

SAFETY DATA SHEET

SECTION 1) IDENTIFICATION

Product Name: MANGANESE REAGENT
Synonym: S-07
Product Code: 54-A 052

Revision Date: Jun 28, 2022 **Date Printed:** Jul 08, 2022
Version: 1.0 **Supersedes Date:** N.A.

Manufacturer's Name: United States - Walter Surface Technologies Inc.
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Product/Recommended Uses: Solution to distinguish AISI 200 & 300 stainless steel (stainless steel grade ID tester).

SECTION 2) HAZARDS IDENTIFICATION

Type of product

Liquid

Classification

Acute toxicity Inhalation Vapor - Category 4

Corrosive to metals - Category 1

Serious Eye Damage - Category 1

Skin Corrosion - Category 1

Pictograms



Signal Word

Danger

Hazardous Statements - Health

H332 - Harmful if inhaled

H314 - Causes severe skin burns and eye damage

Hazardous Statements - Physical

H290 - May be corrosive to metals

Precautionary Statements - General

P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

P103 - Read label before use.

Precautionary Statements - Prevention

- P271 - Use only outdoors or in a well-ventilated area.
- P234 - Keep only in original packaging.
- P280 - Wear protective gloves, protective clothing, eye protection/face protection.
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
- P264 - Wash thoroughly after handling.

Precautionary Statements - Response

- P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P312 - Call a POISON CENTER/doctor if you feel unwell.
- P390 - Absorb spillage to prevent material damage.
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 - Immediately call a POISON CENTER or doctor.
- 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 or shower.
- P363 - Wash contaminated clothing before reuse.
- P321 - Specific treatment (see First-Aid on this label).

Precautionary Statements - Storage

- P406 - Store in a corrosive resistant container with a resistant inner liner.
- P405 - Store locked up.

Precautionary Statements - Disposal

- P501 - Dispose of contents/container in accordance with local/national/international regulations.

Hazards Not Otherwise Classified (HNOC) (Physical & Health)

no data available

SECTION 3) COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture

The product is a mixture.

CAS	Chemical Name	GHS Classifications	% By Weight
0007664-93-9	SULFURIC ACID	Acute Tox. Inh. 4, H332; Acute Tox. Oral 5, H303; Aquatic Chronic 3, H412; Carc. 1A, H350; Eye Dam. 1, H318; Met. Corr. 1, H290; Skin Corr. 1A, H314; STOT SE 1, H370	5.00% - 10.00%

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.

SECTION 4) FIRST-AID MEASURES

Inhalation

- Remove source of exposure or move person to fresh air and keep comfortable for breathing.
- If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by the POISON CENTER/doctor.
- Immediately call a POISON CENTER or doctor.

Eye Contact

- Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open.
- Remove contact lenses, if present and easy to do.
- Continue rinsing for a duration of 30 minutes or until medical aid is available.
- Take care not to rinse contaminated water into the unaffected eye or onto the face.
- Immediately call a POISON CENTER or doctor.

Skin Contact

- Take off immediately all contaminated clothing, shoes and leather goods (e.g. watchbands, belts).

Rinse skin with lukewarm, gently flowing water/shower for a duration of 30 minutes or until medical aid is available.

Immediately call a POISON CENTER or doctor.

Wash contaminated clothing before re-use or discard.

Ingestion

If material has been swallowed and the exposed person is conscious, give small quantities of water to drink.

Never give anything by mouth to an unconscious person.

Rinse mouth.

Do NOT induce vomiting.

Immediately call a POISON CENTER or doctor.

If vomiting occurs naturally, lie on your side, in the recovery position.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Treat according to symptoms (decontamination, vital functions), no known specific antidote. Treatment should be supportive and based on the judgement of the physician in response to the reaction of the patient.

Most important symptoms/effects, acute and delayed

Eye contact

Causes serious eye damage.

Inhalation

May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.

Skin contact

Causes severe burns.

Ingestion

May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact (OE)

Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation (OE)

No known significant effects or critical hazards.

Skin contact (OE)

Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion (OE)

Adverse symptoms may include the following:
stomach pains

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Small Fire : Dry chemical, foam, carbon dioxide, water-spray or alcohol-resistant foam. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Large Fire : Water spray, fog or alcohol-resistant foam.

Unsuitable Extinguishing Media

Do not use straight stream of water.

Specific Hazards in Case of Fire

In case of fire, hazardous decomposition products may include carbon oxides. Fire will produce irritating, toxic and corrosive gases. Containers may explode in fire.

Fire-fighting Procedures

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Cool containers with flooding quantities of water until well after fire is out. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Special Protective Actions

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure

Stay uphill and/or upstream. Ventilate closed spaces before entering. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing. Evacuate and isolate hazard area and keep unauthorized personnel away.

