

Safety Data Sheet
Styrene Monomer 10 - 15 PPM Inhib

Version 1.2

Revision Date: 05/26/2017

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Styrene Monomer 10 - 15 PPM Inhib

Supplier or Repackaging Details

Company : Nexeo Solutions, LLC.
Address : 3 Waterway Square Place Suite 1000
The Woodlands, TX. 77380
United States of America

Manufactured By : LyondellBasell Chemical Company

Emergency telephone number:
Health North America: 1-855-NEXEO4U (1-855-639-3648)
Health International: 1-855-NEXEO4U (1-855-639-3648)
Transport North America: CHEMTREC (1-800-424-9300)

Additional Information: : Responsible Party: Product Safety Group
E-Mail: msds@nexeosolutions.com
SDS Requests: 1-855-429-2661
SDS Requests Fax: 1-281-500-2370
Website: www.nexeosolutions.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 3

Acute toxicity (Inhalation) : Category 4

Skin irritation : Category 2

Eye irritation : Category 2A

Reproductive toxicity : Category 2

Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

Specific target organ toxicity - repeated exposure : Category 1 (Auditory system)

Aspiration hazard : Category 1

GHS Label element

Hazard pictograms : 

Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.

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H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to organs (Auditory system) through prolonged or repeated exposure.

Precautionary statements

: **Prevention:**

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P331 Do NOT induce vomiting.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:

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P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Hazardous components

| CAS-No. | Chemical Name | Weight % |
|----------|-------------------|----------|
| 100-42-5 | Benzene, ethenyl- | 90 - 100 |

Any Concentration shown as a range is due to batch variation.

Molecular formula : C₆H₅-CH=CH₂

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : Consult a physician after significant exposure.
If unconscious place in recovery position and seek medical advice.
Move to fresh air.
- In case of skin contact : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.
Wash contaminated clothing before re-use.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Do NOT induce vomiting.
- Most important symptoms and effects, both acute and delayed : Causes skin and eye irritation.
Risk of serious damage to the lungs (by aspiration).

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray

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|---|---|
| | Foam Carbon dioxide (CO2) Dry chemical |
| Unsuitable extinguishing media | : High volume water jet |
| Specific hazards during fire-fighting | : Do not allow run-off from fire fighting to enter drains or water courses. |
| Hazardous combustion products | : Carbon oxides |
| Specific extinguishing methods | : Use a water spray to cool fully closed containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. |
| Further information | : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. |
| Special protective equipment for firefighters | : Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment. |

SECTION 6. ACCIDENTAL RELEASE MEASURES

| | |
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| Personal precautions, protective equipment and emergency procedures | : Use personal protective equipment. 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. |
| Environmental precautions | : Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities. |
| Methods and materials for containment and cleaning up | : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). |

SECTION 7. HANDLING AND STORAGE

| | |
|---|---|
| Advice on protection against fire and explosion | : Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Keep away from open flames, hot surfaces and sources of ignition. |
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- Advice on safe handling : Avoid formation of aerosol.
Do not breathe vapours/dust.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Take precautionary measures against static discharges.
Provide sufficient air exchange and/or exhaust in work rooms.
Open drum carefully as content may be under pressure.
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : No smoking.
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.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

| CAS-No. | Components | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|----------|-------------------|----------------------------------|--|-----------|
| 100-42-5 | Benzene, ethenyl- | TWA | 20 ppm 85 mg/m ³ | CA AB OEL |
| | | STEL | 40 ppm 170 mg/m ³ | CA AB OEL |
| | | TWA | 50 ppm | CA BC OEL |
| | | STEL | 75 ppm | CA BC OEL |
| | | TWA | 35 ppm | CA ON OEL |
| | | STEL | 100 ppm | CA ON OEL |
| | | TWAEV | 50 ppm 213 mg/m ³ | CA QC OEL |
| | | STEV | 100 ppm 426 mg/m ³ | CA QC OEL |

Personal protective equipment

- Respiratory protection : No personal respiratory protective equipment normally required.
In the case of vapour formation use a respirator with an approved filter.
- Hand protection
- Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Eye protection : Eye wash bottle with pure water

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| | | Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems. |
| Skin and body protection | : | Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place. |
| Hygiene measures | : | When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday. |

