SAFETY DATA SHEET

Issuing date 09-Dec-2015 **Revision Date** 09-Dec-2015 **Revision Number** 0

Section 1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

SSYS Part Number 400625-0002

Product name **P400SC™ Waterworks™ Cleaning Solution**

Synonyms Alkaline cleaning agent
Contains Sodium hydroxide

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use Additive manufacturing

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Importer
Stratasys GMBH
Simon Hegele
Gesellschaft für Logistik und Service mbH
Tejostraße 1-9 (Unit 5, Gate 67)
65479 Raunheim
Germany
TEL: +49 722 977720

Supplier
Stratasys Inc
7665 Commerce Way
Eden Prairie, MN
55344
TEL: 1(952) 937 3000

For further information, please contact

E-mail address objet-info@stratasys.com

1.4. Emergency telephone number

Emergency Telephone Number 1(952) 937 3000
+49 722 97772280 - Europe - Multi lingual response
+49 722 97772281 - Global - English language response

Europe	112

Section 2. Hazards identification

2.1. - Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Skin corrosion/irritation	Category 1 Subcategory 1A
Serious eye damage/eye irritation	Category 1

Physical hazards

none

2.2. Label elements

Signal Word **Danger**

Hazard statements
H314 - Causes severe skin burns and eye damage

Precautionary statements
P264 - Wash face, hands and any exposed skin thoroughly after handling
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
P363 - Wash contaminated clothing before reuse
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
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 centre or doctor/ physician

2.3. Other information

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances
3.2. Mixtures

Chemical Name	EC-No	CAS-No	Weight percent	EU - GHS Substance Classification	REACH No.
Sodium carbonate	207-838-8	497-19-8	60-70	Eye Irrit. 2 (H319)	no data available
Sodium hydroxide	215-185-5	1310-73-2	20-30	Skin Corr. 1A (H314)	no data available
Sodium lauryl sulfate	205-788-1	151-21-3	1-5		no data available
Sodium metasilicate	229-912-9	6834-92-0	1-5	Skin Corr. 1B (H314) STOT SE 3 (H335)	no data available

For the full text of the H-Statements mentioned in this Section, see Section 16

Section 4. First aid measures

4.1. Description of first aid measures

General advice Immediate medical attention is required.

Eye contact Immediate medical attention is required. 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.

Skin contact Immediate medical attention is required. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

Ingestion Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control centre immediately.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.

Protection of first-aiders Use personal protective equipment. Avoid contact with skin, eyes and clothing.

4.2. Most important symptoms and effects, both acute and delayed

Most Important Symptoms/Effects Corrosive. Serious eye irritation or damage.

4.3. Indication of immediate medical attention and special treatment needed

Notes to physician 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 oedema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.

Section 5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media
Water spray. Dry powder. Carbon dioxide (CO_2). Foam.

Extinguishing Media Which Must not be Used for Safety Reasons
No information available.

5.2. Special hazards arising from the substance or mixture

Special Exposure Hazards Arising from the Substance or Preparation Itself, Combustion Products, Resulting Gases
Burning produces noxious and toxic fumes. Carbon monoxide. Carbon dioxide (CO_2). Nitrogen oxides (NOx).

5.3. Advice for firefighters

Special protective equipment for fire-fighters
As in any fire, wear self-contained breathing apparatus and full protective gear.

Section 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Attention! Corrosive material. Evacuate personnel to safe areas. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak. High risk of slipping due to leakage/spillage of product. Avoid inhalation of dust. Avoid dust formation. Refer to Section 8 for personal protective equipment.

6.2. Environmental precautions

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Should not be released into the environment. See Section 12 for additional Ecological Information.

6.3. Methods and materials for containment and cleaning up

Sweep up and shovel into suitable containers for disposal.

6.4. Reference to other sections

See Section 12 for additional information.

Section 7. Handling and storage

7.1. Precautions for safe handling

Handling
Handle in accordance with good industrial hygiene and safety practise. Avoid dust formation. Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Avoid breathing dust. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Do not take internally. Wash thoroughly after handling.

Hygiene measures
When using, do not eat, drink or smoke. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. For environmental protection, remove and wash all contaminated protective equipment before re-use. Wear suitable gloves and eye/face protection.

7.2. Conditions for safe storage, including any incompatibilities
Keep tightly closed in a dry and cool place. Keep away from direct sunlight. Keep away from heat. Store away from incompatible materials. See Section 10 for Incompatibles.

