



SAFETY DATA SHEET

Product: MARC 55 HEAVY DUTY DRAIN CLEANER

Form R04132

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER AND NAME: **MARC 55 HEAVY DUTY DRAIN CLEANER**

SDS DATE: 11/1/18

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: Drain/Sewer Cleaner.

PREPARED BY: MARC

SECTION 2: HAZARDS IDENTIFICATION

CLASSIFICATION: CORROSIVE-Category 1: Causes severe skin burns and eye damage.



SIGNAL WORD AND PRECAUTIONARY STATEMENTS: **DANGER:** Do not breathe fumes, mist, vapors or spray.

Wash hands, face and skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED: rinse mouth. DO NOT induce vomiting. IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. IF INHALED : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. Specific treatment - see on this sheet. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Dispose of contents/container in full compliance with Federal, Provincial and local regulations. Other Hazards: Extremely corrosive. Harmful or fatal if swallowed. Harmful if inhaled. Possibility of damage to the upper respiratory tract and lung tissues. Environmental hazard: Strong acid. Highly toxic to plants and aquatic organisms. Store locked up. Never add water to product. Keep out of reach of children.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Specific percentages may be claimed as a trade secret.

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>% WT.</u>
Sulfuric Acid	7664-93-9	77-100

SECTION 4: FIRST AID MEASURES

GENERAL ADVICE: Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Do not breathe fume/gas/mist vapors/spray. Wash hands, face and skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. If potential for exposure exists, refer to Section 8 for specific personal protective equipment.

EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult a physician. If medical treatment must be delayed, repeat the flushing with tepid water or soak the affected area with tepid water to help remove the last traces of sulfuric acid.

SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower for 15 minutes (Pay particular attention to: folds, crevices, creases, groin). While patient is being transported to a medical facility, continue the application of cold, wet compresses. Wash contaminated clothing before reuse. Discard contaminated shoes. Seek immediate medical attention.

INGESTION: **DO NOT INDUCE VOMITING.** **Conscious and alert person:** Rinse mouth with water and give ½ to 1 cup of water or milk to dilute material. **Spontaneous vomiting:** Keep head below hips to prevent aspiration; Rinse mouth and give ½ to 1 cup of water or milk. **UNCONSCIOUS person:** **DO NOT INDUCE VOMITING** or give any liquid. **IMMEDIATELY CALL PHYSICIAN OR POISON CONTROL CENTER TO OBTAIN MEDICAL ATTENTION.**

INHALATION: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Take precautions to avoid secondary contamination by residual acids. Difficult breathing: Give oxygen. Immediately call A POISON CENTER or doctor/physician.

OTHER HAZARDS: Extremely corrosive. Harmful or fatal if swallowed. Harmful if inhaled. Severe eye and skin irritation. Possibility of damage to the upper respiratory tract and lung tissues.

ENVIRONMENTAL HAZARD: Strong acid. Highly toxic to plants and to aquatic organisms.



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SAFETY PHRASE: Store locked up. Never add water to this product. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: Treat symptomatically. Symptoms may be delayed. If medical treatment must be delayed, repeat the flushing with tepid water or soak the affected area with tepid water to help remove the last traces of sulfuric acid. Creams or ointments **SHOULD NOT** be applied before or during the washing phase of the treatment. Call a physician if irritation persists. Wash contaminated clothing before reusing.

Victims of chemical exposure must be taken for medical attention. Rescuers should be taken for medical attention, if necessary. Take a copy of label and SDS to physician or health professional with victim.

SECTION 5: FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: When material is not involved in fire, do not use water on material itself. Expect violent reaction with water.

Small Fire: Dry chemical or CO₂. Move containers from fire area if you can do it without risk.

Large Fires: Flood fire area with large quantities of water (from a distance), while knocking down vapors with water fog. If insufficient water supply: knock down vapors only.

SPECIAL FIRE FIGHTING PROCEDURES: Fire fighters should wear self-contained breathing apparatus and full firefighting turnout gear. Move containers from fire area if you can do it without risk.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Hazardous combustion products: Releases of sulfur dioxide at extremely high temperatures. **FIRE HAZARD:** Not flammable. **EXPLOSION HAZARD:** Reacts with most metals, especially when dilute: Hydrogen gas release (Extremely flammable, explosive). Evacuate personnel to a safe area. Keep upwind of fire.

HAZARDOUS DECOMPOSITION PRODUCTS: Possibility of decomposition if heated and in contact with sources of ignition. Release of toxic gases and vapors (Sulfur oxides (SO₂, SO₃)).