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|--------------------------------|
| Appearance | : | liquid |
| Colour | : | colourless, yellow |
| Odour | : | aromatic, sweet |
| Odour Threshold | : | 0.017 ppm |
| pH | : | No data available |
| Freezing Point (Freezing Point) | : | -31 °C (-24 °F) |
| Boiling Point (Boiling point/boiling range) | : | 145 °C (293 °F) (1,013 hPa) |
| Flash point | : | 31 °C (88 °F) (1,013 hPa) |
| Evaporation rate | : | No data available |
| Flammability (solid, gas) | : | No data available |
| Upper explosion limit | : | 6.8 %(V) |
| Lower explosion limit | : | 0.9 %(V) |
| Vapour pressure | : | 5 mmHg @ 20 °C (68 °F) |
| Relative vapour density | : | 3.6 @ 20 - 25 °C (68 - 77 °F) |
| Relative density | : | No data available |
| Density | : | No data available |
| Solubility(ies) Water solubility | : | 0.32 g/l @ 25 °C (77 °F) |

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| Solubility in other solvents | : No data available |
| Partition coefficient: n-octanol/water | : log Pow: 2.96 @ 25 °C (77 °F) |
| Auto-ignition temperature | : 490 °C 1,013 hPa |
| Thermal decomposition | : No data available |
| Viscosity | |
| Viscosity, dynamic | : 0.696 mPa.s @ 25 °C (77 °F) |
| Viscosity, kinematic | : 0.77 mm ² /s @ 25 °C (77 °F) |
| Oxidizing properties | : The substance or mixture is not classified as oxidizing. |

SECTION 10. STABILITY AND REACTIVITY

| | |
|------------------------------------|--|
| Reactivity | : No dangerous reaction known under conditions of normal use. |
| Chemical stability | : Stable under normal conditions. |
| Possibility of hazardous reactions | : No hazards to be specially mentioned. |
| Conditions to avoid | : Keep away from heat, flame, sparks and other ignition sources. Exposure to light. |
| Incompatible materials | : Copper Oxidizing agents Strong oxidizing agents Peroxides Contamination polymer catalysts Alkali metals aluminum chloride Strong acids Strong bases Copper alloys metal halogenates Rubber |
| Hazardous decomposition products | : acrid smoke and fumes |

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SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute inhalation toxicity : Acute toxicity estimate: 12 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Components:

100-42-5:

Acute inhalation toxicity : LC50 (Rat): 12 mg/l
Exposure time: 4 h
Assessment: The component/mixture is moderately toxic after short term inhalation.

Skin corrosion/irritation

Product:

Remarks: Irritating to skin.

Components:

100-42-5:

Species: Rabbit
Result: Irritating to skin.

Serious eye damage/eye irritation

Product:

Remarks: Severe eye irritation

Components:

100-42-5:

Species: Rabbit
Result: Irritating to eyes.

Germ cell mutagenicity

Components:

100-42-5:

Germ cell mutagenicity - Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity

Product:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

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Components:

100-42-5:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Reproductive toxicity

Components:

100-42-5:

Effects on fertility : Test Type: Three-generation study
Species: Rat, male and female
Application Route: oral
Dose: 125 and 250 ppm in water
General Toxicity - Parent: NOAEL: 125 ppm
General Toxicity F1: NOAEL: 125 ppm
Symptoms: Reduced embryonic survival

Effects on foetal development : Species: Rat
Application Route: Inhalation
Dose: 0.519, 1.080, 2.146 mg/l
Duration of Single Treatment: 6 h
Frequency of Treatment: 7 days/week
General Toxicity Maternal: NOAEC: 1.08 mg/L
Developmental Toxicity: NOAEC: 1.08 mg/L

Teratogenicity - Assessment : Some evidence of adverse effects on development, based on animal experiments.

STOT - single exposure

Components:

100-42-5:

Target Organs: Respiratory system
Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

STOT - repeated exposure

Components:

100-42-5:

Target Organs: Auditory system
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Aspiration toxicity

Components:

100-42-5:

May be fatal if swallowed and enters airways.

