polyethylene, polypropylene or containers with a resistant inner liner. Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture

Chemical Name	%	CAS Number
Urea Monohydrochloride	25 – 35%	506-89-8
Detergent Blend	2 - 8%	N/A

The exact percentage of the composition has been withheld as it is a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

SECTION 4: FIRST AID MEASURES

- Eye Contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
- Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin Contact:** Flush contaminated skin with plenty of water. Continue to rinse for at least 20 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion:** Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the



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exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most Important Symptoms/Effects, Acute and Delayed

Potential Acute Health Effects

- Eye Contact:** Causes serious eye damage
- Inhalation:** Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin Contact:** Causes mild skin irritation
- Ingestion:** Harmful if swallowed. Irritating to mouth, throat and stomach

Over Exposure Signs/Symptoms

- Eye Contact:** Adverse symptoms may include the following: pain or irritation, watering, redness.
- Inhalation:** No known significant effects or critical hazards.
- Skin Contact:** Adverse symptoms may include the following: Irritation and redness.
- Ingestion:** Harmful if swallowed. Irritating to mouth, throat and stomach.

Indication of Immediate Medical Attention and Special Treatment Needed, If Necessary

- Notes to Physician:** In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific Treatments:** No specific treatment
- Protection of First Aiders:** No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

SECTION 5: FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA:

- Suitable extinguishing: Use an extinguishing agent suitable for the surrounding fire.
Media
- Unsuitable extinguishing: None known.
Media

SPECIAL FIRE FIGHTING PROCEDURES/ PROTECTIVE EQUIPMENT:

No special measures are required. Fire-fighters should wear appropriate protective equipment and self-contained apparatus (SCBA) with a full face-piece operated in positive pressure mode.

UNUSUAL FIRE AND EXPLOSION HAZARDS: At temperatures above 60°C/140°F acid action on most metals may release hydrogen, a highly flammable and explosive gas.

HAZARDOUS DECOMPOSITION PRODUCTS: Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides and hydrochloric acid.

SECTION 6: ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES:

- For non-emergency:** No action shall be taken involving any personal risk or without suitable training.



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Personnel Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental Precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods and Materials for Containment and Cleaning Up

Spill: Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13).

PROTECTIVE EQUIPMENT: Use personal protective devices as stated in Section 8.

SECTION 7: HANDLING AND STORAGE

GENERAL HANDLING: Put on appropriate personal protective equipment (See Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container.

CONDITIONS FOR SAFE STORAGE: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

OTHER PRECAUTIONS: **KEEP OUT OF REACH OF CHILDREN!!** Keep in original container. Wear eye or face protection. Wash hands thoroughly after handling. Do not eat, drink, or smoke when using this product. **CAREFULLY READ ENTIRE LABEL BEFORE USE!**

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

LOCAL EXHAUST: N/A

VENTILATION: Good general ventilation should be sufficient.

RESPIRATORY PROTECTION: If a risk assessment indicates this is necessary.

EYE PROTECTION: Safety eyewear.

SKIN PROTECTION/PROTECTIVE GLOVES: Use chemical-resistant, impervious gloves.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Appropriate footwear and personal protective equipment for the body should be selected based on the task being performed and risks involved should be approved by a specialist before handling this product.

WORK HYGIENIC PRACTICES: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE-
PHYSICAL STATE:** Clear, liquid
COLOR: Yellow
FRAGRANCE: Wintergreen
ODOR THRESHOLD: Not available
pH: 0.7 typical [as is]
BOILING POINT: 100°C (212°F)
MELTING/FREEZING POINT: <-30°C



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FLASH POINT/METHOD USED: >93.3°C (>200°F)
EVAPORATION RATE: >1 (Butyl acetate = 1)
FLAMMABILITY (solid, gas): Not available
LOWER AND UPPER EXPLOSIVE: Not available
VAPOR PRESSURE (mmHg): <0.013kPa (<0.1mmHg) [room temperature]
VAPOR DENSITY (AIR = 1): >1 [Air = 1]
SPECIFIC GRAVITY (H2O = 1): Not available
RELATIVE DENSITY: 1.05
SOLUBILITY IN WATER: Easily soluble in the following materials: water
PARTITION COEFFICIENT, n-OCTANOL/WATER: Not available
AUTO-IGNITION TEMPERATURE: Not available
DECOMPOSITION TEMPERATURE: Not available
VISCOSITY: Not available

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY: No specific test data related to reactivity available for this product or its ingredients.