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTIVE EQUIPMENT: Ensure adequate ventilation, especially in confined areas. Ventilate affected area. Do not touch damaged container or spilled material unless wearing appropriate protective clothing. Wear protective gloves/protective clothing and eye/face protection. Use personal protective devices as stated in Section 8.

EMERGENCY RESPONDERS: Keep unnecessary personnel away. Evacuate personnel to a safe area and upwind of fire. Use personal protective devices as stated in Section 8.

ENVIRONMENTAL PRECAUTIONS: Prevent further leakage or spillage if safe to do so. Do not contaminate water.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANUP: Dike large spills, and cautiously dilute and neutralize with lime or soda ash, and transfer to waste water treatment system. Prevent liquid from entering storm sewers, waterways, or low areas. Clean up in accordance with all applicable regulation. See Section 13 for Waste Disposal.

SECTION 7: HANDLING AND STORAGE

GENERAL/SAFE HANDLING:

DO NOT get in eyes, on skin, or on clothing. Avoid breathing vapors or mist. Wear approved respirators if adequate ventilation cannot be provided. Wash thoroughly after handling. Ingestion or inhalation: Seek medical advice immediately and provide medical personnel with a copy of the SDS. **NEVER** add water to acid. Avoid aerosol formation.

GENERAL HYGIENE CONSIDERATIONS:

Use personal protection recommended in Section 8. Wash hands thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice.

OTHER PRECAUTIONS:

KEEP OUT OF REACH OF CHILDREN!! STORE LOCKED UP. CAREFULLY READ ENTIRE LABEL BEFORE USE.

STORAGE:

Store in original container. **DO NOT** add water or other products to contents in containers as violent reactions will result with resulting high heat, pressure and/or generation of hazardous acid mists. Store locked up. Keep



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containers away from heat, sparks, and flame. Containers that have been opened must be closed and kept upright to prevent leakage. DO NOT STORE IN UNLABELED CONTAINERS.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

CHEMICAL NAME	ACGIH (U.S.A.) TLV-TWA (mg/m ³)	OSHA (U.S.A.) PEL-TWA (mg/m ³)
Sulfuric acid 7664-93-9	0.2	1

ENGINEERING CONTROLS/

VENTILATION:

Good general ventilation should be provided to keep vapor and mist concentrations below the exposure limits.

OTHER:

None

RESPIRATORY:

Appropriate NIOSH respiratory protection if acid mist is present.

EYE PROTECTION:

Chemical splash goggles.

SKIN PROTECTION/PROTECTIVE GLOVES:

Acid-proof gloves.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

Boots, long sleeve clothing under an acid proof suit. An apron can be used in place of acid proof suit in a laboratory environment.

WORK HYGIENIC PRACTICES:

Handle in accordance with good industrial hygiene and safety practice. Wash hands thoroughly after handling, after each work shift, before eating, smoking or using the toilet. Promptly remove contaminated clothing. Destroy contaminated leather articles. Launder or discard contaminated clothing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE-

Oily, clear, liquid

PHYSICAL STATE/COLOR:

Light yellow

ODOR:

Odorless

pH:

<1

SOLUBILITY IN WATER:

Miscible

SPECIFIC GRAVITY:

1.837

MELTING POINT/FREEZING POINT:

-31°F (-35°C)

BOILING POINT:

535°F (279°C)

FLASH POINT/METHOD USED:

No information available.

EVAPORATION RATE:

No information available.

FLAMMABILITY (solid, gas):

No information available.

FLAMMABILITY LIMITS:

Upper flammability limit:

No information available.

Lower flammability limit:

No information available.

VAPOR PRESSURE (mmHg):

<0.3 mmHg @ 25°C (77°F)

<0.6 mmhg @ 38°C (100°F)

VAPOR DENSITY (AIR = 1):

No information available.

PARTITION COEFFICIENT:

No information available.

AUTO-IGNITION TEMPERATURE:

No information available.

DECOMPOSITION TEMPERATURE:

No information available.

KINEMATIC VISCOSITY:

No information available.

DYNAMIC VISCOSITY:

22.5 cP at 20°C (68°F) For Sulphuric acid 93%

EXPLOSIVE PROPERTIES:

Not explosive.

OXIDIZING PROPERTIES:

Not an oxidizer.

DENSITY:

1.837

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY: Reacts violently with water, organic substances and base solutions with evolution of heat and hazardous mists.

STABILITY: Stable under normal conditions, at ambient temperatures.



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CONDITIONS TO AVOID: Heat, sources of ignition.

