1. Product and company identification

Product identifier

Trade name: Luran® SAN Granulate Natural
This safety data sheet pertains to the following products:
Luran® 378P
Luran® 388S

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

General use: Polymer
Basic material for chemical industry processing

Details of the supplier of the safety data sheet

Company name: INEOS Styrolution America LLC
Street/POB-No.: 4245 Meridian Parkway, Suite 151
Postal Code, city: Aurora IL 60504
USA
WWW: www.styrolution.com
E-mail: infopoint.americas@styrolution.com
Telephone: +1 866 - 890 - 6353
Telefax: +1 866 - 890 - 6362
Dept. responsible for information:
Infopoint, Telephone: +1 (0) 815 - 423 - 1235
E-mail: infopoint.americas@styrolution.com

Emergency phone number

CHEMTREC
Telephone: 1 - 800 - 424 - 9300 (24 h)
(collect calls accepted)

2. Hazards identification

Emergency overview

Appearance: Form: solid, pellets
Color: natural colors (off-white)
Odor: weak characteristic
Classification: This material is classified as not hazardous.

Regulatory status

This material is not considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and SIMDUT in Canada.

Hazards not otherwise classified

Dust: Can cause skin, eye and respiratory tract irritation.
In case of dust formation (Fine dust): May form explosible dust-air mixture if dispersed.
The melted product can cause severe burns.
Swallowing may cause gastrointestinal irritation and pain of guts.
see section 11: Toxicological information

3. Composition / Information on ingredients

Chemical characterization: Polymer mixture:
CAS No. 9003-54-7 Styrene-acrylonitrile copolymer

Additional information: Preparation does not contain dangerous substances above limits that need to be mentioned in this section according to applicable legislation.

4. First aid measures

General information: Immediately remove any contaminated clothing, shoes or stockings.

In case of inhalation: Provide fresh air. If the symptoms persist, seek medical attention.

Following skin contact: The melted product can cause severe burns.
Do not remove the product from the skin without medical assistance.
After contact with molten product, cool skin area rapidly with cold water. Consult physician.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing.
Consult an eye specialist in the event of irritation.

After swallowing: Never give an unconscious person anything through the mouth.
Rinse mouth with water. Drink one or two glasses of water.
In the event of discomfort seek medical treatment.

Most important symptoms/effects, acute and delayed

Dust: Can cause skin, eye and respiratory tract irritation.

Information to physician

Treat symptomatically.
Decontamination, vital functions

5. Fire fighting measures

Flash point/flash point range:
> 752 °F

Auto-ignition temperature: Not self-igniting

Suitable extinguishing media:
water fog, foam, dry chemical powder, carbon dioxide (CO2).

Extinguishing media which must not be used for safety reasons:
High power water jet

Specific hazards arising from the chemical

In case of fire may be liberated: Smoke, styrene, Methyl methacrylate, Hydrogen cyanide, carbon monoxide and carbon dioxide (CO2).
In case of dust formation (Fine dust): May form explosible dust-air mixture if dispersed.

Protective equipment and precautions for firefighters:
Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information: Cool endangered containers with water jetspray.
Do not allow fire water to penetrate into surface or ground water.
Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

6. Accidental release measures

Personal precautions: Provide adequate ventilation.
Wear personal protection equipment. Do not breathe dust.

Environmental precautions:
Do not allow to penetrate into soil, waterbodies or drains.

Methods for clean-up: Avoid generation of dust. Remove all sources of ignition.
Collect dry and place in appropriate containers for disposal. Subsequent cleaning. (Water)

Additional information: Special danger of slipping by leaking/spilling product.

7. Handling and storage

Handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Do not breathe dust.
In the case of the formation of dust: Withdraw by suction.
Molten material: Avoid contact with the substance.

Precautions against fire and explosion:
Take precautionary measures against static discharges. Keep away from open flames, hot surfaces and sources of ignition. Use grounding equipment. Use explosion-proof equipment and non-sparking tools/utensils.
In case of dust formation (Fine dust): May form explosible dust-air mixture if dispersed.

Storage

Requirements for storerooms and containers:
Store in a well-ventilated place. Keep container tightly closed.
Protect against heat /sun rays.
Protect from moisture contamination.

Further details: Special danger of slipping by leaking/spilling product.