7.3. Specific end uses
Exposure scenario
No information available

Other Guidelines
No information available

Section 8. Exposure controls/personal protection

8.1. Control parameters

Exposure limits

Chemical Name	European Union	The United Kingdom	France	Spain	Germany
Sodium hydroxide 1310-73-2		STEL: 2 mg/m³	TWA: 2 mg/m³	STEL: 2 mg/m³	
Component	**Italy**	**Portugal**	**The Netherlands**	**Finland**	**Denmark**
Sodium hydroxide 1310-73-2 (20-30)		Ceiling: 2 mg/m³		STEL: 2 mg/m³ Ceiling: 2 mg/m³	Ceiling: 2 mg/m³
Chemical Name	**Austria**	**Switzerland**	**Poland**	**Norway**	**Ireland**
Sodium hydroxide 1310-73-2	STEL 4 mg/m³ TWA: 2 mg/m³	STEL: 2 mg/m³ TWA: 2 mg/m³	STEL: 1 mg/m³ TWA: 0.5 mg/m³	Ceiling: 2 mg/m³	STEL: 2 mg/m³

Derived No Effect Level No information available.
Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering measures Ensure adequate ventilation, especially in confined areas.
Personal protective equipment
Eye Protection Tightly fitting safety goggles.
Skin and body protection impervious clothing.
Hand protection Impervious gloves.
Respiratory protection No protective equipment is needed under normal use conditions. Effective dust mask.

Environmental Exposure Controls No information available.

Section 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State	Solid (powder)	**Appearance**	white
Odour	none		

Property	Values	Remarks/ - Method
pH	no data available	None known
Melting point/range	no data available	None known
Boiling point/boiling range	no data available	None known
Flash point	no data available	None known
Evapouration rate	no data available	None known
Flammability (solid, gas)	no data available	None known
Vapour pressure	no data available	None known
Vapour 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: n-octanol/water	no data available	None known
Autoignition temperature	no data available	None known
Decomposition temperature	no data available	None known
Viscosity	no data available	None known
Explosive properties	no data available	
Oxidising properties	no data available	

9.2. Other information

VOC Content (%)	No information available
Flammability Limits in Air	no data available

Section 10. Stability and reactivity

10.1. Reactivity
No data available.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
None under normal processing.

10.4. Conditions to avoid
Incompatible products. Heat, flames and sparks. Static discharge.

Incompatible materials
Strong reducing agents. Strong oxidising agents. Metals.

10.6. Hazardous decomposition products
Burning produces noxious and toxic fumes. Carbon oxides. Nitrogen oxides (NOx). Ammonia.

Section 11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Product Information	.
Inhalation	Inhalation of dust in high concentration may cause irritation of respiratory system.
Eye contact	Causes serious eye damage. Corrosive to the eyes and may cause severe damage including blindness.
Skin contact	Corrosive. Causes severe skin burns.
Ingestion	May be harmful if swallowed. Ingestion of corrosive substances can cause burns of the upper digestive and respiratory tract.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium carbonate	= 4090 mg/kg (Rat)		
Sodium hydroxide	-	1350 mg/kg (Rabbit)	-
Sodium lauryl sulfate	= 1288 mg/kg (Rat)	= 580 mg/kg (Rabbit)	>3900 mg/m³ (Rat) 1 h
Sodium metasilicate	= 600 mg/kg (Rat)		

Sensitisation No information available.
Mutagenic effects No information available.
Carcinogenic effects No information available.

Reproductive toxicity No information available.
Developmental Toxicity No information available.
Specific target organ systemic toxicity (single exposure) No information available.
Specific target organ systemic toxicity (repeated exposure) No information available.
Target Organ Effects Eyes. Respiratory system. Skin.
Aspiration hazard No information available.

Section 12. Ecological information

12.1. Toxicity

Ecotoxicity effects
Harmful to aquatic organisms.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia magna (Water flea)
Sodium carbonate	EC50 120 h: = 242 mg/L (Nitzschia)	LC50 96 h: = 300 mg/L static (Lepomis macrochirus) LC50 96 h: 310 - 1220 mg/L static (Pimephales promelas)		EC50 48 h: = 265 mg/L (Daphnia magna)
Sodium hydroxide		LC50 96 h: = 45.4 mg/L static (Oncorhynchus mykiss)		