INCOMPATIBILITY (MATERIAL TO AVOID): Vigorous reactions with water, alkaline solutions, metals, metal powder, carbides, chlorates, fulminates, nitrates, picrates, strong oxidizing, reducing, or combustible organic materials. Hazardous gases are evolved on contact with chemicals such as cyanides, sulfides, and carbides. Sulfuric acid reacts with metal to produce hydrogen, a flammable and potentially explosive gas. Hydrogen reacts with sulfides and generates hydrogen sulfide (Highly toxic gas). NEVER add water directly to product because a violent exothermic reaction may occur.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Possibility of decomposition if heated and in contact with sources of ignition. Release of toxic gases and vapors (sulfur oxides (SO₂, SO₃)).

HAZARDOUS POLYMERIZATION: Does not occur. **CONDITIONS TO AVOID (POLYMERIZATION):** None known.

SECTION 11: TOXICOLOGICAL INFORMATION

Routes of entries: Ingestion, Inhalation, Skin and eye contacts.

ACUTE TOXICITY: ORAL acute (LD50): 2 140 mg/kg (Rat). INHALATION: acute (LC50, 2 hours): 510 mg/m³ (Rat); 320 mg/m³ (Mouse). (RTECS).

ACUTE EFFECTS: May be fatal if inhaled or ingested in large quantity. Liquids or acid mists: May produce tissue damage; Mucous membranes (Eyes, mouth, respiratory tract). Extremely dangerous by eyes (conjunctivitis, permanent eye damage) and skin contact (Corrosive) (Severe skin burns, scars). Severe irritant for eyes: inflammation (Redness, watering, itching). Very dangerous in case of inhalation at high concentrations (Mists): May produce severe irritation of respiratory tract (Coughing, shortness of breath, choking). Maintain observation of the patient for delayed onset of pulmonary edema.

CHRONIC EFFECTS: Target organs for acute and chronic overexposure (NIOSH 90-117): Respiratory system, eyes, skin, teeth.

EYES: Risk of serious damage to eyes. Effects of exposure on eye may include pain, redness, severe deep burns and loss of vision. Possibility of corrosion or ulceration (Blindness may result).

SKIN: Possibility of corrosion, burns or ulcers.

INGESTION: Immediate effects of overexposure: Burns of the mouth, throat, esophagus and stomach, with severe pain, bleeding, vomiting, diarrhea and collapse of blood pressure. Damage may appear days after exposure.

INHALATION: At high concentrations (mists) may produce severe irritation of respiratory tract (coughing, shortness of breath, choking). Watch for delayed onset of pulmonary edema.

IRRITATION-SENSITIZATION: Severe irritation: 5 mg/30 s, rinsing (eyes, rabbit). (RTECS). Sensitization: Not known.

GERM CELL MUTAGENICITY: Cytogenetic analysis: 4 mmol/l (ovaries, Hamster). (RTECS).

CARCINOGENICITY: Classification not applicable to sulfuric acid and sulfuric acid solutions.

REPRODUCTIVE TOXICITY: Inhalation (Lo CT); 20 mg/m³/7 hour (6-18 days pregnant) reproductive effects: specific developmental abnormalities (Musculoskeletal system) (Rabbit). (RTECS).

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N/A

SECTION 12: ECOLOGICAL INFORMATION

TOXICITY:

Aquatic toxicity: Slightly to moderately toxic.

Toxicity to aquatic life increases with lower pH. At pH lower than 5, only a few fish species can survive and at pH lower than 4, aquatic life is rare.

Chemical Name	Algae/aquatic plants	Fish	Crustacean
Sulfuric acid	-	Bluegill Sunfish (<i>Lepomis macrochirus</i>) 16 mg/l	Flea water (<i>daphnia magna</i>) >100 mg/l.



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		(LC50; 48 hours)	(EC50, 48 h)
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EYE: Concentrated compound is corrosive.

SKIN: Concentrated compound is corrosive.

Single and repeated exposure: Irritation of the respiratory tract; Corrosion of the respiratory tract; Lung damage; Labored breathing; Altered respiratory rate: Pulmonary edema.

PERSISTENCE AND DEGRADABILITY: Sulfate ion: Ubiquitous in the environment. Metabolized by micro-organisms and plants.

BIOACCUMULATIVE POTENTIAL: The product is not bioaccumulating.

Sulfate ion: Ubiquitous in the environment. Metabolized by micro-organisms and plants without bioaccumulation.

MOBILITY IN SOIL: Easy soil seeping under rain action.

