

Issuing Date 28-Nov-2017

Revision Date 26-Nov-2017

Revision B

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name P400SC™ Waterworks™ Cleaning Solution

Other means of identification

Product Code(s) SDS-400625 EN A

PN (Part Number) 300-00600

UN/ID no. UN1823

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Additive manufacturing Solvent

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address

Stratasys Corporate headquarters United States
9600 West 76th Street Suite #108
Eden Prairie, MN 55344
United States
Local: +1 952-294-3900
Phone: +1 952-937-3000

Manufacturer Address

Produced under authority of Stratasys, Ltd.
Manufactured by:
Seacole CRC, LLC
13505 Industrial Park Boulevard
Plymouth, MN 55441

Emergency telephone number

Emergency Telephone

- +44 1865 407333 - Global – English Language response
- +44 1235 239670 - Europe - Multi lingual response
- +1 215 207 0061 - USA – Multi-lingual response
- +65 3158 1074 - Asia Pacific - Multi lingual response
- +61 2 8014 4558 - Australia - English Language response
- +86 512 8090 3042 - China - Chinese response

E-mail address info@Stratasys.com

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1

Label elements

4. FIRST AID MEASURES

Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Wear personal protective clothing (see section 8). Avoid breathing dust/fume/gas/mist/vapors/spray. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms	Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	CAUTION: Use of water spray when fighting fire may be inefficient.
Specific hazards arising from the chemical	No information available.
Explosion data	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid generation of dust. Do not breathe dust.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

Prevention of secondary hazards May form combustible dust concentrations in air if small particles are generated during further processing, handling or by other means. Avoid dust accumulation in enclosed space. Prevent dust cloud. Remove all sources of ignition.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium hydroxide 1310-73-2	Ceiling: 2 mg/m ³	TWA: 2 mg/m ³ (vacated) Ceiling: 2 mg/m ³	IDLH: 10 mg/m ³ Ceiling: 2 mg/m ³

Appropriate engineering controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Face protection shield.

Hand Protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid breathing dust/fume/gas/mist/vapors/spray.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Solid
Appearance Powder
Odor None
Color White
Odor threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility in other solvents	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point No information available
Molecular weight No information available
VOC Content (%) No information available

Liquid Density No information available
 Bulk density No information available

10. STABILITY AND REACTIVITY

Reactivity No information available.
 Chemical stability Stable under normal conditions.
 Possibility of hazardous reactions None under normal processing.
 Conditions to avoid None known based on information supplied.
 Incompatible materials None known based on information supplied.
 Hazardous decomposition products Burning produces obnoxious and toxic fumes. Carbon monoxide. Carbon dioxide (CO2). Aldehydes.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.
 Eye contact Specific test data for the substance or mixture is not available.
 Skin contact Specific test data for the substance or mixture is not available.
 Ingestion Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

Information on toxicological effects

Symptoms Redness. Burning. May cause blindness. Coughing and/ or wheezing.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 5,544.00 mg/kg
 ATEmix (dermal) 5,546.00 mg/kg
 ATEmix (inhalation-dust/mist) 1.70 mg/l

Unknown acute toxicity 3.85 % of the mixture consists of ingredient(s) of unknown toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium carbonate 497-19-8	= 4090 mg/kg (Rat)	-	= 2300 mg/m ³ (Rat) 2 h
Sodium hydroxide 1310-73-2	-	= 1350 mg/kg (Rabbit)	-
Disodium metasilicate 6834-92-0	= 1153 mg/kg (Rat)	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sodium carbonate 497-19-8	242: 120 h Nitzschia mg/L EC50	300: 96 h Lepomis macrochirus mg/L LC50 static 310 - 1220: 96 h Pimephales promelas mg/L LC50 static	-	265: 48 h Daphnia magna mg/L EC50
Sodium hydroxide 1310-73-2	-	45.4: 96 h Oncorhynchus mykiss mg/L LC50 static	-	-
Disodium metasilicate 6834-92-0	-	210: 96 h Brachydanio rerio mg/L LC50 semi-static 210: 96 h Brachydanio rerio mg/L LC50	-	216: 96 h Daphnia magna mg/L EC50

Persistence and degradability	No information available.
Bioaccumulation	There is no data for this product.
Other adverse effects	No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.
US EPA Waste Number	D002.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Sodium carbonate 497-19-8	Corrosive
Sodium hydroxide 1310-73-2	Toxic Corrosive

14. TRANSPORT INFORMATION

DOT

UN/ID no. UN1823
 Proper Shipping Name SODIUM HYDROXIDE, SOLID
 Hazard Class 8
 Packing group II
 Special Provisions IB8, IP2, IP4, T3, TP33
 Description UN1823, SODIUM HYDROXIDE, SOLID, 8, II
 Emergency Response Guide Number 154

TDG

UN/ID no. UN1823
 Proper Shipping Name SODIUM HYDROXIDE, SOLID
 Hazard Class 8
 Packing group II
 Description UN1823, SODIUM HYDROXIDE, SOLID, 8, II

MEX

UN/ID no. UN1823
 Proper Shipping Name SODIUM HYDROXIDE, SOLID
 Hazard Class 8
 Packing group II
 Description UN1823, SODIUM HYDROXIDE, SOLID, 8, II

ICAO (air)

UN/ID no. UN1823
 Proper Shipping Name SODIUM HYDROXIDE, SOLID
 Hazard Class 8
 Packing group II
 Description UN1823, SODIUM HYDROXIDE, SOLID, 8, II

IATA

UN Number UN1823
 Transport hazard class(es) 8
 Packing group II
 ERG Code 8L
 Description UN1823, Sodium hydroxide, solid, 8, II

IMDG

UN Number UN1823
 Transport hazard class(es) 8
 Packing group II
 EmS-No. F-A, S-B
 Description UN1823, SODIUM HYDROXIDE, SOLID, 8, II

RID

UN Number	UN1823
UN proper shipping name	SODIUM HYDROXIDE, SOLID
Transport hazard class(es)	8
Packing group	II
Classification code	C6
Description	UN1823, SODIUM HYDROXIDE, SOLID, 8, II
Labels	8

ADR

UN Number	UN1823
UN proper shipping name	SODIUM HYDROXIDE, SOLID
Transport hazard class(es)	8
Packing group	II
Classification code	C6
Tunnel restriction code	(E)
Description	UN1823, SODIUM HYDROXIDE, SOLID, 8, II
Labels	8

ADN

UN/ID no	UN1823
UN proper shipping name	SODIUM HYDROXIDE, SOLID
Transport hazard class(es)	8
Packing group	II
Classification code	C6
Description	UN1823, SODIUM HYDROXIDE, SOLID, 8, II
Hazard label(s)	8
Limited quantity (LQ)	1 kg

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No

Sudden release of pressure hazard No
 Reactive Hazard No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hydroxide 1310-73-2	1000 lb	-	-	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sodium hydroxide 1310-73-2	1000 lb	-	RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

US State Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sodium hydroxide 1310-73-2	X	X	X
Sodium sulfate 7757-82-6	-	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA Health hazards 3 Flammability 0 Instability 0 Physical and chemical properties -
HMIS Health hazards 3 Flammability 0 Physical hazards 0 Personal protection X

Issuing Date 09-Dec-2015
 Revision Date 26-Nov-2017
 Revision Note No information available.

Disclaimer

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End of Safety Data Sheet