8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
	Luran® SAN Granulate Natural	USA: ACGIH: TWA	10 mg/m³
		USA: ACGIH: TWA	3 mg/m³
		USA: OSHA: TWA	15 mg/m³
		USA: OSHA: TWA	5 mg/m³
100-42-5	Styrene	OSHA: Ceiling	200 ppm
		USA: ACGIH: STEL	170 mg/m³; 40 ppm
		USA: ACGIH: TWA	85 mg/m³; 20 ppm
		USA: NIOSH: STEL	425 mg/m³; 100 ppm
		USA: NIOSH: TWA	215 mg/m³; 50 ppm
		USA: OSHA: TWA	100 ppm
107-13-1	Acrylonitrile	NIOSH: Ceiling	10 ppm
		OSHA: Ceiling	10 ppm
		USA: NIOSH: TWA	1 ppm
		USA: OSHA: TWA	2 ppm

Biological limit values:

CAS No.	Designation	Type	Limit value	Parameter	Sampling
100-42-5	Styrene	USA: ACGIH-BEI, urine	40 µg/l	Styrene in urine	end of exposure or end of shift
		USA: ACGIH-BEI, urine	400 mg/g creatinine	Mandelic acid + Phenylglyoxylic acid	end of exposure or end of shift

Additional information: The product contains very low levels of residual monomers and process chemicals (styrene, ethylbenzene and acrylonitrile) that may be evolved during thermal processing, along with possible decomposition products. As the identity and levels of these impurities evolved will depend upon the processing conditions (temperature etc.) it is the responsibility of the user to determine the adequacy of any protection or safety measures.

Engineering controls

Provide good ventilation in the work area. Additional controls are not normally necessary when handling the polymer.

Thermal extrusion: Provide local exhaust ventilation to ensure that the workplace exposure limit is not exceeded.
Use of respiratory protection may be necessary during maintenance activities.
See also information in chapter 7, section storage.

Personal protection equipment (PPE)

Eye/face protection: Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.

Skin protection: Wear suitable protective clothing. Boots or safety shoes

Protective gloves according to OSHA Standard - 29 CFR: 1910.138.
Glove material: Nitrile rubber - Layer thickness. 0.11 mm.
Breakthrough time: >480 min.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

In case of melting: Impervious heat protective gloves according to OSHA Standard - 29 CFR: 1910.138.
Glove material: Leather
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Respiratory protection: Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded. The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

General hygiene considerations:

Molten material: Avoid contact with skin.
Do not breathe vapors. Keep away from sources of ignition.
Wash hands before breaks and after work.

In case of dust formation: Particular danger of slipping on spilled product on the ground.
Safety shower and eye wash station should be easily accessible to the work area.

Environmental exposure controls

Do not allow to penetrate into soil, waterbodies or drains.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance:	Form: solid, pellets Color: natural colors (off-white)
Odor:	weak characteristic
Odor threshold:	No data available
pH value:	No data available
Melting point/freezing point:	> 212 °F (DIN EN ISO 306)
Initial boiling point and boiling range:	No data available
Flash point/flash point range:	> 752 °F
Evaporation rate:	No data available
Flammability:	Not highly flammable.
Explosion limits:	No data available
Vapor pressure:	not applicable
Vapor density:	No data available
Density:	at 68 °F: approx. 1.05 - 1.20 g/cm³ (DIN 53479)
Water solubility:	insoluble
Partition coefficient: n-octanol/water:	not applicable
Auto-ignition temperature:	Not self-igniting
Thermal decomposition:	approx. 608 °F
Viscosity, dynamic:	not relevant
Explosive properties:	In case of dust formation (Fine dust): May form explosible dust-air mixture if dispersed.
Oxidizing characteristics:	Not oxidising
Ignition temperature:	> 752 °F (DIN 51794)
Bulk density:	at 68 °F: approx. 600 kg/m³ (DIN 53466)

10. Stability and reactivity

Reactivity: No data available

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions
In case of dust formation (Fine dust): May form explosible dust-air mixture if dispersed.

Conditions to avoid: Keep away from open flames, hot surfaces and sources of ignition.
Avoid dust formation.

Incompatible materials: Strong oxidizing agents

Hazardous decomposition products:
In case of fire may be liberated: Smoke, styrene, Methyl methacrylate, Hydrogen cyanide, carbon monoxide and carbon dioxide (CO2).

Thermal decomposition: approx. 608 °F

11. Toxicological information

Toxicological tests

Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.
Acute toxicity (oral): Lack of data.

Acute toxicity (dermal): Lack of data.

Acute toxicity (inhalative): Lack of data.

Skin corrosion/irritation: Lack of data.

Eye damage/irritation: Lack of data.

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Lack of data.

Germ cell mutagenicity/Genotoxicity: Lack of data.

Carcinogenicity: Lack of data.