MOBILITY: The product is water soluble and may spread in water systems.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14: TRANSPORT INFORMATION

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

CONTAINER SIZES(S): Pails
PROPER SHIPPING NAME: SULFURIC ACID
HAZARD CLASS: 8
ID NUMBER: UN1830
PACKING GROUP: PGII
LABEL STATEMENT: Corrosive

CONTAINER SIZE (S): Quarts
PROPER SHIPPING NAME: COMPOUND, CLEANING LIQUID
HAZARD CLASS: None
ID NUMBER: None
PACKING GROUP: None
LABEL STATEMENT: Limited Quantity Symbol

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

USA CERCLA Section 103 Hazardous substances (40 CFR 302.4)

SARA TITLE III SECTION 302: (Extremely Hazardous Substance List): (40 CFR 355) : Yes

SARA SECTION 311/312 HAZARD CATEGORIES: Acute Health

SARA TITLE III SECTION 313 TOXIC CHEMICALS (40 CFR 372.65)

US: TSCA INVENTORY: Listed: sulfuric acid (RQ) : 1000 POUNDS (454 kg)

TSCA (EPA, Toxic Substance Control Act) Chemical Inventory (40 CFR7 10): Listed.

Classifications HCS Corrosive liquid

Persistent Organic Pollutants: Not applicable.

Ozone-depleting substances (ODS) regulation: Not applicable.
(EC) 1005/2009



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INTERNATIONAL INVENTORIES

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

SECTION 16: OTHER INFORMATION

HMIS/NFPA Ratings: Health = 3
Flammability = 0
Reactivity = 2
Other = -
Protection = -

EMPLOYEE TRAINING: See Section 2 for Risk & Safety Statements and Section 8 for Personal Protection. Employees should be made aware of all hazards of this material (as stated in this SDS) before handling it.

REVISION DATE: 11/1/18

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.

ATTENTION STOCK HANDLERS

PLEASE HANDLE
MARC 55 DRAIN
CLEANER CAREFULLY!
CONTENTS ARE
HIGHLY CORROSIVE.
IF CARTON OR BOTTLES
SHOW SIGNS OF
LEAKAGE, READ
DISPOSAL OR CLEAN UP
INSTRUCTIONS ON
THIS SHEET.
IN CASE OF ACCIDENTAL
SPILLAGE, AVOID CONTACT.
PLEASE FAMILIARIZE YOURSELF
WITH THIS PROCEDURE IN
CASE OF FUTURE LEAKAGES.

WEAR FACE
SHIELD OR
SAFETY
GLASSES



WEAR
GLOVES

IF MARC 55 DRAIN CLEANER COMES INTO CONTACT
WITH YOU: IMMEDIATELY REMOVE ANY CLOTHING IT
CONTACTS! THEN:

FIRST AID:

- EXTERNAL: Flush with water for at least 15 minutes.
- EYES: Flush with water for at least 15 minutes and get prompt medical attention.
- INTERNAL: Drink large quantities of water or milk. DO NOT induce vomiting!
Call a physician, Emergency Services, or
Poison Control Center immediately.

PROCEDURE FOR THE DISPOSAL OR CLEANUP OF MARC 55 DRAIN CLEANER

In the event of leaking product, please follow this procedure:

NOTE: Avoid contact with acid contents. Always wear acid-resistant rubber gloves and apron, face shield, or other suitable eye protection in a well-ventilated area when handling MARC 55 or any acid-based products.

- Place the entire leaking case into a plastic or fiberglass utility tub-type sink. Note: product can cause harm to or discolor porcelain enameled or stainless steel sinks.
- Carefully open case and remove bottle(s) one by one, placing them in the sink.
- Slowly (to avoid splashing) run COLD water over the bottles, as this product generates heat upon contact with water. If a bottle is not leaking, then rinse it well and wipe dry. If entire label remains intact and legible, set aside for re-stocking into inventory. If bottle is leaking, carefully remove cap and slowly pour contents down a free-flowing drain, free of other chemicals, allowing cold water to run for two minutes after emptying each bottle. Rinse emptied bottles completely with cold water only and dispose of them. After all bottles have been checked, allow water to continue to run for an additional five minutes. This product is safe for disposal in steel, plastic, and copper plumbing systems.
- When finished, rinse all garments worn and work area of any remaining acid. Make sure that all traces MARC 55 have been rinsed away.

R7-94

IF YOU HAVE ANY FURTHER QUESTIONS...
PLEASE CONTACT

MID AMERICAN RESEARCH CHEMICAL CORP.



1-800-228-8508

ATENCIÓN TRABAJADORES

POR FAVOR CUANDO COJA
CON LAS MANOS EL
PRODUCTO MARC 55
LIMPIADOR DE DESAGÜE
TENGA MUCHO CUIDADO.
CONTIENE ALTO
CORROSIVO. SI LOS CAR-
TONES Ó LAS BOTELLAS
TIENEN SIGNOS DE FUGA,
LEA LAS INSTRUCCIONES
QUE ENCUENTRA EN ESTA
HOJA PARA DESHACERSE
DEL PRODUCTO Ó LAS
INSTRUCCIONES PARA
LIMPIAR LA SUPERFICIE
MANCHADA. EN CASO DE
QUE SE DERRAME POR
ACCIDENTE EVITE TODO
CONTACTO. POR FAVOR
FAMILIARIZESE CON ESTE
PROCEDIMIENTO EN CASO
DE QUE EN EL FUTURO
ENCUENTRE ALGUNA FUGA.

