



1. Identification of the substance/mixture and of the company/undertaking

Product identifier

Trade name: Novodur® ABS Granulat
This safety data sheet pertains to the following products:
Novodur® 240
Novodur® 250
Novodur® 450
Novodur® 530
Novodur® 532
Novodur® 595CP
Novodur® 640
Novodur® 680
Novodur® 970
Novodur® H605
Novodur® M203
Novodur® HD M203FC
Novodur® P2H-AT
Novodur® PRECO P60P50

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

General use: For the production of moulded plastic articles or as intermediate for the production of plastic
Reserved for industrial and professional use.

Details of the supplier of the safety data sheet

Company name: Styrolution South East Asia Pte Ltd.
Street/POB-No.: 111 Somerset Road
Postal Code, city: #08-01/02 TripleOne Somerset, SG
Singapore 238164
WWW: www.styrolution.com
E-mail: infopoint.asia@styrolution.com
Telephone: +65 6933 8350
Telefax: +65 6933 8355

Dept. responsible for information:
Infopoint, Telephone: + 65 (0) 6933 - 8372
E-mail: infopoint.asia@styrolution.com

Emergency telephone number

Telephone: + 65 (0) 3158 - 1074

2. Hazards identification

Classification of the substance or mixture

GHS classification

This substance is classified as not hazardous.

Label elements

Hazard statements: not applicable



Precautionary statements: not applicable

Other hazards

Dust: Can cause skin, eye and respiratory tract irritation.
In case of dust formation (Fine dust): danger of dust explosion
The melted product can cause severe burns.
Swallowing may cause gastrointestinal irritation and pain of guts.

3. Composition / information on ingredients

Substances

Chemical characterisation: $(C_8H_8 \cdot C_4H_6 \cdot (C_3H_3)_n)_m$ Acrylonitrile-butadiene-styrene copolymer
2-Propenenitrile, polymer with 1,3-Butadiene and Ethylbenzene

CAS-Number: 9003-56-9

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: In case of inhalation of decomposition products, affected person should be moved into fresh air and kept still. If breathing has stopped, give artificial respiration immediately. 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. Cover with sterile dressing material to protect against infection. 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.
In case of troubles or persistent symptoms, consult an ophthalmologist.

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

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Decontamination, vital functions

5. Firefighting measures

Extinguishing media

Suitable extinguishing media:

Water fog, foam, extinguishing powder, carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

Full water jet



Special hazards arising from the substance or mixture

In case of fire may be liberated: smoke, carbon monoxide and carbon dioxide (CO₂).
Possible in traces: acrylonitrile, butadiene, styrene, hydrocarbons, aldehydes, acids, hydrogen cyanide.

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

Advice for firefighters

Special protective equipment for firefighters:

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

Additional information: Seal off endangered area. Remove persons to safety. 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, protective equipment and emergency procedures

Keep the molten mass away from the eyes and the skin.

Where there is a risk of exothermal decomposition as a result of overheating (rise in temperature, formation of fumes or smoke) cool the melt in a water bath.

Provide adequate ventilation.

Wear personal protection equipment. Do not breathe dust.

Environmental precautions

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

Methods and material for containment and cleaning up

Take up mechanically. Collect in closed containers for disposal.

Avoid generation of dust. Remove all sources of ignition. Provide adequate ventilation.

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

7. Handling and storage

Precautions for safe handling

Advices on safe handling: For mechanical processing: Provide adequate ventilation, and local exhaust as needed.

Do not breathe dust.

In the case of the formation of dust: Withdraw by suction.

In case of melting: To avoid thermal decomposition, do not overheat.

Make sure there is sufficient air exchange and / or that working rooms are air suctioned.

Avoid exceeding WEL threshold levels. Do not breathe vapours.

Molten material: Avoid contact with the substance.

After work, wash hands and face.

Precautions against fire and explosion:

Take precautionary measures against static discharges. Keep away from sources of ignition. Use grounding equipment. Use explosion-proof equipment and non-sparking tools/utensils. Avoid open flames.

In case of dust formation (fine dust): danger of dust explosion



Storage

Requirements for storerooms and containers:

Store in a well-ventilated place. Keep container tightly closed. Store only in original container.

Protect against heat /sun rays.

Protect from moisture contamination.

Further details:

Special danger of slipping by leaking/spilling product.

8. Exposure controls/personal protection

Control parameters

Occupational exposure limit values:

| Type | Limit value |
|-----------------|----------------------|
| USA: ACGIH: TWA | 10 mg/m ³ |
| USA: ACGIH: TWA | 3 mg/m ³ |

Exposure 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

Occupational exposure controls

Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded. Use filter type A-P2 according to EN 14387.

Hand protection: Protective gloves according to EN 374.
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 EN 407.
Glove material: Leather
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to EN 166.

Body protection: Wear suitable protective clothing. Boots or safety shoes.
In case of dust formation: Overall

General protection and hygiene measures:

Molten material: Avoid contact with skin.

