

Material Safety Data Sheet

Material Name: REAGENT SOLUTION 44

ID: 205244

***** Section 1 - Chemical Product and Company Identification *****

Product Trade Name REAGENT SOLUTION 44

Manufacturer Information

Henkel Surface Technologies
 Henkel Corporation
 32100 Stephenson Highway
 Madison Heights, MI 48071

Contact Phone: (248) 583-9300

Chemtrec Emergency # (800) 424-9300

***** Section 2 - Composition / Information on Ingredients *****

CAS #	Component	Percent
7664-93-9	Sulfuric acid	45-55

***** Section 3 - Hazards Identification *******Emergency Overview:**

DANGER -- CORROSIVE! Contact with this material will cause burns to the skin, eyes and mucous membranes.

Eye Contact:

This product is severely irritating to the eyes and may cause irreversible damage including burns and blindness.

Skin Contact:

Corrosive to the skin. Contact with the skin or mucous membranes may cause severe irritation and burns.

Ingestion:

This product may produce corrosive damage to the gastrointestinal tract if it is swallowed.

Inhalation:

Inhalation of mists of this product may cause severe irritation and burns to the respiratory tract.

Medical Conditions Aggravated by Exposure:

Pre-existing eye, skin and respiratory disorders.

***** Section 4 - First Aid Measures *******Eye Contact:**

In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.

Skin Contact:

Immediately take off all contaminated clothing. For skin contact, flush with large amounts of water. Seek immediate medical attention.

Ingestion:

If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting. Give one to two glasses of water or milk. Never give anything by mouth to a victim who is unconscious or is having convulsions.

Inhalation:

If mist or vapor of this product is inhaled, remove person immediately to fresh air. Seek medical attention if symptoms develop or persist.

First Aid: Notes to Physician

Provide general supportive measures and treat symptomatically.

***** Section 5 - Fire Fighting Measures *****

Material Safety Data Sheet

Material Name: REAGENT SOLUTION 44

ID: 205244

Flash Point:	Not applicable	Method Used:	Not applicable	Flammability Classification:	Not applicable
Upper Flammable Limit (UFL):	Not applicable	Lower Flammable Limit (LFL):	Not applicable		

Fire & Explosion Hazards:

This product is an aqueous mixture which will not burn. May react with metals to form flammable hydrogen gas.

Decomposition Products:

Irritating and toxic gases or fumes may be released during a fire. Decomposition of this product may yield oxides of sulfur.

Extinguishing Media:

Use methods for the surrounding fire.

Fire-Fighting Instructions:

Firefighters should wear full protective clothing including self contained breathing apparatus.

*** Section 6 - Accidental Release Measures ***

Containment Procedures:

Stop the flow of material, if this is without risk. Wear appropriate protective equipment and clothing during clean-up.

Clean-Up Procedures:

Absorb spill with inert material. Shovel material into appropriate container for disposal. Dispose of collected material according to regulation.

*** Section 7 - Handling and Storage ***

Handling Procedures:

Do not get this material in your eyes, on your skin, or on your clothing. Wash thoroughly after handling. For industrial use only.

Storage Procedures:

Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Manufacturer recommends storing above 40 °F. Thaw and mix thoroughly if frozen.

*** Section 8 - Exposure Controls / Personal Protection ***

Exposure Guidelines:

A: General Product Information

Follow all applicable exposure limits.

B: Component Exposure Limits

Sulfuric acid (7664-93-9)

ACGIH: 0.2 mg/m³ TWA (thoracic fraction)

OSHA: 1 mg/m³ TWA

NIOSH: 1 mg/m³ TWA

Engineering Controls:

Ventilation should effectively remove and prevent buildup of any vapor or mist generated from the handling of this product.

PERSONAL PROTECTIVE EQUIPMENT

As prescribed in the OSHA Standard for Personal Protective Equipment (29 CFR 1910.132), employers must perform a Hazard Assessment of all workplaces to determine the need for, and selection of, proper protective equipment for each task performed.

Eyes/Face Protective Equipment:

Wear chemical goggles; face shield (if splashing is possible).

Material Safety Data Sheet

Material Name: REAGENT SOLUTION 44

ID: 205244

Skin Protection:

Use impervious gloves. Use of impervious apron and boots are recommended.

Respiratory Protection:

If ventilation is not sufficient to effectively prevent buildup of aerosols or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.

Work Practices:

Eye wash fountain and emergency showers are recommended.