POURSE
PROTECTOR
DE CARA O
LENTES DE
SEGURIDAD



POURSE
QUANTES DE
CAUCHO

Si el producto Marc 55 limpiador de desagüe viene en
contacto con su piel: Remueva la ropa que llevo en con-
tacto con el liquido!! Desques haga lo siguiente:

PRIMER AUXILIO:

- Externo: Limpiar con un flujo de agua por 15 minutos.
- Ojos: Limpiar con un flujo de agua por 15 minutos y obtenga atención medica.
- Interno: Tóme una gran cantidad de agua o leche.
NO INDUZCA EL VOMITO.
Llame inmediatamente a un doctor, un servicio de emergencias,
o a un centro de control de toxicos.

PROCEDIMIENTO PARA DESECHAR Ó LIMPIAR EL LIMPIADOR DE DESAGÜE MARC 55

En caso de que el producto tenga una fuga, por favor use las siguientes
instrucciones:

NOTA: Evite contacto con todo conteniendo acido. Siempre use guantes de
caucho, delantal, algo que le proteja la cara ó algún otro resguardo para los
ojos. Use el producto basado en acido Marc 55 en un lugar que tenga buena
ventilación.

- Coloque la caja completá que esta con fuga en una tina plastica ó de vidrio
de fibra. Nota: Este producto puede descolorizar a una tina de porcelana,
esmalte ó de acero inoxidable.
- Con todo cuidado habra la caja y desempaque la botella (s) una por una, y
coloquela en la tina.
- Despacio (para que no salpique) corra agua FRIA sobre las botellas, porque
este producto se calienta cuando tiene contacto con agua. Si una botella no
tiene fuga, enjuagela bien y sequela. Si toda la etiquetá esta intacta y se
puede leer, coloque la botella a un lado para ser puesta en el inventario. Si
una botella tiene una fuga destapela y despacio en un desagüe que este
limpio de otros quimicos deje que el agua FRIA corra por dos minutos
despues que cada botella este vacía. Enjuague completamente en agua
FRIA solamente las botellas vacias y desechelas. Despues que todas las
botellas sean revisadas, deje que el agua FRIA corra por cinco (5) minutos
más adicionales. Este producto puede ser desecho en sistemas de cañerías
de acero, plastico y de cobre.
- Cuando acabe enjuague cualquier acido que quede en alguna superficie,
tambien todas las prendas y el area de trabajo. Asegurese que todo rastro
de Marc 55 sea desaparecido con un buen enjuague.

SI TIENE ALGUNA PREGUNTA POR FAVOR LLAME

MID-AMERICAN RESEARCH CHEMICAL CORP.



AL NUMERO 1-800-228-8508



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Product: MARC 55 HEAVY DUTY LIQUID ORGANIC SEWER AID
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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER AND NAME: **MARC 55 HEAVY DUTY LIQUID ORGANIC SEWER AID**

SDS DATE: 11/1/18

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: Drain/Sewer Cleaner.

PREPARED BY: MARC

SECTION 2: HAZARDS IDENTIFICATION

CLASSIFICATION: CORROSIVE-Category 1: Causes severe skin burns and eye damage.

HAZARD PICTOGRAM, SIGNAL WORD, HAZARD AND PRECAUTIONARY STATEMENTS: **DANGER:** Do not breathe fumes, vapors or spray. Wash hands, face and skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.



IF SWALLOWED: rinse mouth. DO NOT induce vomiting. IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. IF INHALED : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. Specific treatment - see on this sheet. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Dispose of contents/container in full compliance with Federal, Provincial and local regulations. Other Hazards: Extremely corrosive. Harmful or fatal if swallowed. Harmful if inhaled. Possibility of damage to the upper respiratory tract and lung tissues. Environmental hazard: Strong acid. Highly toxic to plants and aquatic organisms. Store locked up. Never add water to product. Keep out of reach of children.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Specific percentages may be claimed as a trade secret.

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>% WT.</u>
Sulfuric Acid	7664-93-9	77-100

SECTION 4: FIRST AID MEASURES

GENERAL ADVICE: Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Do not breathe fume/gas/mist vapors/spray. Wash hands, face and skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. If potential for exposure exists, refer to Section 8 for specific personal protective equipment.

EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult a physician. If medical treatment must be delayed, repeat the flushing with tepid water or soak the affected area with tepid water to help remove the last traces of sulfuric acid.

SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower for 15 minutes (Pay particular attention to: folds, crevices, creases, groin). While patient is being transported to a medical facility, continue the application of cold, wet compresses. Wash contaminated clothing before reuse. Discard contaminated shoes. Seek immediate medical attention.

INGESTION: **DO NOT INDUCE VOMITING.** **Conscious and alert person:** Rinse mouth with water and give ½ to 1 cup of water or milk to dilute material. **Spontaneous vomiting:** Keep head below hips to prevent aspiration; Rinse mouth and give ½ to 1 cup of water or milk. **UNCONSCIOUS person: DO NOT INDUCE VOMITING** or give any liquid. **IMMEDIATELY CALL PHYSICIAN OR POISON CONTROL CENTER TO OBTAIN MEDICAL ATTENTION.**

INHALATION: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Take precautions to avoid secondary contamination by residual acids. Difficult breathing: Give oxygen. Immediately call A POISON CENTER or doctor/physician.

OTHER HAZARDS: Extremely corrosive. Harmful or fatal if swallowed. Harmful if inhaled. Severe eye and skin irritation. Possibility of damage to the upper respiratory tract and lung tissues.

ENVIRONMENTAL HAZARD: Strong acid. Highly toxic to plants and to aquatic organisms.



SAFETY DATA SHEET

Product: MARC 55 HEAVY DUTY LIQUID ORGANIC SEWER AID
Form R04132

SAFETY PHRASE: Store locked up. Never add water to this product. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: Treat symptomatically. Symptoms may be delayed. If medical treatment must be delayed, repeat the flushing with tepid water or soak the affected area with tepid water to help remove the last traces of sulfuric acid. Creams or ointments **SHOULD NOT** be applied before or during the washing phase of the treatment. Call a physician if irritation persists. Wash contaminated clothing before reusing.

Victims of chemical exposure must be taken for medical attention. Rescuers should be taken for medical attention, if necessary. Take a copy of label and SDS to physician or health professional with victim.

SECTION 5: FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: When material is not involved in fire, do not use water on material itself. Expect violent reaction with water.

Small Fire: Dry chemical or CO2. Move containers from fire area if you can do it without risk.

Large Fires: Flood fire area with large quantities of water (from a distance), while knocking down vapors with water fog. If insufficient water supply: knock down vapors only:

SPECIAL FIRE FIGHTING PROCEDURES: Fire fighters should wear self-contained breathing apparatus and full firefighting turnout gear. Move containers from fire area if you can do it without risk.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Hazardous combustion products: Releases of sulfur dioxide at extremely high temperatures. **FIRE HAZARD:** Not flammable. **EXPLOSION HAZARD:** Reacts with most metals, especially when dilute: Hydrogen gas release (Extremely flammable, explosive). Evacuate personnel to a safe area. Keep upwind of fire.

HAZARDOUS DECOMPOSITION PRODUCTS: Possibility of decomposition if heated and in contact with sources of ignition. Release of toxic gases and vapors (Sulfur oxides (SO₂, SO₃)).

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTIVE EQUIPMENT: Ensure adequate ventilation, especially in confined areas. Ventilate affected area. Do not touch damaged container or spilled material unless wearing appropriate protective clothing. Wear protective gloves/protective clothing and eye/face protection. Use personal protective devices as stated in Section 8.

EMERGENCY RESPONDERS: Keep unnecessary personnel away. Evacuate personnel to a safe area and upwind of fire. Use personal protective devices as stated in Section 8.

ENVIRONMENTAL PRECAUTIONS: Prevent further leakage or spillage if safe to do so. Do not contaminate water.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANUP: Dike large spills, and cautiously dilute and neutralize with lime or soda ash, and transfer to waste water treatment system. Prevent liquid from entering storm sewers, waterways, or low areas. Clean up in accordance with all applicable regulation. See Section 13 for Waste Disposal.

SECTION 7: HANDLING AND STORAGE

GENERAL/SAFE HANDLING:

DO NOT get in eyes, on skin, or on clothing. Avoid breathing vapors or mist. Wear approved respirators if adequate ventilation cannot be provided. Wash thoroughly after handling. Ingestion or inhalation: Seek medical advice immediately and provide medical personnel with a copy of the SDS. **NEVER** add water to acid. Avoid aerosol formation.

GENERAL HYGIENE CONSIDERATIONS:

Use personal protection recommended in Section 8. Wash hands thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice.

OTHER PRECAUTIONS:

KEEP OUT OF REACH OF CHILDREN!! STORE LOCKED UP. CAREFULLY READ ENTIRE LABEL BEFORE USE.

