SAFETY DATA SHEET

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Section 1 – Product and Company Identification

1.1 Product name: Synple Chem reagent cartridge
1.2 Product code: Boc protecting group removal B011
1.3 Recommended Use: Laboratory chemical consumable
1.4 Company Name: Synple Chem AG,
Vladimir-Prelog-Weg 3,
CH-8093 Zürich,
Switzerland

1.5 Contact Details: Telephone: +41 (0)44 633 42 95
8:00 a.m. – 5:00 p.m. CET
email: info@synplechem.com

Section 2 – Hazards Identification

2.1 Classification of the substance or mixture

Labelling according to Regulation (EC) No 1272/2008

p-Toluenesulfonic acid monohydrate
Corrosive to metals (Category 1),
H290 Skin irritation (Category 2),
H315 Eye irritation (Category 2),
H319 Specific target organ toxicity - single exposure (Category 3),
Respiratory system, H335

Si-triethylamine
Acute toxicity, Oral (Category 4), H302
Acute toxicity, Dermal (Category 4), H312
Skin irritation (Category 2), H315
Serious eye damage (Category 1), H318

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

p-Toluenesulfonic acid monohydrate

Pictogram

Signal word: Warning

Hazard statement(s)

H290	May be corrosive to metals.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Precautionary statement(s)	
P302 + P352	IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statement(s)	None

Si-triethylamine

Pictogram	
Signal word	Warning
Hazard statement(s)	
H332	Harmful if inhaled.
H320	Causes eye irritation.
Precautionary statement(s)	
P280	Wear protective gloves/ 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.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water
P304 + P340 + P341	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P301 +P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
Supplemental Hazard Statement(s)	none

2.3 Other hazards

none

Section 3 – Composition / Information on Ingredients

Name:	p-Toluenesulfonic acid monohydrate
Synonyms	ptoluenesulfonic acid
Formula	$C_7H_8O_3S \cdot H_2O$
Molecular Weight	190.22 g/mol
Classification	**Component = p-Toluenesulfonic acid**

		Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H315, H319, H335 Concentration limits: >= 20 %: STOT SE 3, H335;	
CAS – No.	EC – No.	Index – No.	Concentration
6192-52-5	203-180-0	016-030-00-2	< = 100%
Classification		**Component = Sulfuric acid** Met. Corr. 1; Skin Corr. 1A; Eye Dam. 1; H290, H314, H318 Concentration limits: >= 15 %: Skin Corr. 1A, H314; 5 - < 15 %: Skin Irrit. 2, H315; 5 - < 15 %: Eye Irrit. 2, H319; >= 1 %: Met. Corr. 1, H290;	
CAS – No.	EC – No.	Index – No.	Concentration
7664-93-9	231-639-5	016-020-00-8	> = 1 - < 3 %

Name:		Si-triethylamine	
Synonyms		Triethylamine-Derivatized Silica Gel	
Formula		–	
Molecular Weight		–	
Classification		–	
CAS – No.	EC – No.	Index – No.	Concentration
–	–	–	< = 100%

Section 4 – First Aid Measures

4.1 Inhalation

If inhaled, move affected person to fresh air. If breathing is difficult give oxygen. If breathing has stopped give artificial respiration. Seek medical attention.

Skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

Eye contact

Wash thoroughly with plenty of water for at least 15 minutes, separating the eyelids with the fingers. If eye irritation persists, seek medical attention.

Ingestion

Rinse mouth with plenty of water if person is conscious. Never give anything by mouth to an unconscious person. Consult a physician.

Section 5 – Fire-Fighting Measure

5.1 Suitable Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

5.2 Special hazards arising from the cartridge substances or mixtures

Carbon oxides.
Sulfur oxides.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Section 6 – Accidental Release Measures

6.1 Personal precautions
In case of a damaged cartridge or leaking reagent out of the cartridge avoid breathing dust and vapours, mist or gas. Ventilate the area thoroughly and shut of sources of ignition. Evacuate personnel to safe areas Avoid raising dust. Use protective equipment described in Section 8.

6.2 Environmental precautions
Do net let the materials inside the cartridge enter the drain.

6.3 Methods and materials for containment and cleaning up
Contain spilled cartridge material and pick up without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal. For disposal see Section 13.

Section 7– Handling and Storage

7.1 Precautions for safe handling
Do not try to open the reagent cartridge.

7.2 Conditions for safe storage
Keep cartridge in sealed closed bag. Store below 8°C, out of direct sunlight and away from incompatible substances.

7.3 Specific end-usage
Use only in the application the cartridge intended for. Only use with Synple Chem synthesizer devices.

Section 8 – Exposure Controls / Personal Protection

8.1 Personal protective equipment

Respiratory protection
Respiratory protection is not required when materials are contained in the cartridge. When spilled see Section 6.

Hand protection
Handle with gloves. The selected protective gloves have to satisfy the specifications of the EU Directive 89 / 686 / EEC and the standard EN 374 derived from it. Gloves must be inspection prior to use. Use proper glove removal technique (without touching the outer surface of the glove) to avoid skin contact with the product. Dispose of gloves after use in accordance with applicable regulations and good laboratory practice. Wash and dry hands.

Eye protection
Safety glasses with side – shields conforming to EN 166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin and body protection
Choose body protection according with good laboratory practices and to specific workplace.

Hygiene measure

Handle in accordance with good laboratory hygiene and safe practice. Wash hands before breaks and at the end of the workday.