Recommended Equipment

Breathing protection is required. Wear chemical protective clothing and positive pressure self-contained breathing apparatus (SCBA).

Personal Precautions

Do not breathe vapor or mist. Do not get on skin, eyes or clothing.

Environmental Precautions

Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning up

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Contaminated absorbent material may pose the same hazard as the spilled product. If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated. Absorb Liquids in vermiculite, dry sand, earth, or similar inert material and deposit in sealed containers for disposal. Ventilate area after clean-up is complete.

SECTION 7) HANDLING AND STORAGE

General

Wash hands after use. Do not breathe vapor or mist. Use good personal hygiene practices. Eating, drinking and smoking in work areas is prohibited. Remove contaminated clothing and protective equipment before entering eating areas. All containers must be properly labelled. Eyewash stations and showers should be available in areas where this material is used and stored. Do not get in eyes, on skin, or on clothing.

Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source. Report ventilation failures immediately.

Storage Room Requirements

Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored. Store in a cool, dry, well ventilated area, away from sources of ignition and incompatibilities. Keep containers securely sealed when not in use. Containers that have been opened must be carefully resealed to prevent leakage. Indoor storage should meet OSHA standards and appropriate fire codes. Empty containers retain residue and may be dangerous. Store in approved containers and protect against physical damage.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye protection

Wear safety glasses complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids.

Skin Protection

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

Respiratory protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 should be followed. Check with respiratory protective equipment suppliers.

Appropriate Engineering Controls

If vapor or mist is generated when material is heated or handled, provide adequate ventilation to keep the airborne concentrations of vapors below their respective threshold limit value. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Chemical Name	ACGIH TWA (mg/m3)	ACGIH TWA (ppm)	ACGIH STEL (mg/m3)	ACGIH STEL (ppm)	ACGIH Carcinogen	ACGIH TLV Basis	ACGIH Notations	OSHA TWA (mg/m3)
SULFURIC ACID	0.2 (T)				A2	Pulm func	A2 (M)	1

Chemical Name	OSHA TWA (ppm)	OSHA STEL (mg/m3)	OSHA STEL (ppm)	OSHA Carcinogen	OSHA Tables (Z1, Z2, Z3)	OSHA Skin designation	CAN_ONtmg	CAN_ONtppm
SULFURIC ACID					1			

Chemical Name	CAN_ONsmg	CAN_ONsppm
SULFURIC ACID		

(C) - Ceiling limit, (M) - Mist, (T) - Thoracic fraction, A2 - Suspected Human Carcinogen, func - Function, pulm - Pulmonary

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

9.1 Physical and Chemical Properties

Type of product : liquid.

Density	9.01 lb/gal
Specific Gravity	1.08
% VOC	0.00%
Density VOC	0.00 lb/gal

Appearance	Colorless liquid
Odor Threshold	N/A
Odor Description	Odorless
pH	0.50
Water Solubility	Soluble in the following materials: cold water and hot water.
Flammability	
Flash Point Symbol	N/A
Flash Point	93.30 °C
Viscosity	N/A
Lower Explosion Level	N/A
Upper Explosion Level	N/A
Vapor Density	N/A
Freezing Point	N/A
Melting Point	N/A
Low Boiling Point	N/A

High Boiling Point	N/A
Auto Ignition Temp	N/A
Evaporation Rate	N/A
Coefficient Water/Oil	N/A

SECTION 10) STABILITY AND REACTIVITY

Stability

Stable under normal storage and handling conditions.

Conditions To Avoid

Avoid heat, sparks, flame, high temperature and contact with incompatible materials.

Hazardous Reactions/Polymerization

Will not occur.

Incompatible Materials

Strong bases, acids, and oxidizing agents. Corrosive in contact with metals.

Hazardous Decomposition Products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Oxides of carbon.

SECTION 11) TOXICOLOGICAL INFORMATION

Acute Toxicity

Harmful if inhaled

The Acute Toxicity Estimate (ATE) for an oral exposure to this mixture is >5000 mg/kg body weight

The Acute Toxicity Estimate (ATE) for a dermal exposure to this mixture is >5000 mg/kg body weight

The Acute Toxicity Estimate (ATE) for an inhalation (vapour) exposure to this mixture is 20 mg/l

Aspiration Hazard

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

Carcinogenicity

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

Germ Cell Mutagenicity

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

Reproductive Toxicity

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

Respiratory/Skin Sensitization

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

0007664-93-9 SULFURIC ACID

Repeated or prolonged contact with skin may cause dermatitis.

Serious Eye Damage/Irritation

Causes serious eye damage

0007664-93-9 SULFURIC ACID

Contact can severely irritate and burn the eyes.

