



Shell Chemical Appalachia LLC  
300 Frankfort Rd  
Monaca, PA 15061

April 13, 2022

Sharon Carr, Water Quality Specialist  
Mark Gorog, Regional Manager Air Quality Program  
Pennsylvania Department of Environmental  
Protection Southwest Regional Office  
400 Waterfront Drive  
Pittsburgh, PA 15222

**RE: PA-04-00740C and PA0002208 Sulfuric Acid Spill, Which Occurred March 19, 2022**

Dear Sharon and Mark,

Shell Chemical Appalachia LLC (“Shell”) is submitting this incident report to the Pennsylvania Department of Environmental Protection (PADEP) regarding a sulfuric acid release from a tank into secondary containment on March 19, 2022. The National Pollutant Discharge Elimination System permit for the site is PA0002208 and the Air Plan Approval number is PA-04-00740C.

This incident investigation summary letter includes a follow up to the letters sent to Shawn Bell in the Water Quality Management Program on March 23, 2022, and a Malfunction Report sent to Mark Gorog in the Air Quality Program March 29, 2022. A PADEP Notification of Release Form was sent to Sharon Carr of PADEP and Rebecca Matsco of Potter Township on March 30, 2022.

**Event Details:**

On March 19, 2022, Shell received a delivery of 93% Sulfuric Acid in the spent caustic area within the water treatment plant area for offloading into Sulfuric Acid Tank, T-53503 or PADEP Tank #054A. After the driver and operator completed offloading the trailer, an employee noticed vapors coming from the tank/containment area and discovered the outlet blind flange N3(1) was leaking.

No personnel reported being exposed to the leak or the fumes, and no Sulfuric Acid leaked from secondary containment. The Sulfuric Acid was contained within the high wall secondary containment area. The secondary containment area drain valve was closed at the time of the

spill.

Before offloading the tank, the tank level was 1.8%, after offloading the tank level was 8%. Approximately 3,000 gallons were offloaded, and an estimated 2,195 gallons leaked into the secondary containment area from flange N3(1), with a conservatively calculated 358 pounds of vapor emissions. The Reportable Quantity for Sulfuric Acid was not reached for any environmental media.

**Mitigation Measures:**

The Sulfuric Acid in the secondary containment area was neutralized and completely pumped out on March 23, 2022. The Sulfuric Acid leaked was stopped by tightening bolts on the flange N3(1).

The flange is being inspected and the bolts will be tightened according to the manufacturers specification and certified with a PADEP certified inspector. Tightness testing will be performed before the tank is returned to service. The return to service date is anticipated to be within two weeks. After the repair is complete and witnessed by the Certified Inspector, the Modification Report will be submitted.

If you have any questions regarding this matter, please contact me at (724) 709-2467 or [kimberly.kaal@shell.com](mailto:kimberly.kaal@shell.com).

Sincerely,

*Kimberly Kaal*

Kimberly Kaal  
Environmental Manager, Attorney-in-Fact

CC: Scott Beaudway, Air Quality Specialist  
Anna Fabrizi, District Supervisor

Attachments:

Safety Data Sheets  
PADEP Notification of Release

**NOTIFICATION OF RELEASE (*Owners and Operators*)**

FACILITY I.D. NUMBER 04 - 12735

Initial  
 Follow-Up

**NOTIFICATION OF CONTAMINATION (*Certified Installers and Inspectors*)**

**INFORMATION FOR OWNERS AND OPERATORS (O/O)**

The Storage Tank Program's Corrective Action Process (CAP) regulations establish requirements for owners and operators of storage tank systems and storage tank facilities to report confirmed releases and, in certain cases, suspected releases.

**Suspected Release Reporting:** Upon the completion of a suspected release investigation from which it could not be determined whether a release has occurred, the owner or operator must, within 15 days of the indication of the suspected release, complete and submit this form to the appropriate regional office of the Department (Subsection 245.304(c)(2)).

**Confirmed Release Reporting:** The owner or operator must notify the appropriate regional office of the Department by telephone as soon as practicable, but no later than 24 hours, after the confirmation of a release (Subsections 245.305(a) and (b)). Within 15 days of that telephone notification, the owner or operator must complete and submit this form to the appropriate regional office of the Department, to each municipality in which the release occurred, and to each municipality where that release has impacted environmental media or water supplies, buildings, or sewer or other utility lines (Subsections 245.305(c) and (e)). And if new impacts to environmental media or water supplies, buildings, or sewer or other utility lines are discovered after that initial written notification, the owner or operator must, within 15 days of the discovery of the new impact, complete and submit this form to the Department and to each impacted municipality (Subsections 245.305(d) and (e)).

**INFORMATION FOR CERTIFIED INSTALLERS AND INSPECTORS (I/I)**

In accordance with the Storage Tank Program's certification regulations, certified installers and inspectors must complete and submit this form to the Department within 48 hours of observing any of the following while performing services as a certified installer or inspector: a release of a regulated substance; suspected or confirmed contamination of soil, surface or groundwater from regulated substances; or a regulated substance in a containment structure or facility (Subsections 245.132(a)(4) and 245.132(a)(6)).

