



**Kit Name:** Kit Polystyrene medium/low, calibration kit, nominal Mp 160 - 850,000 g/mol, 12 x 1.0 g

**Kit PN:** PSS-PSKITML

This product is a kit, composed of the following individual chemical components:

### Kit Components

PSS Component Part Number	Component Name	Volume or mass/ container and unit	No. of component containers/ kit
PSS-ps162	Poly(styrene) nominal Mw: 162 g/mol, 1000 mg	1.0 g	1
PSS-ps1k	Poly(styrene) nominal Mw: 1000 g/mol, 1000 mg	1.0 g	1
PSS-ps2.1k	Poly(styrene) nominal Mw: 2100 g/mol, 1000 mg	1.0 g	1
PSS-ps4.5k	Poly(styrene) nominal Mw: 4500 g/mol, 1000 mg	1.0 g	1
PSS-ps10k	Poly(styrene) nominal Mw: 10000 g/mol, 1000 mg	1.0 g	1
PSS-ps20k	Poly(styrene) nominal Mw: 20000 g/mol, 1000 mg	1.0 g	1
PSS-ps43k	Poly(styrene) nominal Mw: 43000 g/mol, 1000 mg	1.0 g	1
PSS-ps100k	Poly(styrene) nominal Mw: 100000 g/mol, 1000 mg	1.0 g	1
PSS-ps180k	Poly(styrene) nominal Mw: 180000 g/mol, 1000 mg	1.0 g	1
PSS-ps320k	Poly(styrene) nominal Mw: 320000 g/mol, 1000 mg	1.0 g	1
PSS-ps560k	Poly(styrene) nominal Mw: 560000 g/mol, 1000 mg	1.0 g	1
PSS-ps800k	Poly(styrene) nominal Mw: 800000 g/mol, 1000 mg	1.0 g	1

Applicable SDS/s for each component follow this cover sheet.

## 1. Identification of the substance and of the company

### 1.1 Product identifiers

Product name Polystyrene standard, nominal Mw 162 g/mol, 1 g  
(ItemNo: PSS-PS162)

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

Identified uses Laboratory chemicals, Manufacture of substances

### 1.3 Details of the supplier of the safety data sheet

Company PSS Polymer Standards Service GmbH  
In der Dalheimer Wiese 5  
D - 55120 Mainz

Technical phone +49 6131 - 96239 - 0  
Fax +49 6131 - 96239 -11  
Email sds@pss-polymer.com

### 1.4 Emergency telephone number

24-hour emergency contact number: +1 872 5888271 (PSS)

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## 2. Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

Specific target organ toxicity - single exposure (Category 3), H335

Acute aquatic toxicity (Category 1), H400

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

### 2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word Warning

Hazard statement(s)

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H400 Very toxic to aquatic life.

Precautionary statement(s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P273 Avoid release to the environment.

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 Statements none

### 2.3 Other hazards

none

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### 3. Composition / information on ingredients

#### 3.1 Substances

Synonyms: Hexylbenzene, 1-Phenylhexane  
Formula: C<sub>12</sub>H<sub>18</sub>  
Molecular Weight: 162,27 g/mol  
CAS-No.: 1077-16-3  
EC No.: 214-070-7

#### Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Hexylbenzene	Skin irritation 2; Eye irritation 2; Stot se 3; Acute aquatic toxicity 1; H315, H319, H335, H400	-

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

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### 4. First aid measures

#### 4.1 Description of first aid measures

##### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

##### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

##### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

##### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

##### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

#### 4.3 Indication of any immediate medical attention and special treatment needed

no data available

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### 5. Fire fighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

#### 5.2 Special hazards arising from the substance or mixture

Carbon oxides.

#### 5.3 Advice for fire fighters

Wear self-contained breathing apparatus for fire fighting if necessary.

#### 5.4 Further information

Use water spray to cool unopened containers.

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### 6. Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

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## 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

## 6.4 Reference to other sections

For disposal see section 13.

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## 7. Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge. For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

### 7.3 Specific end use(s)

A part from the uses mentioned in section 1.2 no other specific uses are stipulated.

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## 8. Exposure controls / personal protection

### 8.1 Control parameters

Components with workplace control parameters

### 8.2 Exposure controls

#### Appropriate engineering controls

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

#### Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,4 mm

Break through time: 480 min

Material tested: Camatril® (KCL 730)

#### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,2 mm

Break through time: 30 min

Material tested: Dermatril® P (KCL 743)

Data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

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## Body Protection

Impervious clothing; The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

## Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

## Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance	Form: clear, liquid Colour: colourless
Odour	no data available
Odour Threshold	no data available
pH	no data available
Melting point/freezing point	Melting point/range: -61 °C - lit.
Initial boiling point and boiling range	226 °C - lit.
Flash Point	83 °C - closed cup
Evaporation rate	no data available
Flammability	no data available
Upper/lower flammability or explosive limits	no data available
Vapour pressure	no data available
Vapour density	no data available
Relative density	0,861 g/cm <sup>3</sup> at 25 °C
Water solubility	no data available
Partition coefficient: n- Octanol/Water	no data available
Auto ignition temperature	no data available
Decomposition temperature	no data available
Viscosity	no data available
Explosive properties	no data available
Oxidizing properties	no data available

### 9.2 Other safety information

no data available

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## 10. Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

Heat, flames and sparks.

