

SAFETY DATA SHEET

in accordance with 29 CFR 1910.1200 and ANSI standard Z400.1-2010

Terluran® ABS Granulate, Natural

Material number TER003

1. Product and company identification

Product identifier

Trade name: Terluran® ABS Granulate, Natural
This safety data sheet pertains to the following products:
Terluran® GP-22 Natural
Terluran® GP-35 Natural
Terluran® HI-10 Natural
Terturan® EHI-4 NR

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

General use: Polymer
For industrial processing only

Details of the supplier of the safety data sheet

Company name: Styrolution America LLC
25846 SW Frontage Road
Channahon IL 60410
USA
WWW: www.styrolution.com
E-mail: infopoint.americas@styrolution.com
Telephone: +1815-423-5541
Telefax: +1815-423-1038
Dept, responsible for information:
Infopoint, Telephone: +1(0)815-423-1235
E-mail: infopoint.americas@styrolution.com

Emergency telephone number

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

2. Hazards identification

Emergency overview

Appearance: Physical state: solid: pellets
Color: natural colors (whitish)
Odor: weak, characteristic

Regulatory status

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

Information pertaining to special dangers for human and environment

Dust: Can cause skin, eye and respiratory tract irritation.
Fine dust: explosive
The melted product can cause severe burns.
Swallowing may cause gastrointestinal irritation and pain of guts.
see section 11: Toxicological information

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3. Composition / Information on ingredients

Chemical characterization: Polymer mixture:
GAS No. 9003-56-9: > 98 % Styrene-acrylonitrile-butadiene copolymer
GAS No. 100-42-5: <0,1 % Styrene

4. First-aid measures

General information: Immediately remove any contaminated clothing, shoes or stockings.
After inhalation: Provide fresh air. Put victim at rest and keep warm. Seek medical attention
In case of skin contact: The melted product can cause severe burns.
Do not attempt to remove molten product, or molten product that has cooled, from skin without medical assistance.
After contact with molten product, cool skin area rapidly with cold water. Consult physician.
After eye contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Consult an eye specialist in the event of irritation.
After swallowing: Rinse mouth with water. Drink one or two glasses of water.
Never give an unconscious person anything through the mouth, seek medical attention.

Most important symptoms and effects, both acute and delayed

Dust: Skin irritation, eye irritations and redness

Information to physician

Treat symptomatically.

5. Firefighting measures

Flash point/flash point range: >752°F
Autoflammability: not self-igniting
Suitable extinguishing media: Water fog, foam, extinguishing powder, carbon dioxide.
Extinguishing media which must not be used for safety reasons:

High power water jet

Special hazards arising from the substance or mixture

In case of fire may be liberated: hydrogen cyanide, carbon monoxide and carbon dioxide (CO₂).

In case of dust (Fine dust): danger of dust explosion

Special protective equipment for firefighters:

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information:

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 measures: Do not allow to penetrate into soil, water bodies or drains.
Methods for cleaning up: Avoid generation of dust. Remove all sources of ignition.
Take up mechanically. Collect in closed containers for disposal.
Additional information: Special danger of slipping by leaking/spilling product.

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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 discharge. Keep away from sources of ignition. Use grounding equipment. Use explosion-proof equipment and non-sparking tools/utensils. Avoid open flames.

Dust forms explosive mixtures with air.

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.

8. Exposure controls I personal protection

Exposure guidelines

Occupational exposure limit values:

CAS No	Designation	Type	Limit value
100-42-5	Terluran® ABS Granulate, Natural	USA: ACGIH: TWA	10 mg/m ³ Dust limit value, indicativ; inhalable fraction
		USA: ACGIH: TWA	3 mg/m ³ Dust limit value, indicativ; respirable fraction
		USA: OSHA: TWA	15 mg/m ³ Dust limit value inhalable fraction
		USA: OSHA: TWA	5 mg/m ³ Dust limit value respirable fraction
		OSHA: Ceiling	200 ppm (Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift: 600 ppm 5 mins. in any 3 hrs.)
107-13-1	Acrylonitrile	USA: ACGIH: STEL	170 Mg/M ³ ; 40 ppm
		USA: ACGIH: TWA	85 Mg/M ³ ; 20 ppm
		USA: NIOSH: STEL	425 mg/m ³ ; 100 ppm
		USA: NIOSH: TWA	215 Mg/M ³ ; 50 ppm
		USA: OSHA: TWA	100 ppm (Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift: 600 ppm 5 mins. in any 3 hrs.)
106-99-0	1,3- Butadiene	NIOSH: Ceiling	10 ppm
		OSHA: Ceiling	10 ppm
		USA: ACGIH: TWA	4,3 Mg/M ³ ; 2 ppm (May be absorbed through the skin.)
		USA: NIOSH: TWA	1 ppm
106-99-0	1,3- Butadiene	USA: OSHA: TWA	2ppm
		USA: ACGIH: TWA	4,4 mg/m ³ ; 2 ppm (A2)
		USA: OSHA: STEL	5 ppm
		USA: OSHA: TWA	1 ppm

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Biological limit values:

GAS No.	Designation	Type	Limit value	Parameter	Test material	Sample time
100-42-5	Styrene	USA: ACGIH-BEI	0,2		blood	end of exposure or end of shift
		USA: ACGIH-BEI	400		urine	end of exposure or end of shift
106-99-0	1,3-Butadiene	USA: ACGIH-BEI	2,5		blood	No restriction
		USA: ACGIH-BEI	2,5		urine	No restriction

Engineering controls

Provide good ventilation and/or an exhaust system in the work area.