Reproductive toxicity: Lack of data.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Lack of data.
Dusts: Irritating to eyes, respiratory system and skin.

Specific target organ toxicity (repeated exposure): Lack of data.

Aspiration hazard: Lack of data.

Other information: When handled appropiately, even after long years of experience with this product, no adverse health effects are known.

Symptoms

Can cause skin, eye and respiratory tract irritation.
The melted product can cause severe burns.
Thermal treatment, Processing: Irritating to eyes, respiratory system and skin.
In case of ingestion: Swallowing may cause gastrointestinal irritation and pain of guts.

12. Ecological information

Ecotoxicity

Effects in sewage plants: In sewage treatment plants it may be separated mechanically.

Further details: Pellets may accumulate in the digestive systems of birds and aquatic life, causing injury and possible death due to starvation.

Mobility in soil

No data available

Persistence and degradability

Further details: Biodegradation: Product is not readily biodegradable.

Additional ecological information

General information: Do not allow to penetrate into soil, waterbodies or drains.

13. Disposal considerations

Product

Recommendation: With due observance of the regulations laid down by the local authorities, this must be brought to a suitable incineration plant/waste disposal site.

Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation.
Non-contaminated packages may be recycled.

14. Transport information

USA: Department of Transportation (DOT)

Proper shipping name: Not restricted

Sea transport (IMDG)

Proper shipping name: Not restricted
Marine pollutant: no

Air transport (IATA)

Proper shipping name: Not restricted

Further information

No dangerous good in sense of these transport regulations.

15. Regulatory information

National regulations - U.S. Federal Regulations

Styrene-acrylonitrile copolymer:
TSCA Inventory: listed; EPA flags XU
TSCA HPVC: not listed
Carcinogen Status:
IARC Rating: Group 3
OSHA Carcinogen: not listed
NTP Rating: not listed

Polydimethylsiloxane:
TSCA Inventory: listed; UVCB; EPA flags XU
TSCA HPVC: not listed

Styrene:
TSCA Inventory: listed
TSCA HPVC: not listed
Carcinogen Status:
IARC Rating: Group 2B
OSHA Carcinogen: not listed
NTP Rating: listed
Clean Air Act:
Hazardous Air Pollutants: Code XOV
SOCMI Chemical: yes
Clean Water Act:
Hazardous Substances: RQ 1000 lbs.
Other Environmental Laws:
CERCLA: RQ 1000 lbs.
RCRA Groundwater Monitoring: Methods 8020, 8240 / PQL 1, 5
SARA Title III Section 313, Toxic Release: Conc. 0.1% / Threshold Standard
NIOSH Recommendations:
Occupational Health Guideline: 0571

Acrylonitrile:
TSCA Inventory: listed; EPA flags T
TSCA HPVC: not listed
Carcinogen Status:
IARC Rating: Group 2B
OSHA Carcinogen: listed
NTP Rating: listed
Clean Air Act:
Accidental Release Prevention: Threshold 20000 lbs. / Basis for listing = b
Hazardous Air Pollutants: Code XOV
SOCMI Chemical: yes
Clean Water Act:
Hazardous Substances: RQ 100 lbs.
Priority Pollutant: yes
Other Environmental Laws:
CERCLA: RQ 100 lbs.
RCRA Hazardous Wastes: Code U009
RCRA Groundwater Monitoring: Methods 8030, 8240 / PQL 5, 5
SARA Title III Section 302, EHS: TPQ 10000 lbs. / RQ 100 lbs.
SARA Title III Section 313, Toxic Release: Conc. 0.1% / Threshold Standard
NIOSH Recommendations:
Occupational Health Guideline: 0014

National regulations - U.S. State Regulations

California Proposition 65:
THIS PRODUCT(S) CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

National regulations - Great Britain

Hazchem-Code: -

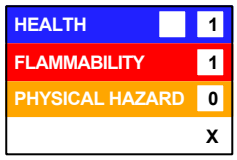
16. Other information

Uses advised against: For toys and childcare articles

Hazard rating systems: NFPA Hazard Rating:

Health: 1 (Slight)
Fire: 1 (Slight)
Reactivity: 0 (Minimal)

HMIS Version III Rating:
Health: 1 (Slight)
Flammability: 1 (Slight)
Physical Hazard: 0 (Minimal)
Personal Protection: X = Consult your supervisor



Reason of change: Changes in section 1: Changes of product list: EMEA
General revision

Date of first version: 9/24/2012

Department issuing data sheet

Contact person: see section 1: Dept. responsible for information

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.