Skin Corrosion/Irritation

Causes severe skin burns and eye damage

Specific Target Organ Toxicity - Repeated Exposure

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

0007664-93-9 SULFURIC ACID

Repeated exposure can cause permanent lung damage.

Specific Target Organ Toxicity - Single Exposure

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

Likely Routes of Exposure

Inhalation, Ingestion, Skin contact, Eye contact

0007664-93-9 SULFURIC ACID

The substance can be absorbed into the body by inhalation of its aerosol.

0007664-93-9 SULFURIC ACID

LC50 (rat): 510 mg/m3 (2 hour-exposure) (255 mg/m3 - equivalent 4-hour exposure) (1)

LC50 (mouse): 320 mg/m3 (2-hour exposure) (160 mg/m3 - equivalent 4-hour exposure) (1)

LD50 (oral, rat): 2140 mg/kg (2)

SECTION 12) ECOLOGICAL INFORMATION

Toxicity

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

Persistence and Degradability

No data available.

Bioaccumulative Potential

No data available.

Mobility in Soil

No data available.

Other Adverse Effects

No data available.

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal

It is the responsibility of the user of the product to determine at the time of disposal whether the product meets local criteria for hazardous waste. Waste management should be in full compliance with national, state and local laws. Empty Containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes.

SECTION 14) TRANSPORT INFORMATION

	IATA Information	IMDG Information	U.S. DOT Information	Canada TDG Information
UN number:	UN2796	UN2796	UN2796	UN2796
Proper shipping name:	Sulfuric acid with not more than 51% acid	Sulfuric acid with not more than 51% acid	Sulfuric acid with not more than 51% acid	Sulfuric acid with not more than 51% acid
Hazard class:				8
Hazard class:	8	8	8	
Packaging group:	II	II	II	II
Hazardous substance (RQ):			No Data Available	
Marine Pollutant:	NA	No Data Available	No Data Available	No Data Available

Note / Special Provision:	No Data Available	No Data Available	No Data Available	No Data Available
Toxic-Inhalation Hazard:	NA	NA	No Data Available	No Data Available

SECTION 15) REGULATORY INFORMATION

U.S. Federal regulations

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Water Act (CWA) 311: Sulfuric acid

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)

None of the components are listed.

Clean Air Act Section 602 Class I Substances

None of the components are listed.

Clean Air Act Section 602 Class II Substances

None of the components are listed.

DEA List I Chemicals (Precursor Chemicals)

None of the components are listed.

DEA List II Chemicals (Essential Chemicals)

Listed

States regulations

Canada

CEPA toxic substance : None of the components are listed.

Canada inventory (DSL NDSL) : All components are listed or exempted.

Canadian NPRI The following components are listed: Solvent naphtha (petroleum), light aliph.; Isopropyl Alcohol

International lists

China : All components are listed or exempted.

New Zealand : All components are listed or exempted.

Philippines : All components are listed or exempted.

Europe : All components are listed or exempted.

Turkey : All components are listed or exempted.

Taiwan : All components are listed or exempted.

Australia : All components are listed or exempted.

Republic of Korea : All components are listed or exempted.

California Proposition 65

CAS	Chemical Name	% By Weight	Regulation List
0007664-93-9	SULFURIC ACID	5.00% - 10.00%	Canada_NPRI,DSL,TSCA



WARNING: This product can expose you to chemicals including SULFURIC ACID, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

SECTION 16) OTHER INFORMATION

Glossary

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center(US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL

Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self Contained Breathing Apparatus; STEL-Short Term Exposure Limit; TCEQ Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System. ACGIH - American Conference of Governmental Industrial Hygienists; CAS - Chemical Abstracts Service ; Chemtrec - Chemical Transportation Emergency Center; DSL - Domestic Substances List; ESL- Effects screening levels; GHS - "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations; HMIS - Hazardous Material Information Service; IATA - Dangerous Goods Regulations (DGR) for the air transport (IATA); IMDG - International Maritime Dangerous Goods Code; LC - Lethal Concentration; LD - Lethal Dose; NFPA - National Fire Protection Association; OEL - Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL - Permissible Exposure Limit; SARA 313 - Superfund Amendments and Reauthorization Act, Section 313; SCBA - Self Contained Breathing Apparatus; ppm - parts per million; STEL - Short-term exposure limit; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act Public Law 94-469; TWA - Time-weighted average; US DOT- US Department of Transportation.

Version 1.0:

Revision Date: Jun 28, 2022

First Edition.; First Edition.

Full text of H-Statements referred to under Section 3

- H370 Causes damage to organs.
- H318 Causes serious eye damage
- H314 Causes severe skin burns and eye damage
- H332 Harmful if inhaled
- H412 Harmful to aquatic life with long lasting effects
- H290 May be corrosive to metals
- H303 May be harmful if swallowed
- H350 May cause cancer.

DISCLAIMER

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