Sodium lauryl sulfate	EC50 72 h: = 53 mg/L (Desmodesmus subspicatus) EC50 96 h: 30 - 100 mg/L (Desmodesmus subspicatus) EC50 96 h: = 117 mg/L (Pseudokirchneriella subcapitata) EC50 96 h: 3.59 - 15.6 mg/L static (Pseudokirchneriella subcapitata)	LC50 96 h: 8 - 12.5 mg/L static (Pimephales promelas) LC50 96 h: 15 - 18.9 mg/L static (Pimephales promelas) LC50 96 h: 22.1 - 22.8 mg/L static (Pimephales promelas) LC50 96 h: 4.3 - 8.5 mg/L static (Oncorhynchus mykiss) LC50 96 h: = 4.62 mg/L flow-through (Oncorhynchus mykiss) LC50 96 h: = 4.2 mg/L (Oncorhynchus mykiss) LC50 96 h: = 7.97 mg/L flow-through (Brachydanio rerio) LC50 96 h: 9.9 - 20.1 mg/L semi-static (Brachydanio rerio) LC50 96 h: 4.06 - 5.75 mg/L static (Lepomis macrochirus) LC50 96 h: 4.2 - 4.8 mg/L flow-through (Lepomis macrochirus) LC50 96 h: = 4.5 mg/L (Lepomis macrochirus) LC50 96 h: 5.8 - 7.5 mg/L static (Pimephales promelas) LC50 96 h: 10.2 - 22.5 mg/L semi-static (Pimephales promelas) LC50 96 h: 6.2 - 9.6 mg/L (Pimephales promelas) LC50 96 h: 13.5 - 18.3 mg/L semi-static (Poecilia reticulata) LC50 96 h: 10.8 - 16.6 mg/L static (Poecilia reticulata) LC50 96 h: = 1.31 mg/L semi-static (Cyprinus carpio)	EC50 = 0.46 mg/L 30 min EC50 = 0.72 mg/L 15 min EC50 = 1.19 mg/L 5 min	EC50 48 h: = 1.8 mg/L (Daphnia magna)
Sodium metasilicate		LC50 96 h: = 210 mg/L semi-static (Brachydanio rerio) LC50 96 h: = 210 mg/L (Brachydanio rerio)		EC50 96 h: = 216 mg/L (Daphnia magna)

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

Chemical Name	log Pow
Sodium lauryl sulfate	1.6

12.4. Mobility in soil

Adsorbs on soil.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

This product does not contain any known or suspected endocrine disruptors

Section 13. Disposal considerations

13.1. Waste treatment methods

Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packageing	Do not re-use empty containers.
Other Information	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

Section 14. Transport information

IMDG/IMO

14.1. UN-Number	UN1823
14.2. Proper shipping name	Sodium hydroxide, solid mixture
14.3. Hazard class	8
14.4. Packing group	II
Description	UN1823, Sodium hydroxide, solid mixture, 8, II
14.5. Marine pollutant	None.
14.6. Special Provisions	none.
EmS	F-A, S-B
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

RID

14.1. UN-Number	UN1823
14.2. Proper shipping name	Sodium hydroxide, solid mixture
14.3. Hazard class	8
14.4. Packing group	II
Description	UN1823, Sodium hydroxide, solid mixture, 8, II
14.5. Environmental hazard.	None
14.6. Special Provisions	none.
Classification Code	C6

ADR

14.1. UN-Number	UN1823
14.2. Proper shipping name	Sodium hydroxide, solid mixture
14.3. Hazard class	8
14.4. Packing group	II
Description	UN1823, Sodium hydroxide, solid mixture, 8, II, (E)
14.5. Environmental hazard.	None
14.6. Special Provisions	None
Classification Code	C6
Tunnel Restriction Code	(E)

ICAO

14.1. UN-Number	UN1823
14.2. Proper shipping name	Sodium hydroxide, solid mixture
14.3. Hazard class	8

14.4. Packing group	II
Description	UN1823, Sodium hydroxide, solid mixture, 8, II
14.5. Environmental hazard.	None
14.6. Special Provisions	None

IATA

14.1. UN-Number	UN1823
14.2. Proper Shipping Name	Sodium hydroxide, solid mixture
14.3. Hazard class	8
14.4. Packing group	II
Description	UN1823, Sodium hydroxide, solid mixture, 8, II
14.5. Environmental hazard.	None
14.6. Special Provisions	None
ERG Code	8L

Section 15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories

TSCA	Complies
EINECS/ELINCS	not determined
DSL/NDSL	not determined
PICCS	not determined
ENCS	not determined
IECSC	not determined -
AICS	not determined
KECL	not determined

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

15.2. Chemical Safety Assessment
No information available

Section 16. Other information

Full text of H-Statements referred to under sections 2 and 3
H314 - Causes severe skin burns and eye damage
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation

Key literature references and sources for data
www.ChemADVISOR.com/

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This safety data sheet complies with the requirements of Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No. 1907/2006

Disclaimer
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End of Safety Data Sheet