**INSTRUCTIONS**

Record the storage tank facility I.D. number at the top right-hand corner of each page of this form.

**Owners and Operators (O/O):** Indicate if this is an initial or follow-up notification by marking the appropriate box found in the top right-hand corner of this page.

- To report a Suspected Release, complete all information in Sections I, II, IIIA, IIIC, VI, VIII and IX.
- To report a Confirmed Release, complete all information in Sections I, II, IIIA, IIIB, IIIC, IV, V, VIII and IX.

**Certified Installers and Inspectors (I/I):** Complete all information in Sections I, II, IIIA, IIIC, VI or VII, VIII, and IX. Attach a copy of the failed, valid tightness test results, if applicable.

**PLEASE SEND COMPLETED ORIGINAL FORM TO:**

PA Department of Environmental Protection  
Environmental Cleanup and Brownfields Program  
Storage Tank Section

(and the appropriate address below, depending on where the FACILITY is located)

<p><b>Northwest Region</b> 230 Chestnut Street Meadville, PA 16335-3481 PHONE: 814-332-6945 / 800-373-3398 FAX: 814-332-6121 <b>Counties:</b> Armstrong, Butler, Clarion, Crawford, Elk, Erie, Forest, Indiana, Jefferson, Lawrence, McKean, Mercer, Venango, Warren</p>	<p><b>North-central Region</b> 208 W. Third Street, Suite 101 Williamsport, PA 17701 PHONE: 570-327-3636 FAX: 570-327-3420 <b>Counties:</b> Bradford, Cameron, Centre, Clearfield, Clinton, Columbia, Lycoming, Montour, Northumberland, Potter, Snyder, Sullivan, Tioga, Union</p>	<p><b>Northeast Region</b> 2 Public Square Wilkes-Barre, PA 18701-1915 PHONE: 570-826-2511 FAX: 570-820-4907 <b>Counties:</b> Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike, Schuylkill, Susquehanna, Wayne, Wyoming</p>
<p><b>Southwest Region</b> 400 Waterfront Drive Pittsburgh, PA 15222 PHONE: 412-442-4000 FAX: 412-442-4194 <b>Counties:</b> Allegheny, Beaver, Cambria, Fayette, Greene, Somerset, Washington, Westmoreland</p>	<p><b>South-central Region</b> 909 Elmerton Avenue Harrisburg, PA 17110 PHONE: 717-705-4705 / 800-541-2050 FAX: 717-705-4830 <b>Counties:</b> Adams, Bedford, Berks, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lancaster, Lebanon, Mifflin, Perry, York</p>	<p><b>Southeast Region</b> 2 East Main Street Norristown, PA 19401 PHONE: 484-250-5900 FAX: 484-250-5961 <b>Counties:</b> Bucks, Chester, Delaware, Montgomery, Philadelphia</p>

I. FACILITY INFORMATION (Both O/O and I/I)	II. OWNER/OPERATOR INFORMATION (Both O/O and I/I)
Facility Name <u>Shell Chemicals Appalachia LLC</u>	Facility I.D. Number <u>04-12735</u>
Street Address (P.O. Box not acceptable) <u>300 Franfort Road</u>	Owner Name <u>Shell Chemical Appalachia LLC</u>
City <u>Monaca</u>	Address <u>300 Frankfort Road</u>
State <u>PA</u>	City <u>Monaca</u>
Zip Code <u>15601 -</u>	State <u>PA</u>
County <u>Beaver</u>	Zip Code <u>15061 -</u>
Municipality <u>Potter</u>	Telephone Number <u>( 724 ) 709 - 2467</u>
Contact Person <u>Kimberly Kaal</u>	Operator Name <u>Kimberly Kaal</u>
Telephone Number <u>( 724 ) 709 - 2467</u>	Telephone Number <u>( 724 ) 709 - 2467</u>

