

## Safety Data Sheet

### 1. Identification

Product identifier	Shodex STANDARD SL-105、SM-105、SH-75
Other means of identification	Not available
Supplier (Manufacturer)	Resonac Corporation
Address	Tokyo Shiodome Building, 1-9-1, Higashi-Shimbashi, Minato-ku, Tokyo 105-7325, Japan
Department	Functional Chemicals Business Unit, Specialty Chemicals Department
Telephone	+81-3- 6263-8112
Email	<a href="mailto:rec_shodex@resonac.com">rec_shodex@resonac.com</a>
Emergency phone number	+65-3165-2217 (NCEC/ Singapore)
Recommended use and restriction on use	
Recommended use	Calibration standard for size exclusion chromatography
Importer (SINGAPORE)	Resonac Asia Pacific Pte. Ltd. 4 Shenton Way #16-02/06, SGX Centre 2, Singapore 068807 Tel : +65-6836 6988

### 2. Hazards identification

#### GHS classification

Hazards not described are "Not classified", "Not applicable" or "Classification not possible".

#### GHS label elements including precautionary statements

Pictograms	None
Signal word	None
Hazard statements	None
Precautionary statements	
Prevention	None
Response	None
Storage	None
Disposal	None

Other hazards which do not result in classification: Not available

### 3. Composition/information on ingredients

Substance/Mixture                      Substance

Ingredients	Concentration or concentration range	CAS No.	EC No.
Styrene, oligomers	100%	9003-53-6	500-008-9

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### 4. First-aid measures

Description of necessary first aid measures

Inhalation	Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention as needed. If vomiting occurs, turn the head to the side, and take care to prevent suffocation.
Skin contact	Wash with plenty of soap and water. Get medical advice/attention as needed.
Eye contact	Immediately wash eyes with plenty of water for 15 minutes. Get immediate medical advice/attention. Open the eyelids, immediately flush the eyes with plenty of water and move the eyeballs in all directions so that the water can be flushed to every corner of the eyeballs.
Ingestion	Get immediate medical advice/attention. Rinse mouth thoroughly with water. It is recommended to give plenty of water for drinking and induce vomiting if possible.

Most important symptoms/effects, acute and delayed:

Not available

Indication of immediate medical attention and special treatment needed, if necessary:

Not available

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### 5. Fire-fighting measures

Suitable extinguishing media	Spray water, carbon dioxide, foam, dry chemical.
Unsuitable extinguishing media	Not available
Specific hazards arising from the chemical	There is a risk of ignition or explosion of dust.
Special protective actions for fire fighters	Extinguish the fire from the upwind direction. Keep unauthorized personnel away from the surrounding of fire site. Evacuate unauthorized personnel to a safe place. If possible, remove containers from hazardous area. Take appropriate measures to prevent substances that affect the environment from flowing out through fire fighting wastewater, etc.

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Avoid fire fighting wastewater flowing into the environment.

Wear appropriate respiratory protective equipment.

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### 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Wear appropriate protective equipment during handling.
Environmental precautions	Take care to prevent the spillage from being discharged into rivers, etc. so as to avoid impact on the environment.
Methods and materials for containment and cleaning up	Immediately eliminate nearby ignition sources and hot objects. Sweep up the spillage and recover it into a sealed container. Prohibit unauthorized personnel from approaching.
Prevention measures for secondary disaster	Prepare an appropriate fire extinguisher in case of a fire.

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### 7. Handling and storage

Precautions for safe handling	Wear appropriate protective equipment during handling. Do not get in eyes, on skin, or on clothing. After handling, thoroughly wash hands, face, etc., and rinse mouth. Avoid exposure to strong oxidants. Obtain special instructions before use. Pay full attention to avoid dust scattering. Handle in a well-ventilated place.
Conditions for safe storage, including any incompatibilities	Store in a well-ventilated cool place. Avoid high temperature and humidity, direct sunlight and moisture, store in a dry and cool place. Keep container tightly closed.

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### 8. Exposure controls/personal protection

Control Parameters/Occupational Exposure Limits	
Singapore	Not available
ACGIH	Not available
Biological Limit	Not available
Appropriate engineering control measures	Use closed devices, equipment or local exhaust ventilation system to operate as much as possible.

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Eye-washing and shower equipment should be installed near the workplace.

Individual protection measures, such as personal protective equipment (PPE)

Respiratory protection	Wear dust masks and simple dust masks.
Hand protection	Wear rubber protective gloves.
Eye protection	Wear eye protection (normal eye protection, normal eye protection with side shields, goggles), face protection (protective masks).
Skin and body protection	Wear protective clothing, protective boots, protective apron.