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Further information

Product:

Remarks: Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

100-42-5:

- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 4.02 mg/l
Exposure time: 96 h
Test Type: flow-through test
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 4.7 mg/l
Exposure time: 48 h
Test Type: flow-through test
- Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (microalgae)): 4.9 mg/l
Exposure time: 72 h
Test Type: static test
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 1.01 mg/l
Exposure time: 21 d
- Chronic aquatic toxicity- Assessment : Harmful to aquatic life with long lasting effects.

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information : No data available

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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

- Waste from residues : Dispose of in accordance with all applicable local, state and federal regulations.
For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact NEXEO's Environmental Services Group at 800-637-7922.
- Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

TDG (Transportation of Dangerous Goods):

UN2055, STYRENE MONOMER, STABILIZED, 3, III

IATA (International Air Transport Association):

UN2055, Styrene monomer, stabilized, 3, III

IMDG (International Maritime Dangerous Goods):

UN2055, STYRENE MONOMER, STABILIZED, 3, III, Flash Point:31 °C(88 °F)

SECTION 15. REGULATORY INFORMATION

- WHMIS Classification** : B2: Flammable liquid
D2A: Very Toxic Material Causing Other Toxic Effects
D2B: Toxic Material Causing Other Toxic Effects

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

The components of this product are reported in the following inventories:

- DSL : All components of this product are on the Canadian DSL
- AICS : On the inventory, or in compliance with the inventory
- NZIoC : On the inventory, or in compliance with the inventory
- ENCS : On the inventory, or in compliance with the inventory
- KECI : On the inventory, or in compliance with the inventory
- PHIL : On the inventory, or in compliance with the inventory
- IECSC : On the inventory, or in compliance with the inventory

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SECTION 16. OTHER INFORMATION

The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by NEXEO™ Solutions EHS Product Safety Department (1-855-429-2661) MSDS@nexeosolutions.com.

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Legacy SDS: : R0000009

Material number:

16117463, 16117462, 16045753, 554032, 55665, 88426, 71292, 166708, 55251, 71935, 22000, 22001, 20013, 20012, 20011, 20010

| Key or legend to abbreviations and acronyms used in the safety data sheet | | | |
|---|---|-------|---|
| ACGIH | American Conference of Government Industrial Hygienists | LD50 | Lethal Dose 50% |
| AICS | Australia, Inventory of Chemical Substances | LOAEL | Lowest Observed Adverse Effect Level |
| DSL | Canada, Domestic Substances List | NFPA | National Fire Protection Agency |
| NDSL | Canada, Non-Domestic Substances List | NIOSH | National Institute for Occupational Safety & Health |
| CNS | Central Nervous System | NTP | National Toxicology Program |
| CAS | Chemical Abstract Service | NZIoC | New Zealand Inventory of Chemicals |
| EC50 | Effective Concentration | NOAEL | No Observable Adverse Effect Level |
| EC50 | Effective Concentration 50% | NOEC | No Observed Effect Concentration |
| EGEST | EOSCA Generic Exposure Scenario Tool | OSHA | Occupational Safety & Health Administration |
| EOSCA | European Oilfield Specialty Chemicals Association | PEL | Permissible Exposure Limit |
| EINECS | European Inventory of Existing Chemical Substances | PICCS | Philippines Inventory of Commercial Chemical Substances |
| MAK | Germany Maximum Concentration Values | PRNT | Presumed Not Toxic |
| GHS | Globally Harmonized System | RCRA | Resource Conservation Recovery Act |
| >= | Greater Than or Equal To | STEL | Short-term Exposure Limit |
| IC50 | Inhibition Concentration 50% | SARA | Superfund Amendments and Reauthorization Act. |
| IARC | International Agency for Research on Cancer | TLV | Threshold Limit Value |
| IECSC | Inventory of Existing Chemical Substances in China | TWA | Time Weighted Average |
| ENCS | Japan, Inventory of Existing and | TSCA | Toxic Substance Control Act |

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| | New Chemical Substances | | |
| KECI | Korea, Existing Chemical Inventory | UVCB | Unknown or Variable Composition, Complex Reaction Products, and Biological Materials |
| <= | Less Than or Equal To | WHMIS | Workplace Hazardous Materials Information System |
| LC50 | | Lethal Concentration 50% | |