III. REGULATED SUBSTANCE INFORMATION		
A. Type of Product(s) Involved (Mark All That Apply <input checked="" type="checkbox"/> ): <u>Both O/O and I/I</u>	B. Quantity (Gallons) of Product(s) Released: <u>O/O Only</u>	C. Contamination Suspected [S] or Confirmed [C] (Mark All That Apply <input checked="" type="checkbox"/> ): <u>Both O/O and I/I</u>
Leaded Gasoline ..... <input type="checkbox"/>	.....	..... <input type="checkbox"/> [S] ..... <input type="checkbox"/> [C]
Unleaded Gasoline ..... <input type="checkbox"/>	.....	..... <input type="checkbox"/> [S] ..... <input type="checkbox"/> [C]
Aviation Gasoline ..... <input type="checkbox"/>	.....	..... <input type="checkbox"/> [S] ..... <input type="checkbox"/> [C]
Kerosene ..... <input type="checkbox"/>	.....	..... <input type="checkbox"/> [S] ..... <input type="checkbox"/> [C]
Jet Fuel ..... <input type="checkbox"/>	.....	..... <input type="checkbox"/> [S] ..... <input type="checkbox"/> [C]
Diesel Fuel ..... <input type="checkbox"/>	.....	..... <input type="checkbox"/> [S] ..... <input type="checkbox"/> [C]
New Motor Oil ..... <input type="checkbox"/>	.....	..... <input type="checkbox"/> [S] ..... <input type="checkbox"/> [C]
Used Motor Oil ..... <input type="checkbox"/>	.....	..... <input type="checkbox"/> [S] ..... <input type="checkbox"/> [C]
Fuel Oil No. 1 ..... <input type="checkbox"/>	.....	..... <input type="checkbox"/> [S] ..... <input type="checkbox"/> [C]
Fuel Oil No. 2 ..... <input type="checkbox"/>	.....	..... <input type="checkbox"/> [S] ..... <input type="checkbox"/> [C]
Fuel Oil No. 4 ..... <input type="checkbox"/>	.....	..... <input type="checkbox"/> [S] ..... <input type="checkbox"/> [C]
Fuel Oil No. 5 ..... <input type="checkbox"/>	.....	..... <input type="checkbox"/> [S] ..... <input type="checkbox"/> [C]
Fuel Oil No. 6 ..... <input type="checkbox"/>	.....	..... <input type="checkbox"/> [S] ..... <input type="checkbox"/> [C]
Other (Specify) <u>Sulfuric Acid</u> ..... <input type="checkbox"/>	..... <u>2</u> , <u>1</u> <u>9</u> <u>5</u>	..... <input type="checkbox"/> [S] ..... <input checked="" type="checkbox"/> [C]
Unknown ..... <input type="checkbox"/>	.....	..... <input type="checkbox"/> [S] ..... <input type="checkbox"/> [C]

IV. CONFIRMED RELEASE INFORMATION (O/O Only)		
Date Release was Confirmed: <u>03 / 19 / 2022</u> <small>m / d / y</small>	Date Owner/Operator Sent Copy of this Written Notification to Local Municipality(ies) and Name of Municipality(ies) Notified:	
Date Owner/Operator Verbally Notified Appropriate Regional Office of Confirmed Release and Office Notified: Date: <u>03 / 19 / 2022</u> Office <u>Southwest Region</u>	Date: <u>03 / 30 / 2022</u> Municipality <u>Potter Township</u>	Date: <u> / / </u> Municipality <u> </u>
Source (Mark All That Apply <input checked="" type="checkbox"/> ): Tank (DEP Assigned Nos. <u>054A</u> ) ..... <input checked="" type="checkbox"/>	How Discovered (Mark All That Apply <input checked="" type="checkbox"/> ): During Closure..... <input type="checkbox"/>	Environmental Media Affected and Impacts (Mark All That Apply <input checked="" type="checkbox"/> ): Soil ..... <input type="checkbox"/>
Piping System (Aboveground Regulated) ..... <input type="checkbox"/>	Lining Installation..... <input type="checkbox"/>	Sediment ..... <input type="checkbox"/>
Piping System (Underground Regulated)..... <input type="checkbox"/>	Routine Leak Detection ..... <input type="checkbox"/>	Surface Water ..... <input type="checkbox"/>
Piping System (Non-Regulated)..... <input type="checkbox"/>	Third Party Inspection..... <input type="checkbox"/>	Ground Water ..... <input type="checkbox"/>
Dispenser/Dispensing Equipment ..... <input type="checkbox"/>	Tightness Testing Activities ..... <input type="checkbox"/>	Bedrock ..... <input type="checkbox"/>
Spill Prevention Equipment..... <input type="checkbox"/>	Visible Product or Odor Reports ..... <input checked="" type="checkbox"/>	Water Supplies ..... <input type="checkbox"/>
Submersible Turbine Pump Head/Fittings..... <input type="checkbox"/>	Water in Tank..... <input type="checkbox"/>	Vapors/Product in Buildings ..... <input type="checkbox"/>
Containment/Sump Failure ..... <input type="checkbox"/>	Construction ..... <input type="checkbox"/>	Vapors/Product in Sewer/Utility Lines ..... <input type="checkbox"/>
Other (Specify) ..... <input type="checkbox"/>	Upgrade/Repair ..... <input type="checkbox"/>	Ecological Receptors..... <input type="checkbox"/>
Unknown ..... <input type="checkbox"/>	Supply Well Sample Results..... <input type="checkbox"/>	
Cause (Mark All That Apply <input checked="" type="checkbox"/> ): Faulty Installation..... <input type="checkbox"/>	Monitoring Well Sample Results ..... <input type="checkbox"/>	
Corrosion..... <input type="checkbox"/>	Property Transfer..... <input type="checkbox"/>	
Physical/Mechanical Failure..... <input checked="" type="checkbox"/>	Other (Specify) ..... <input type="checkbox"/>	
Spill During Delivery ..... <input type="checkbox"/>	Unknown ..... <input type="checkbox"/>	
Overfill at Delivery..... <input type="checkbox"/>		
Vehicle Gas Tank Overfill ..... <input type="checkbox"/>		
Product Delivery Hose Rupture..... <input type="checkbox"/>		
Accident/Natural Disaster ..... <input type="checkbox"/>		
Other (Specify) ..... <input type="checkbox"/>		
Unknown ..... <input type="checkbox"/>		