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

Other decomposition products - no data available In the event of fire: see section 5

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## 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

no data available

#### Skin corrosion/irritation

no data available

#### Serious eye damage/eye irritation

no data available

#### Respiratory or skin sensitisation

no data available

#### Germ cell mutagenicity

no data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

#### Reproductive toxicity

no data available

#### Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

#### Specific target organ toxicity - repeated exposure

no data available

#### Aspiration hazard

no data available

#### Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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## 12. Ecological information

### 12.1 Toxicity

no data available

### 12.2 Persistence and degradability

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

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

Very toxic to aquatic life.

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## 13. Disposal considerations

### 13.1 Waste treatment methods

#### Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

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## 14. Transport information

### 14.1 UN number

ADR/RID: 3082                      IMDG: 3082                      IATA: 3082

### 14.2 UN proper shipping name

ADR/RID: Environmentally hazardous substance, liquid, n.o.s. (Hexylbenzene)  
IMDG: Environmentally hazardous substance, liquid, n.o.s. (Hexylbenzene)  
IATA: Environmentally hazardous substance, liquid, n.o.s. (Hexylbenzene)

### 14.3 Transport hazard class(es)

ADR/RID: 9                              IMDG: 9                              IATA: 9

### 14.4 Packaging group

ADR/RID: III                              IMDG: III                              IATA: III

### 14.5 Environmental hazards

ADR/RID: yes                              IMDG Marine pollutant: no                      IATA: yes

### 14.6 Special precautions for user

#### Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

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## 15. Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

no data available

### 15.2 Chemical Safety Assessment

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

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## 16. Other information

### Full text of H-Statements referred to under sections 2 and 3.

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
stot se	Specific target organ toxicity - single exposure

## WARRANTY

The information in this document is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product. PSS GmbH shall not be held liable for any damage resulting from handling or from contact with the above product.

## DISCLAIMER

For R&D use only. Not for drug, household or other uses.

## 1. Identification of the substance and of the company

### 1.1 Product identifiers

Product name Polystyrene standard

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

Identified uses Laboratory chemicals, Manufacture of substances

### 1.3 Details of the supplier of the safety data sheet

Company PSS Polymer Standards Service GmbH  
In der Dalheimer Wiese 5  
D - 55120 Mainz

Technical phone +49 6131 - 96239 - 0  
Fax +49 6131 - 96239 -11  
Email sds@pss-polymer.com

### 1.4 Emergency telephone number

24-hour emergency contact number: +1 872 5888271 (PSS)

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## 2. Hazards identification

### 2.1 Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.  
This substance is not classified as dangerous according to Directive 67/548/EEC.

### 2.2 Label elements

The product does not need to be labelled in accordance with EC directives or respective national laws.

### 2.3 Other hazards

none

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## 3. Composition/ information on ingredients

### 3.1 Substances

Synonyms: PS  
Formula:  $[\text{CH}_2\text{CH}(\text{C}_6\text{H}_5)]_n$   
CAS-No.: 9003-53-6  
EC No.: 2028515

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## 4. First aid measures

### 4.1 Description of first aid measures

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

#### In case of skin contact

Wash off with soap and plenty of water.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

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

### 4.3 Indication of any immediate medical attention and special treatment needed

no data available

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## 5. Fire fighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

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



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## 5.2 Special hazards arising from the substance or mixture

Carbon oxides.

## 5.3 Advice for fire fighters

Wear self-contained breathing apparatus for fire fighting if necessary.

## 5.4 Further information

no data available

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## 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapors, mist or gas.

### 6.2 Environmental precautions

Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

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## 7. Handling and storage

### 7.1 Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

### 7.3 Specific end use(s)

no data available

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## 8. Exposure controls / personal protection

### 8.1 Control parameters

Components with workplace control parameters

### 8.2 Exposure controls

#### Appropriate engineering controls

General industrial hygiene practice.

#### Personal protective equipment

##### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves must satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

##### Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

##### Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts is desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance	Form: liquid, viscous to solid (depending on the molar mass)
Odour	no data available
Odour Threshold	no data available
pH	no data available
Melting point/freezing point	no data available
Initial boiling point and boiling range	no data available
Flash Point	no data available
Evaporation rate	no data available
Flammability	no data available
Upper/lower flammability or explosive limits	no data available
Vapour pressure	no data available
Vapour density	no data available
Relative density	no data available
Water solubility	insoluble
Partition coefficient: n- Octanol/Water	no data available
Auto ignition temperature	no data available
Decomposition temperature	no data available
Viscosity	no data available
Explosive properties	no data available
Oxidizing properties	no data available

### 9.2 Other safety information

no data available

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## 10. Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

no data available

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

Other decomposition products - no data available

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## 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

no data available

#### Skin corrosion/irritation

no data available

#### Serious eye damage/eye irritation

no data available

#### Respiratory or skin sensitisation

no data available

#### Germ cell mutagenicity

no data available

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## Carcinogenicity

Carcinogenicity - rat - Implant

Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Tumorigenic: Tumors at site or application.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Benzene, ethenyl-, homopolymer)

## Reproductive toxicity

no data available

## Specific target organ toxicity - single exposure

no data available

## Specific target organ toxicity - repeated exposure

no data available

## Aspiration hazard

no data available

## Potential health effects

**Inhalation** May be harmful if inhaled. May cause respiratory tract irritation.

**Ingestion** May be harmful if swallowed.

**Skin** May be harmful if absorbed through skin. May cause skin irritation.

**Eyes** May cause eye irritation.

## Additional Information

RTECS: Not available

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## 12. Ecological information

### 12.1 Toxicity

no data available

### 12.2 Persistence and degradability

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

no data available

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## 13. Disposal considerations

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packaging

Dispose of as unused product.

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## 14. Transport information

### 14.1 UN number

ADR/RID: -

IMDG: -

IATA: -

### 14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