See also information in chapter 7, section storage.

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

Body protection: Wear suitable protective clothing, boots or Wear protective shoes.
Protective gloves according to OSHA Standard -29 GFR: 191 0.138.
Glove material: Nitrile rubber - Layer thickness: 0, 11 mm.
Breakthrough time: >480 mm.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
In case of melting: Protective gloves against heat according to OSHA Standard -29 GFR: 191 0.138.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Personal protection equipment

Respiratory protection: Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded.
Use filter according to OSHA Standard -29 GFR: 1910.134 or ANSI Z88.2.

General protection and hygiene measures

Molten material: Avoid contact with skin.

Do not inhale dust particles or vapors. Keep away from sources of ignition. Wash hands before breaks and after work.

In case of dust: Particular danger of slipping when spread on the ground.

Environmental exposure controls

Do not allow to penetrate into soil, water bodies or drains.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance: Physical state: solid: pellets
Color: natural colors (whitish)

Odor: weak, characteristic

Melting point/melting range: >212°F (DIN EN ISO 306)

Flash point/flash point range: > 752 °F

Flammability: Not highly flammable.

Explosive properties: Dust explosion risk at fine dust

Density: at 68 °F: approx. 1, 04 g/cm³ (DIN 53479)

Water solubility: insoluble

Autoflammability: not self-igniting

Thermal decomposition: approx. 572 °F
To avoid thermal decomposition, do not overheat.

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Additional information

Oxidizing characteristics: Oxidising potential: 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.
Polymerisation: In case of dust (Fine dust): danger of dust explosion
Conditions to avoid: Protect from excessive heat. Keep away from sources of ignition and heat.
Avoid dust formation.
Materials to avoid: Strong oxidizing agents
Hazardous decomposition products:
In case of fire may be liberated: hydrogen cyanide, carbon monoxide and carbon dioxide (CO₂).
Thermal decomposition: approx. 572 °F
To avoid thermal decomposition, do not overheat.

11. Toxicological information

Toxicological tests

Toxicological effects: Acute toxicity (oral): Lack of data.
Acute toxicity (dermal): Lack of data.
Acute toxicity (inhalative): Lack of data.
Skin corrosion/irritation: Lack of data. May cause irritations.
Eye damage/irritation: Lack of data. May cause irritations.
Sensitisation to the respiratory tract: Lack of data. Not to be expected
Skin sensitisation: Lack of data. Not to be expected
Germ cell mutagenicity/Genotoxicity: Lack of data. Not to be expected
Carcinogenicity: Lack of data. Not to be expected
Reproductive toxicity: Lack of data. Not to be expected
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:
Styrene: Harmful if inhaled. Causes damage to organs through prolonged or repeated exposure.
lung damages
May be fatal if swallowed and enters airways.
Causes serious eye irritation. Causes skin irritation.

Acrylonitrile: Toxic by inhalation, in contact with skin and if swallowed.
May cause cancer. Suspected of damaging the unborn child.
Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage.

1,3-Butadiene: May cause cancer. May cause genetic defects.

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Symptoms

Dust:
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

Aquatic toxicity: no evidence of aquatic toxicity
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.

Persistence and degradability

Further details: Biodegradation: Product is not readily biodegradable.
The product is likely to persist in the environment.

Additional ecological information

General information: Do not allow to enter into ground-water, surface water 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 controlled under DOT

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.

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15. Regulatory information

U.S. Federal Regulations

Styrene-acrylonitrile-butadiene copolymer: TSCA Inventory: listed; EPA flags XU
TSCA HPVC: not listed

Styrene: TSCA Inventory: listed
ISCA HPVC: not listed
Carcinogen Status:
IARC Rating: Group 2B
OSHA Carcinogen: not listed
NTP Rating: listed
Clean Air Act:
Hazardous Air Pollutants: Code XOY
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 I
TSCA HPVC: not listed
Carcinogen Status:
IARC Rating: Group 2B
OSHA Carcinogen: listed
NIP Rating: listed
Clean Air Act:
Accidental Release Prevention: Threshold 20000 lbs. I Basis for listing =b
Hazardous Air Pollutants: Code XOY
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

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1,3-Butadiene: TSCA Inventory: listed
TSCA HPVC: not listed
Carcinogen Status:
IARC Rating: Group 2A
OSHA Carcinogen: listed
NTP Rating: listed
Clean Air Act:
Accidental Release Prevention: Threshold 10000 lbs. / Basis for listing =f
Hazardous Air Pollutants: Code XO
SOCMI Chemical: yes
Other Environmental Laws:
CERCLA: RQ 10 lbs.
SARA Title III Section 313, Toxic Release: Conc. 0.1% /Threshold Standard
NIOSH Recommendations:
Occupational Health Guideline: 0067

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 - EC member states

Labeling (671548/EEC or 19991451EC)

Code letter and hazard symbol: not applicable

R phrase(s): not applicable

S phrase(s): not applicable

National regulations - Great Britain

Hazchem-Code: -

16. Other information

Hazard rating systems: NFPA Hazard Rating:
Health: I (Slight)
Fire: I (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: product name, Changes of product list
General revision

Date of first version: 25.09.2012

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.