**V. INTERIM REMEDIAL ACTIONS (O/O Only)**

Indicate the Interim Remedial Actions Planned, Initiated or Completed (Mark All That Apply 

	Planned	Initiated	Completed	Not Applicable
Regulated Substance Removed from Storage Tanks .....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fire, Explosion and Safety Hazards Mitigated .....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Contaminated Soil Excavated .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Free Product Recovered .....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Water Supplies Identified and Sampled.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Temporary Water Supplies Provided .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other (Specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**VI. SUSPECTED RELEASE / CONTAMINATION INFORMATION (Both O/O and I/I)**

Date the Indication of a Suspected Release / Contamination was Observed: 03 / 19 / 2022  
m d y

Indication of Suspected Release / Contamination (Mark All That Apply 

<input type="checkbox"/> Unusual Level of Vapors	<input type="checkbox"/> Containment Sump Test Failure
<input type="checkbox"/> Erratic Behavior of Product Dispensing Equipment	<input type="checkbox"/> Spill Prevention Equipment Test Failure
<input type="checkbox"/> Release Detection Results Indicate a Release	<input checked="" type="checkbox"/> Other (Specify) <u>Visible leak from a flange</u>
<input type="checkbox"/> Discovery of Holes in the Storage Tank	

**VII. CONFIRMED CONTAMINATION INFORMATION (I/I Only)**

Date the Confirmed Contamination was Observed: 03 / 19 / 2022  
m d y

Extent of Confirmed Contamination (Mark All That Apply 

<input type="checkbox"/> Product Stained or Product Saturated Soil or Backfill	<input type="checkbox"/> Free Product or Sheen on the Ground Water Surface
<input type="checkbox"/> Poned Product	<input type="checkbox"/> Free Product or Sheen on Surface Water
<input type="checkbox"/> Free Product or Sheen on Poned Water	<input checked="" type="checkbox"/> Other (Specify) <u>Acid contained in secondary containment and visible vapors</u>

**VIII. ADDITIONAL INFORMATION (Both O/O and I/I)**

Provide any additional, relevant, available information concerning the release or contamination. If reporting a confirmed release, include specific details about the source and cause of the release, the affected environmental media, and any impacts to water supplies, buildings, or sewer or other utility lines. Owners or Operators reporting a suspected release should describe what procedures were followed to investigate the indication(s) of the suspected release noted in Section VI. Provide both DEP-assigned and owner/operator-assigned tank number(s), where applicable. Use additional 8½" x 11" sheets of paper, if necessary.

During the fill process an operator noticed fumes and a visible leak. Approximately 2,195 gallons of liquids escaped from a tank located within our waste water treatment plant from PADEP Tank ID#054A. The tank's secondary containment prevented all liquids from leaving the site. Though the Reportable Quantity was not exceeded; out of an abundance of caution, Shell notified the Pennsylvania Department of Environmental Protection, the National Response Center, and the Local Emergency Planning Committee. There was no harm to personnel, the community, or the environment because of this event.

The sulfuric acid has been vacuumed out of the secondary containment and transported to the appropriate disposal facility. The release was estimated at 2,195 gallons based on gauge readings, was contained to the secondary containment, and did not threaten any state waterways prior to disposal.

**IX. CERTIFICATION (Both O/O and I/I)**

**OWNER OR OPERATOR CERTIFICATION**

I, Kimberly Kaal, hereby certify, under penalty of law as provided in 18 Pa.  
**(Print Name)**

**C.S.A. §4904** (relating to unsworn falsification to authorities) that I am the owner or operator of the above referenced storage tank facility and that the information provided by me in this notification is true, accurate and complete to the best of my knowledge and belief.

Kimberly Kaal  
Signature of Owner or Operator

3 / 30 / 2022  
Date

**CERTIFIED INSTALLER CERTIFICATION**

I, \_\_\_\_\_, hereby certify, under penalty of law as provided in 18 Pa.  
**(Print Name)**

**C.S.A. §4904** (relating to unsworn falsification to authorities) that I am the certified installer who performed tank handling activities at the above referenced storage tank facility and that the information provided by me in this notification is true, accurate and complete to the best of my knowledge and belief.

\_\_\_\_\_  
Signature of Certified Installer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Installer Certification Number

\_\_\_\_\_  
Company Certification Number

**CERTIFIED INSPECTOR CERTIFICATION**

I, \_\_\_\_\_, hereby certify, under penalty of law as provided in 18 Pa.  
**(Print Name)**

**C.S.A. §4904** (relating to unsworn falsification to authorities) that I am the certified inspector who performed inspection activities at the above referenced storage tank facility and that the information provided by me in this notification is true, accurate and complete to the best of my knowledge and belief.