STABILITY: The product is stable.

CONDITIONS TO AVOID: No specific data.

INCOMPATIBILITY (MATERIAL TO AVOID): Reactive or incompatible with the following materials: oxidizing materials. This material may be extremely hazardous in contact with chlorates and nitrates. Contact with hypochlorites (eg. Chlorine bleach, sulfides or cyanides) will liberate toxic gases. Contact with alkaline materials (eg. Aqua ammonia) will generate heat.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Under normal conditions of storage and use, hazardous decomposition products should not be produced. Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides and hydrochloric acid.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID (POLYMERIZATION): NA

SECTION 11: TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY

RESULT	SPECIES	DOSE	EXPOSURE
LD50 Oral	rat	Over 1120.9 mg/kg	-

EYES: Causes serious eye damage.

SKIN: Causes mild skin irritation.

INGESTION: Harmful if swallowed. Irritating to mouth, throat and stomach.

INHALATION: Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

CHRONIC EFFECTS: N/A

Carcinogenicity: No components are listed as carcinogens by IARC, ACGIH, OSHA or NTP.

Specific Target Organ Toxicity (single exposure):

There is no data available.

Specific Target Organ Toxicity (repeated exposure):

There is no data available.

Aspiration Hazard:

There is no data available.

Information on the likely routes of exposure: Dermal contact. Eye contact. Inhalation. Ingestion.

Potential Acute Health Effects:



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- Skin Contact:** Causes mild skin irritation
- Ingestion:** Irritating to mouth, throat and stomach

Symptoms related to the physical, chemical and toxicological characteristics:

- Eye Contact:** Adverse symptoms may include the following: pain or irritation, watering, redness.
- Inhalation:** No known significant effects or critical hazards.
- Skin Contact:** Adverse symptoms may include the following: Irritation and redness.
- Ingestion:** No known significant effects or critical hazards.

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

- Short term exposure:** No known significant effects or critical hazards.
- Long term exposure:** No known significant effects or critical hazards.

Potential chronic health effects:

- General:** No known significant effects or critical hazards.
- Carcinogenicity:** No known significant effects or critical hazards.
- Mutagenicity:** Not mutagenic.
- Teratogenicity:** No known significant effects or critical hazards.
- Developmental effects:** No known significant effects or critical hazards.
- Fertility effects:** No known significant effects or critical hazards.

Numerical measures of toxicity:

Acute toxicity estimates: There is no data available.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Result	Species	Exposure
Acute LC50 71mg/L	Ceriodaphnia dubia	48 hours
Acute LC0>142mg/L	Rainbow trout	96 hours

Persistence and Degradability: There is no data available.

Bioaccumulative Potential: There is no data available.

Mobility in Soil

Soil/Water partition coefficient: Not available.
(K_{oc})

Other adverse effects: No known significant effects or critical hazards

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.



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SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (for ground/non-bulk containers)

CONTAINER SIZES(S): Quarts
PROPER SHIPPING NAME: COMPOUND, CLEANING LIQUID.
HAZARD CLASS: N/A
ID NUMBER: N/A
PACKING GROUP: N/A
LABEL STATEMENT: N/A

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: United States Inventory (SCA): All components are listed or exempted.

Clean Air Act Section 112: Not listed.

(b) Hazardous Air
Pollutants (HAPS)

Clean Air Act Section 602: Not listed.

Class I Substances

Clean Air Act Section 602: Not listed.

Class II Substances

DEA List: Not listed.

SARA 302/304:

Composition/Information on ingredients:
Not listed.

SARA 311/312

Classification: Immediate (acute) health hazard.

Composition/Information on ingredients

Name M-342	Fire Hazard	Sudden Release of Pressure	Reactive	Immediate (acute) Health Hazard	Delayed (chronic) Health Hazard
Urea Monohydrochloride	No	No	No	Yes	No

SECTION 16: OTHER INFORMATION

HMIS/NFPA Ratings: Health = 1
Flammability = 0
Reactivity = 0
Other = -
Protection = B

REVISION DATE: 01/04/2019

DISCLAIMER: While the information contained herein is believed to be correct, no warranties are made with respect thereto, and all liability from reliance thereon is disclaimed.