STORAGE:

Store in original container. **DO NOT** add water or other products to contents in containers as violent reactions will result with resulting high heat, pressure and/or generation of hazardous acid mists. Store locked up. Keep



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containers away from heat, sparks, and flame. Containers that have been opened must be closed and kept upright to prevent leakage. DO NOT STORE IN UNLABELED CONTAINERS.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

CHEMICAL NAME	ACGIH (U.S.A.) TLV-TWA (mg/m ³)	OSHA (U.S.A.) PEL-TWA (mg/m ³)
Sulfuric acid 7664-93-9	0.2	1

ENGINEERING CONTROLS/

VENTILATION:

Good general ventilation should be provided to keep vapor and mist concentrations below the exposure limits.

OTHER:

None

RESPIRATORY:

Appropriate NIOSH respiratory protection if acid mist is present.

EYE PROTECTION:

Chemical splash goggles.

SKIN PROTECTION/PROTECTIVE GLOVES:

Acid-proof gloves.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

Boots, long sleeve clothing under an acid proof suit. An apron can be used in place of acid proof suit in a laboratory environment.

WORK HYGIENIC PRACTICES:

Handle in accordance with good industrial hygiene and safety practice. Wash hands thoroughly after handling, after each work shift, before eating, smoking or using the toilet. Promptly remove contaminated clothing. Destroy contaminated leather articles. Launder or discard contaminated clothing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE-	Oily, clear, liquid
PHYSICAL STATE/COLOR:	Light yellow
ODOR:	Odorless
pH:	<1
SOLUBILITY IN WATER:	Miscible
SPECIFIC GRAVITY:	1.837
MELTING POINT/FREEZING POINT:	-31°F (-35°C)
BOILING POINT:	535°F (279°C)
FLASH POINT/METHOD USED:	No information available.
EVAPORATION RATE:	No information available.
FLAMMABILITY (solid, gas):	No information available.
FLAMMABILITY LIMITS:	
Upper flammability limit:	No information available.
Lower flammability limit:	No information available.
VAPOR PRESSURE (mmHg):	<0.3 mmHg @ 25°C (77°F) <0.6 mmHg @ 38°C (100°F)
VAPOR DENSITY (AIR = 1):	No information available.
PARTITION COEFFICIENT:	No information available.
AUTO-IGNITION TEMPERATURE:	No information available.
DECOMPOSITION TEMPERATURE:	No information available.
KINEMATIC VISCOSITY:	No information available.
DYNAMIC VISCOSITY:	22.5 cP at 20°C (68°F) For Sulphuric acid 93%
EXPLOSIVE PROPERTIES:	Not explosive.
OXIDIZING PROPERTIES:	Not an oxidizer.
DENSITY:	1.837

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY: Reacts violently with water, organic substances and base solutions with evolution of heat and hazardous mists.

STABILITY: Stable under normal conditions, at ambient temperatures.



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CONDITIONS TO AVOID: Heat, sources of ignition.

INCOMPATIBILITY (MATERIAL TO AVOID): Vigorous reactions with water, alkaline solutions, metals, metal powder, carbides, chlorates, fulminates, nitrates, picrates, strong oxidizing, reducing, or combustible organic materials. Hazardous gases are evolved on contact with chemicals such as cyanides, sulfides, and carbides. Sulfuric acid reacts with metal to produce hydrogen, a flammable and potentially explosive gas. Hydrogen reacts with sulfides and generates hydrogen sulfide (Highly toxic gas). NEVER add water directly to product because a violent exothermic reaction may occur.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Possibility of decomposition if heated and in contact with sources of ignition. Release of toxic gases and vapors (sulfur oxides (SO₂, SO₃)).

HAZARDOUS POLYMERIZATION: Does not occur. **CONDITIONS TO AVOID (POLYMERIZATION):** None known.

SECTION 11: TOXICOLOGICAL INFORMATION

Routes of entries: Ingestion, Inhalation, Skin and eye contacts.

ACUTE TOXICITY: ORAL acute (LD50): 2 140 mg/kg (Rat). INHALATION: acute (LC50, 2 hours): 510 mg/m³ (Rat); 320 mg/m³ (Mouse). (RTECS).

ACUTE EFFECTS: May be fatal if inhaled or ingested in large quantity. Liquids or acid mists: May produce tissue damage; Mucous membranes (Eyes, mouth, respiratory tract). Extremely dangerous by eyes (conjunctivitis, permanent eye damage) and skin contact (Corrosive) (Severe skin burns, scars). Severe irritant for eyes: inflammation (Redness, watering, itching). Very dangerous in case of inhalation at high concentrations (Mists): May produce severe irritation of respiratory tract (Coughing, shortness of breath, choking). Maintain observation of the patient for delayed onset of pulmonary edema.