\_\_\_\_\_  
Signature of Certified Inspector

\_\_\_\_\_  
Date

\_\_\_\_\_  
Inspector Certification Number

\_\_\_\_\_  
Company Certification Number

## Safety Data Sheet

### SULFURIC ACID 93% 66B

Version 1.2

Revision Date: 10/03/2019

#### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name** : SULFURIC ACID 93% 66B

#### Recommended use of the chemical and restrictions on use

Recommended use : Industrial chemical

#### Manufacturer or supplier's details

**Company** : Univar Solutions USA, Inc.  
**Address** : 3075 Highland Pkwy Suite 200  
Downers Grove, IL 60515  
United States of America (USA)

#### Emergency telephone number:

Transport North America: CHEMTREC (1-800-424-9300)

CHEMTREC INTERNATIONAL Tel # 703-527-3887

**Additional Information:** : Responsible Party: Product Compliance Department  
E-mail: SDSNA@univarsolutions.com  
SDS Requests: 1-855-429-2661  
Website: www.univarsolutions.com

#### SECTION 2. HAZARDS IDENTIFICATION

#### GHS Classification

Skin corrosion : Category 1A

Serious eye damage : Category 1

#### GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H314 Causes severe skin burns and eye damage.

Precautionary statements : **Prevention:**  
P264 Wash skin thoroughly after handling.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.  
P305 + P351 + P338 + P310 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/doctor.

## Safety Data Sheet

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Version 1.2

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P363 Wash contaminated clothing before reuse.

**Storage:**

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

None known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

**Hazardous components**

CAS-No.	Chemical name	Weight percent
7664-93-9	Sulfuric acid	90 - 100

Any Concentration shown as a range is due to batch variation.

**Molecular formula** : H<sub>2</sub>O<sub>4</sub>S

### SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.  
Consult a physician.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.  
If on skin, rinse well with water.  
If on clothes, remove clothes.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.  
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
Continue rinsing eyes during transport to hospital.  
Remove contact lenses.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.  
Keep respiratory tract clear.  
Do NOT induce vomiting.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.  
Take victim immediately to hospital.

### SECTION 5. FIREFIGHTING MEASURES



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Suitable extinguishing media	: Dry chemical Carbon dioxide (CO <sub>2</sub> )
Unsuitable extinguishing media	: High volume water jet Water
Specific hazards during fire-fighting	: Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	: sulfur oxides
Specific extinguishing methods	: Use a water spray to cool fully closed containers.
Further information	: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	: Wear self-contained breathing apparatus for firefighting if necessary.

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Use personal protective equipment.
Environmental precautions	: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

#### SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	: Normal measures for preventive fire protection.
Advice on safe handling	: Do not breathe vapours/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. To avoid spills during handling keep bottle on a metal tray. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage	: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with

## Safety Data Sheet

### SULFURIC ACID 93% 66B

Version 1.2

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Materials to avoid : the technological safety standards.  
: Do not store near acids.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

CAS-No.	Components	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
7664-93-9	Sulfuric acid	TWA (Thoracic fraction)	0.2 mg/m <sup>3</sup>	ACGIH
		TWA	1 mg/m <sup>3</sup>	NIOSH REL
		TWA	1 mg/m <sup>3</sup>	OSHA Z-1
		TWA	1 mg/m <sup>3</sup>	OSHA P0

### Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water  
Tightly fitting safety goggles  
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : Impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid  
Colour : Clear, Colorless, amber  
Odour : pungent  
Odour Threshold : No data available  
pH : 0.3 @ 25 °C (77 °F)

Freezing Point (Melting point/range) : -31 - 10.56 °C (-24 - 51.01 °F)  
Boiling Point (Boiling point/boiling range) : 217 - 330 °C (423 - 626 °F)  
Flash point : No data available

Evaporation rate : No data available  
Flammability (solid, gas) : No data available  
Upper explosion limit : No data available

## Safety Data Sheet

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Lower explosion limit	: No data available
Vapour pressure	: < 0.3 mmHg @ 25 °C (77 °F)
Relative vapour density	: 3.4 @ 20 °C (68 °F) (Air = 1.0)
Relative density	: 1.8347 - 1.8437 @ 25 °C (77 °F) Reference substance: (water = 1)
Density	: Estimated 1.837 g/cm <sup>3</sup> @ 20 °C (68 °F)  15.3 - 15.4 lb/gal @ 25 °C (77 °F)
Solubility(ies)	
Water solubility	: completely miscible
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Thermal decomposition	: 340 °C

#### SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Acid reacts with most metals to release hydrogen gas which can form explosive mixtures with air. Reacts with organic materials and may cause ignition of finely divided materials on contact.
Conditions to avoid	: Avoid contact with combustible material (paper, wool, oil).
Incompatible materials	: Alkalis Metals carbide chlorates fuminates nitrates Organic materials Strong oxidizing agents strong reducing agents water Sulphur compounds
Hazardous decomposition products	: corrosive vapors Sulphur oxides toxic fumes

**Safety Data Sheet**  
**SULFURIC ACID 93% 66B**

Version 1.2

Revision Date: 10/03/2019

**SECTION 11. TOXICOLOGICAL INFORMATION****Skin corrosion/irritation****Product:**

Remarks: Extremely corrosive and destructive to tissue.