Avoid breathing dust and vapours. 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.



9. Physical and chemical properties

Information on basic physical and chemical properties

| | |
|--|---|
| Appearance: | Form: solid, granulate Colour: varying, depends on colouring |
| Odour: | characteristic |
| Odour threshold: | no data available |
| pH value: | no data available |
| Melting point/freezing point: | (Softening temperature): 95 - 105 °C |
| Initial boiling point and boiling range: | no data available |
| Flash point/flash point range: | no data available |
| Evaporation rate: | no data available |
| Flammability: | Not highly flammable. |
| Explosion limits: | no data available |
| Vapour pressure: | no data available |
| Vapour density: | no data available |
| Density: | at 20 °C: 1 - 1.1 g/cm ³ |
| Water solubility: | insoluble |
| Partition coefficient: n-octanol/water: | no data available |
| Auto-ignition temperature: | not self-igniting |
| Thermal decomposition: | approx. > 300 °C |

Additional information

| | |
|-----------------------|----------------------------------|
| Viscosity | - |
| Explosive properties: | Dust explosion risk at fine dust |
| Ignition temperature: | > 300 °C |
| Bulk density: | 500 - 700 kg/m ³ |

10. Stability and reactivity

| | |
|-------------------------------------|---|
| Reactivity: | exothermic reactions |
| Chemical stability: | Stable under recommended storage conditions. |
| Possibility of hazardous reactions: | In case of dust formation (Fine dust): danger of dust explosion |
| Conditions to avoid: | Keep away from sources of ignition and heat. Keep away from open flames, hot surfaces and sources of ignition. Avoid dust formation. Protect from moisture contamination. |
| Incompatible materials: | Strong oxidizing agents, strong acids |
| Hazardous decomposition products: | In case of fire may be liberated: smoke, carbon monoxide and carbon dioxide (CO ₂). Possible in traces: acrylonitrile, butadiene, styrene, hydrocarbons, aldehydes, acids, hydrogen cyanide. |
| Thermal decomposition: | approx. > 300 °C |



11. Toxicological information

Information on toxicological effects

| | |
|------------------------|---|
| Toxicological effects: | Acute toxicity (oral): Lack of data. No evidence of acute toxicity. Acute toxicity (dermal): Lack of data. No evidence of acute toxicity. Acute toxicity (inhalative): Lack of data. No evidence of acute toxicity. Skin corrosion/irritation: Lack of data. Dust: Can cause skin, eye and respiratory tract irritation. Processing, thermal hazards: Vapours: Can cause skin, eye and respiratory tract irritation. Eye damage/irritation: Lack of data. Dust: Can cause skin, eye and respiratory tract irritation. Processing, thermal hazards: Vapours: Can cause skin, eye and respiratory tract irritation. Sensitisation to the respiratory tract: Based on available data, the classification criteria are not met. The chemical structure of the polymer does not suggest a specific alert for such an effect. Skin sensitisation: Based on available data, the classification criteria are not met. The chemical structure of the polymer does not suggest a specific alert for such an effect. Germ cell mutagenicity/Genotoxicity: Based on available data, the classification criteria are not met. The chemical structure of the polymer does not suggest a specific alert for such an effect. Carcinogenicity: Based on available data, the classification criteria are not met. No indications of human carcinogenicity exist. Reproductive toxicity: Based on available data, the classification criteria are not met. The chemical structure of the polymer does not suggest a specific alert for such an effect. Effects on or via lactation: Lack of data. Specific target organ toxicity (single exposure): Lack of data. Dust: Can cause skin, eye and respiratory tract irritation. Processing, thermal hazards: Vapours: Can cause skin, eye and respiratory tract irritation. Specific target organ toxicity (repeated exposure): Lack of data. Chronic toxic effects are not expected. The product has not been tested. The statement is derived from products of similar structure or composition. Aspiration hazard: Lack of data. |
| Other information: | When handled appropriately, even after long years of experience with this product, no adverse health effects are known. |

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

Toxicity

| | |
|---------------------------|--|
| Aquatic toxicity: | no evidence of aquatic toxicity |
| Effects in sewage plants: | In sewage treatment plants it may be separated mechanically. |



Persistence and degradability

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

Mobility in soil

no data available

Additional ecological information

General information: Do not allow to enter into ground-water, surface water or drains.

13. Disposal considerations

Waste treatment methods

Product

Recommendation: Recycling or special waste incineration.
After appropriate treatment the product can be remelted and reprocessed into new moulded articles. Mechanical recycling is only possible if the material has been selectively retrieved and carefully segregated according to type.

Contaminated packaging

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

14. Transport information

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 - Korea

Industrial Safety and Health Act

not applicable

Toxic Chemical Control Act

not applicable

National regulations - Japan

ENCS: listed; MITI 6-176



16. Other information

Reason of change: Changes in section 1: APAC: Changes of product list

Date of first version: 31/1/2013

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.