

SAFETY DATA SHEET

1. Identification

Product identifier	U-2000	
Other means of identification		
Product Number	4002808	
Recommended use	Not available.	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company name	Thatcher Company	
Address	1905 Fortune Road Salt Lake City, UT 84104 United States	
Telephone	General Assistance 8-5	(801) 972-4587
E-mail	Not available.	
Emergency phone number	Chemtec (CCN 22106)	(800) 424-9300

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 1A
	Serious eye damage/eye irritation	Category 1
	Carcinogenicity	Category 1A
	Specific target organ toxicity, repeated exposure	Category 2
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Danger	
Hazard statement	Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. May cause damage to organs through prolonged or repeated exposure.	
Precautionary statement		
Prevention	Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.	
Response	If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. 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 center/doctor. Wash contaminated clothing before reuse.	
Storage	Store locked up.	
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.	
Hazard(s) not otherwise classified (HNOC)	None known.	
Supplemental information	88.49% of the mixture consists of component(s) of unknown acute oral toxicity.	

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Nitric Acid Tech Gr (50 - 55%)		7697-37-2	44.44
Phosphoric acid		7664-38-2	10.01
Sulfuric acid		7664-93-9	1 - < 3
Other components below reportable levels			40 - < 50

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Eye contact

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 center immediately.

Ingestion

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed

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. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed

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.

General information

If you feel unwell, seek medical advice (show the label where possible). 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

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

Not applicable.

Special protective equipment and precautions for firefighters

Wear suitable protective equipment.

Fire fighting equipment/instructions

Move containers from fire area if you can do so without risk.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Stop the flow of material, if this is without risk. Following product recovery, flush area with water.

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

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Provide adequate ventilation. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

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

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Nitric Acid Tech Gr (50 - 55%) (CAS 7697-37-2)	PEL	5 mg/m3
		2 ppm
Phosphoric acid (CAS 7664-38-2)	PEL	1 mg/m3
Sulfuric acid (CAS 7664-93-9)	PEL	1 mg/m3

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Nitric Acid Tech Gr (50 - 55%) (CAS 7697-37-2)	STEL	4 ppm	
	TWA	2 ppm	
Phosphoric acid (CAS 7664-38-2)	STEL	3 mg/m3	
	TWA	1 mg/m3	
Sulfuric acid (CAS 7664-93-9)	TWA	0.2 mg/m3	Thoracic fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Nitric Acid Tech Gr (50 - 55%) (CAS 7697-37-2)	STEL	10 mg/m3
		4 ppm
	TWA	5 mg/m3
		2 ppm
Phosphoric acid (CAS 7664-38-2)	STEL	3 mg/m3
	TWA	1 mg/m3
Sulfuric acid (CAS 7664-93-9)	TWA	1 mg/m3

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

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

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Keep away from food and drink. 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 Clear, Red Liquid

Physical state Liquid.

Form Liquid.

Color	Not available.
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	181.4 °F (83 °C) 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.
Vapor pressure	Not available.
Vapor 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.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	10.00 lbs/gal estimated
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Percent volatile	43.89 % estimated
Specific gravity	1.2 estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Alcohols.
Hazardous decomposition products	Nitrogen oxides (NOx).

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause damage to organs through prolonged or repeated exposure by inhalation. May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns. Harmful if swallowed.

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

Acute toxicity Harmful if swallowed.

Components	Species	Test Results
Nitric Acid Tech Gr (50 - 55%) (CAS 7697-37-2)		
<u>Acute</u>		
Inhalation		
LC50	Mouse	244 mg/l, 30 Minutes 67 mg/l, 4 Hours
	Rat	138 mg/l, 30 Minutes 65 mg/l, 4 Hours
Phosphoric acid (CAS 7664-38-2)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	2740 mg/kg
Oral		
LD50	Rat	1530 mg/kg
Sulfuric acid (CAS 7664-93-9)		
<u>Acute</u>		
Inhalation		
LC50	Guinea pig	0.018 mg/l, 8 Hours
	Rat	347 mg/l, 1 Hours
Oral		
LD50	Rat	2140 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Causes severe skin burns and eye damage.

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

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

Carcinogenicity Risk of cancer cannot be excluded with prolonged exposure.

IARC Monographs. Overall Evaluation of Carcinogenicity

Sulfuric acid (CAS 7664-93-9) 1 Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

Sulfuric acid (CAS 7664-93-9) Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard Not an aspiration hazard.