**Components:****7664-93-9:**

Species: Rabbit

Result: Causes severe burns.

**Serious eye damage/eye irritation****Product:**

Remarks: May cause irreversible eye damage.

**Components:****7664-93-9:**

Species: Rabbit

Result: Risk of serious damage to eyes.

**Germ cell mutagenicity****Components:****7664-93-9:**

Genotoxicity in vitro

: Test Type: Ames test

Species: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Result: negative

**Carcinogenicity****IARC**

Group 1: Carcinogenic to humans

7664-93-9

Sulfuric acid

**OSHA**

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP**

Known to be human carcinogen

7664-93-9

Sulfuric acid

**Further information****Product:**

Remarks: No data available

**Safety Data Sheet**  
**SULFURIC ACID 93% 66B**

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**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity**

No data available

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects****Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances  
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Harmful to aquatic life with long lasting effects.

**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : Dispose of in accordance with all applicable local, state and federal regulations.  
For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Univar Solutions ChemCare: 1-800-909-4897

Dispose of in accordance with all applicable local, state and federal regulations.  
For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Univar Solutions ChemCare: 1-800-909-4897

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.

**Safety Data Sheet**  
**SULFURIC ACID 93% 66B**

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**SECTION 14. TRANSPORT INFORMATION**

**DOT (Department of Transportation):**  
 UN1830, Sulfuric acid solution, 8, II

**IATA (International Air Transport Association):**  
 UN1830, Sulphuric acid Solution, 8, II

**IMDG (International Maritime Dangerous Goods):**  
 UN1830, SULFURIC ACID SOLUTION, 8, II

**SECTION 15. REGULATORY INFORMATION**

**WHMIS Classification** : D2A: Very Toxic Material Causing Other Toxic Effects  
 D2B: Toxic Material Causing Other Toxic Effects  
 E: Corrosive Material

**EPCRA - Emergency Planning and Community Right-to-Know Act**

**CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sulfuric acid	7664-93-9	1000	1000

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sulfuric acid	7664-93-9	1000	1000

**SARA 311/312 Hazards** : Skin corrosion or irritation  
 Serious eye damage or eye irritation

**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**Clean Air Act**

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMII Intermediate or Final VOC's (40 CFR 60.489).

**Clean Water Act**

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

7664-93-9 Sulfuric acid

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

# Safety Data Sheet

## SULFURIC ACID 93% 66B

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7664-93-9 Sulfuric acid

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

### Massachusetts Right To Know

7664-93-9 Sulfuric acid

### Pennsylvania Right To Know

7664-93-9 Sulfuric acid

7732-18-5 Water

### California Prop 65

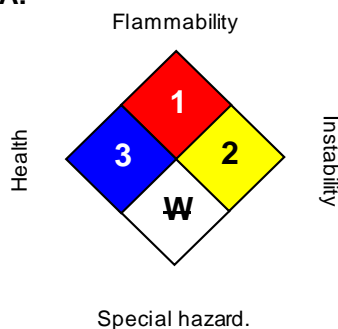
**⚠ WARNING:** This product can expose you to chemicals including Sulfuric acid, which is/are known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### The components of this product are reported in the following inventories:

- TSCA : On TSCA Inventory
- DSL : All components of this product are on the Canadian DSL
- AICS : On the inventory, or in compliance with the inventory
- NZIoC : Not in compliance with the inventory
- ENCS : On the inventory, or in compliance with the inventory
- KECI : On the inventory, or in compliance with the inventory
- PICCS : On the inventory, or in compliance with the inventory
- IECSC : On the inventory, or in compliance with the inventory

## SECTION 16. OTHER INFORMATION

### NFPA:



### HMIS III:

<b>HEALTH</b>	<b>3*</b>
<b>FLAMMABILITY</b>	<b>1</b>
<b>PHYSICAL HAZARD</b>	<b>2</b>

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions

## Safety Data Sheet

### SULFURIC ACID 93% 66B

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beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Univar Solutions Product Compliance Department (1-855-429-2661) SDSNA@univarsolutions.com.

The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Univar Solutions Product Compliance Department (1-855-429-2661) SDSNA@univarsolutions.com.

**Revision Date** : 10/03/2019

**Material number:**

16144451, 16142210, 16140162, 16141097, 16140266, 16140348, 16141851, 16141877, 16140763, 16141633, 16143767, 16143769, 16142063, 16142367, 16142360, 16140603, 16142270

<b>Key or legend to abbreviations and acronyms used in the safety data sheet</b>			
ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical	TWA	Time Weighted Average



**Safety Data Sheet**  
**SULFURIC ACID 93% 66B**

Version 1.2

Revision Date: 10/03/2019

	Substances in China		
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		



# SAFETY DATA SHEET

## 1. Identification

**Product identifier** **SULFURIC ACID 98%**

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer**

**Company name** BRENNTAG CANADA INC  
**Address** 43 Jutland Rd.  
Toronto, ON M8Z 2G6  
Canada

**Telephone** 416-259-8231  
**Website** <http://www.brenntag.com/canada/en/>  
**E-mail** [RegulatoryAffairs@Brenntag.ca](mailto:RegulatoryAffairs@Brenntag.ca)