Section 9 – Physical and Chemical Properties

9.1 Appearance

Form:	Plastic Reagent Cartridge Filled with solid reagents / powder
Colour:	White / Brown

9.2 Safety Data

pH	No data available
Melting point	No data available
Boiling point	No data available
Flash point	No data available
Ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Water solubility	Insoluble

Section 10 – Stability and Reactivity

10.1 Chemical Stability
Stable under recommended storage conditions for at least 1 year

10.2 Conditions to avoid
Avoid temperatures above 60°C, long exposure to air and moisture

10.3 Materials to avoid
Strong oxidizing agents or corrosive chemicals

10.4 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions – monomers, carbon dioxide and / or carbon monoxide, nitrogen oxides, boron oxides, borane

Section 11 – Toxicological Information

11.1 Acute Toxicity
p-Toluenesulfonic acid monohydrate: LD50 Oral - Rat - 2,570 mg/kg Remarks: (RTECS)
Si-Et_3N: No data available

11.2 Skin corrosion / irritation
No data available

11.3 Serious eye damage / eye irritation
p-Toluenesulfonic acid monohydrate: Eyes - Rabbit Result: Severe irritations Remarks: (anhydrous substance) (IUCLID)
Si-Et_3N: No data available

11.4 Respiratory or skin sensation

p-Toluenesulfonic acid monohydrate: Sensitisation test: - Guinea pig Result: negative (OECD Test Guideline 406)
Si-Et_3N: No data available

11.5 Germ cell mutagenicity
p-Toluenesulfonic acid monohydrate: Ames test Result: negative
Si-Et_3N: No data available

11.6 Carcinogenicity
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NPT or EPA classification

11.7 Reproductive toxicity
No data available

11.8 Specific target organ toxicity – single exposure
p-Toluenesulfonic acid monohydrate: May cause respiratory irritation. - Respiratory system; Acute oral toxicity - Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract., gastric pain; Acute inhalation toxicity - Irritation symptoms in the respiratory tract., mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract
Si-Et_3N: No data available

11.9 Specific target organ toxicity – repeated exposure
No data available

11.10 Aspiration hazard
No data available

11.11 Additional information

Silica:
RTECS: VV7315000
Amorphous silica is not classifiable as to its carcinogenicity to humans (Group 3); however, crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1, IARC). Therefore, amorphous silica should be handled as if possessing the same hazards as the crystalline form., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

p-Toluenesulfonic acid:
RTECS: Not available
Burning sensation, cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Other dangerous properties cannot be excluded. Handle in accordance with good industrial hygiene and safety practice.

Section 12 – Ecological Information

12.1 Toxicity

p-Toluenesulfonic acid:

Toxicity to fish LC50 - Lepomis macrochirus (Bluegill sunfish) - > 500 mg/l - 96 h; Remarks: (anhydrous substance)(IUCLID)
Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - > 500 mg/l - 96 h; Remarks: (anhydrous substance)(IUCLID)
Toxicity to algae IC50 - Chlorella vulgaris (Fresh water algae) - 245 mg/l - 96 h; Remarks: (anhydrous substance)(IUCLID)
Toxicity to bacteria EC0 - Bacteria - > 2,500 mg/l - 24 h; Remarks: (anhydrous substance)(IUCLID)

Si-Et_3N:
No data available

12.2 Persistence and degradability

p-Toluenesulfonic acid:
Biodegradability Result: 79 % - Readily eliminated from water (OECD Test Guideline 302B)
Remarks: (anhydrous substance)

Si-Et_3N:
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
No data available

12.6 Other adverse effects

p-Toluenesulfonic acid:
Harmful effect due to pH shift. Discharge into the environment must be avoided.

Si-Et_3N:
No data available

Section 13 – Disposal Considerations

13.1 Product (Reagent cartridge)
Contact a licensed professional waste disposal service to dispose of this material. Combine the cartridge with a combustible solvent and burn in a chemical incinerator quipped with an afterburner and scrubber. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations.

13.2 Contaminated packaging
In case some chemical material will exit the cartridge and contaminate the outer packaging dispose the packaging in the same way as the cartridge.

13.3 Un-Contaminated Packaging
Can be disposed with regular waste

Section 14 – Transport Information

14.1 UN number
ADR/RID: 2585 IMDG: 2585 IATA: 2585

14.2 UN proper shipping name
ADR/RID: ARYLSULPHONIC ACIDS, SOLID
IMDG: ARYLSULPHONIC ACIDS, SOLID
IATA: Arylsulphonic acids, solid

14.3 Transport hazard class(es)
ADR/RID: 8
IMDG: 8
IATA: 8

14.4 Packaging group
ADR/RID: III
IMDG: III
IATA: III

14.5 Environmental hazards
ADR/RID: no
IMDG Marine pollutant: no
IATA: no

14.6 Special precautions for user
No data available

Section 15 – Regulatory Information

Not hazardous according to UN GHS, EU Regulation EC 1272 / 2008, or Directive 67 / 548 / EEC. Caution: This substance has not been fully tested (EC).

15.1 Safety, health and environmental regulations/legislation specific for the substrate or mixture
No data available

15.2 Chemical safety assessment
For this product a chemical safety assessment was not carried out.

Section 16 – Other Information

This product must only be handled by, or under close supervision of those qualified in the handling and use of potentially hazardous substances. This Safety Data Sheet is offered without charge to the clients of Synple Chem and it is issued only as a guide for safe handling, use, storage, disposal and release. Information contained on this sheet is the most current available to Synple Chem at the time of preparation but does not purport to be all inclusive or a guarantee as to the properties of the product supplied. Synple Chem makes no warranties or representations as to the accuracy and completeness of the information contained herein. Synple Chem shall not be held responsible for the suitability of this information for the user's intended purposes or the consequence of such use, and shall not be liable for any damage or loss, howsoever arising, direct or otherwise.