CHRONIC EFFECTS: Target organs for acute and chronic overexposure (NIOSH 90-117): Respiratory system, eyes, skin, teeth.

EYES: Risk of serious damage to eyes. Effects of exposure on eye may include pain, redness, severe deep burns and loss of vision. Possibility of corrosion or ulceration (Blindness may result).

SKIN: Possibility of corrosion, burns or ulcers.

INGESTION: Immediate effects of overexposure: Burns of the mouth, throat, esophagus and stomach, with severe pain, bleeding, vomiting, diarrhea and collapse of blood pressure. Damage may appear days after exposure.

INHALATION: At high concentrations (mists) may produce severe irritation of respiratory tract (coughing, shortness of breath, choking). Watch for delayed onset of pulmonary edema.

IRRITATION-SENSITIZATION: Severe irritation: 5 mg/30 s, rinsing (eyes, rabbit). (RTECS). Sensitization: Not known.

GERM CELL MUTAGENICITY: Cytogenetic analysis: 4 mmol/l (ovaries, Hamster). (RTECS).

CARCINOGENICITY: Classification not applicable to sulfuric acid and sulfuric acid solutions.

REPRODUCTIVE TOXICITY: Inhalation (Lo CT); 20 mg/m³/7 hour (6-18 days pregnant) reproductive effects: specific developmental abnormalities (Musculoskeletal system) (Rabbit). (RTECS).

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N/A

SECTION 12: ECOLOGICAL INFORMATION

TOXICITY:

Aquatic toxicity: Slightly to moderately toxic.

Toxicity to aquatic life increases with lower pH. At pH lower than 5, only a few fish species can survive and at pH lower than 4, aquatic life is rare.

Chemical Name	Algae/aquatic plants	Fish	Crustacean
Sulfuric acid	-	Bluegill Sunfish (<i>Lepomis macrochirus</i>) 16 mg/l	Flea water (<i>daphnia magna</i>) >100 mg/l.



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		(LC50; 48 hours)	(EC50, 48 h)
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EYE: Concentrated compound is corrosive.

SKIN: Concentrated compound is corrosive.

Single and repeated exposure: Irritation of the respiratory tract; Corrosion of the respiratory tract; Lung damage; Labored breathing; Altered respiratory rate: Pulmonary edema.

PERSISTENCE AND DEGRADABILITY: Sulfate ion: Ubiquitous in the environment. Metabolized by micro-organisms and plants.

BIOACCUMULATIVE POTENTIAL: The product is not bioaccumulating.

Sulfate ion: Ubiquitous in the environment. Metabolized by micro-organisms and plants without bioaccumulation.

MOBILITY IN SOIL: Easy soil seeping under rain action.

MOBILITY: The product is water soluble and may spread in water systems.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14: TRANSPORT INFORMATION

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

CONTAINER SIZES(S): Pails
PROPER SHIPPING NAME: SULFURIC ACID
HAZARD CLASS: 8
ID NUMBER: UN1830
PACKING GROUP: PGII
LABEL STATEMENT: Corrosive

CONTAINER SIZE (S): Quarts
PROPER SHIPPING NAME: COMPOUND, CLEANING LIQUID
HAZARD CLASS: None
ID NUMBER: None
PACKING GROUP: None
LABEL STATEMENT: Limited Quantity Symbol

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

USA CERCLA Section 103 Hazardous substances (40 CFR 302.4)

SARA TITLE III SECTION 302: (Extremely Hazardous Substance List): (40 CFR 355) : Yes

SARA SECTION 311/312 HAZARD CATEGORIES: Acute Health

SARA TITLE III SECTION 313 TOXIC CHEMICALS (40 CFR 372.65)

US: TSCA INVENTORY: Listed: sulfuric acid (RQ) : 1000 POUNDS (454 kg)

TSCA (EPA, Toxic Substance Control Act) Chemical Inventory (40 CFR7 10): Listed.

Classifications HCS Corrosive liquid

Persistent Organic Pollutants: Not applicable.

Ozone-depleting substances (ODS) regulation: Not applicable.
(EC) 1005/2009



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INTERNATIONAL INVENTORIES

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

SECTION 16: OTHER INFORMATION

HMIS/NFPA Ratings: Health = 3
Flammability = 0
Reactivity = 2
Other = -
Protection = -

EMPLOYEE TRAINING: See Section 2 for Risk & Safety Statements and Section 8 for Personal Protection. Employees should be made aware of all hazards of this material (as stated in this SDS) before handling it.

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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.