**Emergency phone number** 1-855-273-6824

## 2. Hazard(s) identification

**Physical hazards** Not classified.

**Health hazards**

Acute toxicity, inhalation	Category 2
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Health hazards not otherwise classified	Category 1

**Environmental hazards**

Hazardous to the aquatic environment, acute hazard	Category 3
Hazardous to the aquatic environment, long-term hazard	Category 3

### Label elements



**Signal word** Danger

**Hazard statements** Causes severe skin burns and eye damage. Fatal if inhaled. Causes serious eye damage. Harmful to aquatic life. Harmful to aquatic life with long lasting effects. Presents a health hazard which is not otherwise classified.

**Precautionary statement**

<b>Prevention</b>	Do not breathe vapour. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection.
<b>Response</b>	IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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 CENTRE/doctor. Specific treatment is urgent (see this label). Wash contaminated clothing before reuse.
<b>Storage</b>	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.

**Other hazards** None known.

**Supplemental information** 98 % of the mixture consists of component(s) of unknown acute dermal toxicity.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
SULFURIC ACID		7664-93-9	98
Other components below reportable levels			2

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

### 4. First-aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control centre immediately.
<b>Skin contact</b>	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control centre immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control centre immediately.
<b>Ingestion</b>	Call a physician or poison control centre immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Most important symptoms/effects, acute and delayed</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Foam. Powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe vapours or spray mist. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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**Methods and materials for containment and cleaning up**

Prevent product from entering drains.

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. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. For waste disposal, see section 13 of the SDS.

**Environmental precautions**

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage**

**Precautions for safe handling**

Respiratory protection is "only required" when sprays are present in the air.

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

Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Store away from incompatible materials (see Section 10 of the SDS).

**8. Exposure controls/personal protection**

Recommendations listed in this section indicate the type of equipment, which will provide protection against overexposure to this product. Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for specific protective devices at your workplace.

**Occupational exposure limits**

**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
SULFURIC ACID (CAS 7664-93-9)	TWA	0.2 mg/m3	Thoracic fraction.

**Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)**

Components	Type	Value
SULFURIC ACID (CAS 7664-93-9)	STEL	3 mg/m3
	TWA	1 mg/m3

**Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)**

Components	Type	Value	Form
SULFURIC ACID (CAS 7664-93-9)	TWA	0.2 mg/m3	Mist.

**Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)**

Components	Type	Value	Form
SULFURIC ACID (CAS 7664-93-9)	TWA	0.2 mg/m3	Thoracic fraction.

**Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)**

Components	Type	Value	Form
SULFURIC ACID (CAS 7664-93-9)	TWA	0.2 mg/m3	Thoracic fraction.

**Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)**

Components	Type	Value
SULFURIC ACID (CAS 7664-93-9)	STEL	3 mg/m3
	TWA	1 mg/m3

Consult provincial or territorial exposure values, as may apply.

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

**Individual protection measures, such as personal protective equipment**

The following are recommendations only for the use of PPE. These recommendations cannot anticipate the variety of workplaces where the product will be used, nor how the product will be used in a variety of applications and processes. In determining appropriate PPE and engineering controls, it is the duty of the employer / user to evaluate their use of this product in accordance with the requirements of the local jurisdiction, and, if necessary, in conjunction with a professional industrial hygienist.

**Eye/face protection** Chemical respirator with organic vapour cartridge and full facepiece.

**Skin protection**

**Hand protection** Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

**Other** Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection** Chemical respirator with organic vapour cartridge and full facepiece.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties**

**Appearance**

**Physical state** Liquid.  
**Form** Liquid.  
**Colour** CLEAR PALE YELLOW

**Odour** ODOURLESS

**Odour threshold** Not available.

**pH** 0.3

**Melting point/freezing point** Not available.

**Initial boiling point and boiling range** 286.2 °C (547.16 °F) estimated

**Flash point** Not available.

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not applicable.

**Upper/lower flammability or explosive limits**

**Flammability limit - lower (%)** Not available.

**Flammability limit - upper (%)** Not available.

**Explosive limit - lower (%)** Not available.

**Explosive limit - upper (%)** Not available.

**Vapour pressure** Not available.

**Vapour density** Not available.

**Relative density** Not available.

**Solubility(ies)**

**Solubility (water)** Not available.

**Partition coefficient (n-octanol/water)** Not available.

**Auto-ignition temperature** Not available.

<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	15.40 lbs/gal
<b>Explosive properties</b>	Not explosive.
<b>Oxidising properties</b>	Not oxidising.
<b>Percent volatile</b>	2 % estimated
<b>Specific gravity</b>	1.85

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerisation does not occur.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidising agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Fatal if inhaled.
<b>Skin contact</b>	Causes severe skin burns.
<b>Eye contact</b>	Causes serious eye damage.
<b>Ingestion</b>	Causes digestive tract burns.