Chronic effects May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Sulfuric acid (CAS 7664-93-9)		
Aquatic		
Fish	LC50	Western mosquitofish (<i>Gambusia affinis</i>) 42 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

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. 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

DOT

UN number	NA1760
UN proper shipping name	Compounds, cleaning liquid (Phosphoric, Nitric, Sulfuric Acid)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	B2, IB2, N37, T11, TP2, TP27
Packaging exceptions	154
Packaging non bulk	202
Packaging bulk	242

DOT BULK

BULK

UN number	NA1760
UN proper shipping name	Compounds, cleaning liquid (Phosphoric, Nitric, Sulfuric Acid)
Transport hazard class(es)	
Class	8
Label(s)	8
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	B2, IB2, N37, T11, TP2, TP27
Packaging exceptions	154
Packaging non bulk	202
Packaging bulk	242

IATA

UN number	NA1760
UN proper shipping name	Compounds, cleaning liquid

Transport hazard class(es)

Class 8
Subsidiary risk -
Label(s) 8

Packing group II

Environmental hazards No.

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo aircraft Forbidden.

Cargo aircraft only Forbidden.

IMDG

UN number NA1760

UN proper shipping name Compounds, cleaning liquid

Transport hazard class(es)

Class 8
Subsidiary risk -
Label(s) 8

Packing group II

Environmental hazards

Marine pollutant No.

EmS Not available.

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; DOT Bulk packaging type**IATA; IMDG****15. Regulatory information****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)

Nitric Acid Tech Gr (50 - 55%) (CAS 7697-37-2)	Listed.
Phosphoric acid (CAS 7664-38-2)	Listed.
Sulfuric acid (CAS 7664-93-9)	Listed.

SARA 304 Emergency release notification

Nitric Acid Tech Gr (50 - 55%) (CAS 7697-37-2)	1000 LBS
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Sulfuric acid (CAS 7664-93-9)

1000 LBS

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
Nitric Acid Tech Gr (50 - 55%)	7697-37-2	1000	1000 lbs		
Sulfuric acid	7664-93-9	1000	1000 lbs		

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Nitric Acid Tech Gr (50 - 55%)	7697-37-2	44.44
Sulfuric acid	7664-93-9	1 - < 3

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Nitric Acid Tech Gr (50 - 55%) (CAS 7697-37-2)
Sulfuric acid (CAS 7664-93-9)

Safe Drinking Water Act (SDWA) Not regulated.

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 - New Jersey RTK - Substances: Listed substance

Nitric Acid Tech Gr (50 - 55%) (CAS 7697-37-2)
Phosphoric acid (CAS 7664-38-2)
Sulfuric acid (CAS 7664-93-9)

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Nitric Acid Tech Gr (50 - 55%) (CAS 7697-37-2)
Phosphoric acid (CAS 7664-38-2)
Sulfuric acid (CAS 7664-93-9)

US. Massachusetts RTK - Substance List

Nitric Acid Tech Gr (50 - 55%) (CAS 7697-37-2)
Phosphoric acid (CAS 7664-38-2)
Sulfuric acid (CAS 7664-93-9)

US. New Jersey Worker and Community Right-to-Know Act

Nitric Acid Tech Gr (50 - 55%) (CAS 7697-37-2)
Sulfuric acid (CAS 7664-93-9)

US. Pennsylvania RTK - Hazardous Substances

Nitric Acid Tech Gr (50 - 55%) (CAS 7697-37-2)
Phosphoric acid (CAS 7664-38-2)

Sulfuric acid (CAS 7664-93-9)

US. Pennsylvania Worker and Community Right-to-Know Law

Nitric Acid Tech Gr (50 - 55%) (CAS 7697-37-2)

Phosphoric acid (CAS 7664-38-2)

Sulfuric acid (CAS 7664-93-9)

US. Rhode Island RTK

Nitric Acid Tech Gr (50 - 55%) (CAS 7697-37-2)

Phosphoric acid (CAS 7664-38-2)

Sulfuric acid (CAS 7664-93-9)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Rhodamine B dye (CAS 81-88-9)

Listed: July 1, 1990

Sulfuric acid (CAS 7664-93-9)

Listed: March 14, 2003

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
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
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
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, including date of preparation or last revision

Issue date 04-29-2015

Version # 01

NFPA ratings Health: 3
Flammability: 0
Instability: 0

NFPA ratings



Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision Information

Product and Company Identification: Product and Company Identification