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### 9. Physical and chemical properties

Appearance (physical state, colour etc)	Colorless, transparent solid
Odour	Odourless
pH	Not available
Melting point/freezing point	240°C
Initial boiling point and boiling range	Boiling point: None
Flash point	345~360°C
Upper/lower flammability or explosive limits	Upper: Not available; Lower: Not available
Vapour pressure	Not available
Vapour density	Not available
Density and/or relative density	1.04~1.13
Solubility	Water: insoluble Soluble in benzene, pyridine, dichloromethane, etc.
Partition coefficient: n-octanol/water	Insoluble
Auto-ignition temperature	427°C
Decomposition temperature	Not available
Odour threshold	Not available
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Viscosity	Not available

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### 10. Stability and reactivity

Reactivity	Not available
Chemical stability	Stable under normal storage and handling conditions.
Possibility of hazardous reactions	Take care not to contact with oxidants.

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Conditions to avoid	Intense heat, sparks and open flames.
Incompatible materials	Oxidant.
Hazardous decomposition products	Not available

### 11. Toxicological information

#### Acute toxicity

Oral:	Classification not possible
Dermal:	Classification not possible
Inhalation:	Not classified
	Dust: Rat LC <sub>50</sub> (30min) 56.6g/m <sup>3</sup> (RTECS)

Skin corrosion/irritation Classification not possible

Serious eye damage/irritation Not classified

Eye contact (dust) May cause mild eye irritation (MSDS-OHS)

Eye contact (fume) May cause eye irritation or tearing (MSDS-OHS)

Respiratory sensitisation Classification not possible

Skin sensitisation Classification not possible

Germ cell mutagenicity Classification not possible

Carcinogenicity Not classified

IARC Group3 (Not classifiable as to its carcinogenicity to humans)

Reproductive toxicity Classification not possible

Specific target organ toxicity (Single exposure) Not classified

Intratracheal administration test in mouse shows effects on respiratory organs, dehydrogenase, etc. (MSDS-OHS)

Inhalation exposure (dust) High concentrations: May cause irritation, cough (MSDS-OHS)

Inhalation exposure (fume): May cause nose, throat or lung irritation (MSDS-OHS)

Specific target organ toxicity (Repeated exposure) Not classified

Rat 2-Week intravenous administration test showed abnormal liver function test or effects on protein metabolism (RTECS)

Rat Long-term inhalation exposure test (dust) showed dysplasia, changes in red or white blood cells, increased liver weight, mild pneumonia (MSDS-OHS)

Aspiration hazard Classification not possible

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### 12. Ecological information

Toxicity	Hazardous to the aquatic environment – acute hazard: Classification not possible Hazardous to the aquatic environment – chronic hazard: Not classified
Persistence and degradability	Biodegradability test (28 days): Not readily degradable (J-CHECK)
Bioaccumulative potential	Bioconcentration test (koi, 8 weeks): Low bioconcentrative (J-CHECK)
Mobility in soil	Not available
Other adverse effects	Hazardous to the ozone layer: Classification not possible If it leaks out, marine organisms and birds mistake it for food and ingest it, which can lead to death. So it is necessary to consider leakage prevention.

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### 13. Disposal considerations

Disposal methods:

Waste disposal of chemicals:

When entrusting disposal, it should be entrusted to an industrial waste processor licensed by the local government.

Waste disposal of contaminated packaging:

Empty containers should be disposed of after the contents are completely removed.

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### 14. Transport information

UN number	Not applicable
UN proper shipping name	Not applicable
Transport hazard class(es)	Not applicable
Packing group	Not applicable
Marine pollutant (Yes/No)	No
Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)	Not applicable
Special precautions	Not available

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### 15. Regulatory information

Workplace Safety and Health Act: Applicable

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### 16. Other information

Prepared in accordance with SS586: 2014

Abbreviations and acronyms:

IARC: International Agency for Research on Cancer

LC<sub>50</sub>: Lethal Concentration 50 Percent Kill

RTECS: Registry of Toxic Effects of Chemical Substances

ACGIH: American Conference of Governmental Industrial Hygienists

Warranty:

The information provided in this SDS are based on currently available materials, information, and other data, however, we cannot assume any liability for the accuracy of the information contained. All chemical products may have unknown, potentially hazardous characteristics. It is recommended that handling should be done with caution.

The sign "-" included in the above means no relevant information.

Other information:

This Safety Data Sheet applies to: Applies to SL-105, SM-105 and SH-75 kit components.

SL-105 (10 types), SM-105 (10 types), SH-75 (7 types)