**Symptoms related to the physical, chemical and toxicological characteristics** Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

### Information on toxicological effects

<b>Acute toxicity</b>	Fatal if inhaled.
<b>Skin corrosion/irritation</b>	Causes severe skin burns and eye damage.
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.

### Respiratory or skin sensitisation

<b>Respiratory sensitisation</b>	Not a respiratory sensitizer.
<b>Skin sensitisation</b>	This product is not expected to cause skin sensitisation.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

### Carcinogenicity

#### Canada - Alberta OELs: Carcinogen category

SULFURIC ACID (CAS 7664-93-9)

Suspected human carcinogen.

<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.

## 12. Ecological information

<b>Ecotoxicity</b>	Harmful to aquatic life with long lasting effects.
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Components	Species	Test results	
SULFURIC ACID (CAS 7664-93-9)			
<b>Aquatic</b>			
Crustacea	EC50	Daphnia magna > 100 mg/l, 48 hours	
	LC50	Aesop shrimp (Pandalus montagui)	42.5 mg/l, 48 hours
		Cockle (Cerastoderma edule)	200 - 500 mg/l, 48 hours
		Common shrimp, sand shrimp (Crangon crangon)	70 - 80 mg/l, 48 hours
		Green or European shore crab (Carcinus maenas)	70 - 80 mg/l, 48 hours
Fish	LC50	Starry, european flounder (Platichthys flesus)	100 - 330 mg/l, 48 hours
		Western mosquitofish (Gambusia affinis)	42 mg/l, 24 hours
			42 mg/l, 48 hours
		42 mg/l, 96 hours	

**Persistence and degradability** No data is available on the degradability of this product.  
**Bioaccumulative potential** No data available.  
**Mobility in soil** No data available.  
**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** 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** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

### 14. Transport information

Transport information on packaging may be different from that listed. Transportation information on packaging may be different from that listed.

#### DOT

**UN number** UN1830  
**UN proper shipping name** SULFURIC ACID  
**Transport hazard class(es)**  
**Class** 8  
**Subsidiary risk** -  
**Packing group** II  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.  
**ERG number** 137

#### IATA

**UN number** UN1830  
**UN proper shipping name** SULFURIC ACID  
**Transport hazard class(es)**  
**Class** 8  
**Subsidiary risk** -  
**Packing group** II

**Environmental hazards** No.  
**ERG Code** 137  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**IMDG**

**UN number** UN1830  
**UN proper shipping name** SULPHURIC ACID with more than 51% acid solution (SULFURIC ACID)  
**Transport hazard class(es)**  
**Class** 8  
**Subsidiary risk** -  
**Packing group** II  
**Environmental hazards**  
**Marine pollutant** No.  
**EmS** F-A, S-B  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.

**DOT; IATA; IMDG; TDG**



**TDG**

**UN number** UN1830  
**UN proper shipping name** SULPHURIC ACID (SULFURIC ACID)  
**Transport hazard class(es)**  
**Class** 8  
**Subsidiary risk** -  
**Packing group** II  
**Environmental hazards** Not available.  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

## 15. Regulatory information

**Canadian regulations** This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

**Canada DSL Inventory: Registration Status**

SULFURIC ACID (CAS 7664-93-9) Listed

**Canada NPRI (Supplier Notification Required): Listed substance**

SULPHURIC ACID (CAS 7664-93-9) Listed

**Controlled Drugs and Substances Act**

Not regulated.

**Export Control List (CEPA 1999, Schedule 3)**

Not listed.

**Greenhouse Gases**

Not listed.

**Ontario. Toxic Substances. Toxic Reduction Act, 2009. Regulation 455/09 (July 1, 2011)**

SULFURIC ACID (CAS 7664-93-9)

**Precursor Control Regulations**

SULFURIC ACID (CAS 7664-93-9) Class B



**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

SULFURIC ACID (CAS 7664-93-9) Listed.

**SARA 304 Emergency release notification**

SULFURIC ACID (CAS 7664-93-9) 1000 lbs

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
SULFURIC ACID	7664-93-9	1000	1000		

**SARA 311/312 Hazardous chemical** Yes

**Classified hazard categories** Skin corrosion or irritation  
 Serious eye damage or eye irritation

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
SULFURIC ACID	7664-93-9	98

**Other federal regulations**

**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

SULFURIC ACID (CAS 7664-93-9) 6552

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**

SULFURIC ACID (CAS 7664-93-9) 20 %WV

**DEA Exempt Chemical Mixtures Code Number**

SULFURIC ACID (CAS 7664-93-9) 6552

**US state regulations**

**US. California Proposition 65**

Not listed.

**International regulations**

**Stockholm Convention**

Not applicable.

**Rotterdam Convention**

Not applicable.

**Kyoto protocol**

Not applicable.

**Montreal Protocol**

Not applicable.

**Basel Convention**

Not applicable.

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Toxic Chemical Substances (TCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information

**Issue date** 28-May-2018

**Version No.** 01

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