*** Section 9 - Physical & Chemical Properties ***

Physical State:	Liquid	Appearance:	Clear
Odor:	None	Vapor Pressure:	Not determined
Vapor Density:	Not determined	Boiling Point:	>210 °F (>98.9 °C)
Specific Gravity:	1.35 - 1.45	pH:	<1
Viscosity:	Not determined	VOC:	Not applicable
Solubility Water:	Complete	Evaporation Rate:	Not determined
Percent Volatile:	50% as water	Percent Solids:	Not applicable

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability:

Stable under normal conditions.

Conditions to Avoid:

None identified.

Incompatibility:

Keep away from organic materials, combustible materials, alkalis and metals.

Decomposition Products:

Decomposition of this product may yield oxides of sulfur.

Hazardous Polymerization:

Will not occur.

*** Section 11 - Toxicological Information ***

Acute Toxicity:

A: General Product Information

Sulfuric acid is corrosive to the eyes, skin, respiratory system and gastrointestinal tract. Exposure to sulfuric acid may lead to dental erosion, bronchitis, fibrosis, emphysema and pulmonary edema. Exposure to mists containing inorganic acids including sulfuric acid have been implicated in causing cancer in humans.

B: Component Analysis - LD50/LC50

Sulfuric acid (7664-93-9)

Inhalation LC50 Mouse: 320 mg/m³/2H; Inhalation LC50 Rat: 510 mg/m³/2H; Oral LD50 Rat: 2140 mg/kg

Carcinogenicity:

A: General Product Information

No information available for the product.

B: Component Carcinogenicity

Sulfuric acid (7664-93-9)

ACGIH: A2 - Suspected Human Carcinogen (contained in strong inorganic acid mists)

IARC: Monograph 54 [1992] (listed under Occupational exposures to mists and vapours from sulfuric acid and other strong inorganic acids) (Group 1 (carcinogenic to humans))

Material Safety Data Sheet

Material Name: REAGENT SOLUTION 44

ID: 205244

Chronic Toxicity

No information available for the product.

Epidemiology:

No information available for the product.

Neurotoxicity:

No information available for the product.

Mutagenicity:

No information available for the product.

Teratogenicity:

No information available for the product.

Other Toxicological Information:

None available.

*** Section 12 - Ecological Information ***

Ecotoxicity:

A: General Product Information

Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Sulfuric acid (7664-93-9)

Test & Species

96 Hr LC50 Brachydanio rerio

24 Hr EC50 Daphnia magna

>500 mg/L [static]

29 mg/L

Conditions

Environmental Fate:

No data is available concerning the environmental fate, biodegradation or bioconcentration for this product.

*** Section 13 - Disposal Considerations ***

US EPA Waste Numbers & Descriptions:

A: General Product Information

This product, if discarded directly, would be a characteristic RCRA corrosive waste (D002).

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions:

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

*** Section 14 - Transportation Information ***

US DOT Information

Shipping Name: Please refer to the container label for transportation information.

*** Section 15 - Regulatory Information ***

US Federal Regulations

A: General Product Information

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

Material Safety Data Sheet

Material Name: REAGENT SOLUTION 44

ID: 205244

B: Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Sulfuric acid (7664-93-9)

SARA 302: 1000 lb TPQ

SARA 313: 1.0 % de minimis concentration (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)

CERCLA: 1000 lb final RQ; 454 kg final RQ

SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No Reactive: Yes

State Regulations

A: General Product Information

No additional information available.

B: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS #	CA	FL	MA	MN	NJ	PA
Sulfuric acid	7664-93-9	Yes	No	Yes	Yes	Yes	Yes

Other Regulations

A: General Product Information

All components are on the U.S. EPA TSCA Inventory List.

B: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Sulfuric acid	7664-93-9	Yes	Yes	Yes

C: Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Sulfuric acid	7664-93-9	1 %

*** Section 16 - Other Information ***

NFPA Ratings: Health: 3 Fire: 0 Reactivity: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

HMIS Ratings: Health: 3* Fire: 0 Reactivity: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; NFPA = National Fire Protection Association; HMIS = Hazardous Material Identification System; CERCLA = Comprehensive Environmental Response, Compensation and Liability Act; SARA = Superfund Amendments and Reauthorization Act

The information presented herein is believed to be factual as it has been derived from the works and opinions of persons believed to be qualified experts; however, nothing contained in this information is to be taken as a warranty or representation for which Henkel Surface Technologies bears legal responsibility. The user should review any recommendations in the specific context of the intended use to determine whether they are appropriate.

Contact: Product Safety and Regulatory Affairs

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This is the end of MSDS # 205244