

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

### Product identifier

Trade name: Novodur® HH Natural  
This safety data sheet pertains to the following products:  
Novodur® HH-106 BEM  
Novodur® HH-106 NR  
Novodur® HH-106 Q459 NR  
Novodur® HH-112 NR  
Novodur® HH-112 Q459 NR

### 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 APAC 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: INSTY.asia@ineos.com  
Telephone: +65 6933 8350  
Telefax: +65 6933 8355  
Dept. responsible for information:  
Infopoint, Telephone: + 65 (0) 6933 - 8372  
E-mail: INSTY.asia@ineos.com

### Emergency telephone number

Telephone: +86 512 8090 3042 (country); + 65 3158 1074 (regional)

## 2. Hazards identification

### Classification of the substance or mixture

#### GHS classification

This mixture 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.  
Fine dust: May form explosible dust-air mixture if dispersed.  
In case of dust formation: Particular danger of slipping on spilled product on the ground.  
The melted product can cause severe burns.  
Swallowing may cause gastrointestinal irritation and pain of guts.

### 3. Composition / information on ingredients

#### Mixtures

Chemical characterisation: Polymer mixture:

CAS No. 25747-74-4 Acrylonitrile-methylstyrene copolymer

CAS No. 9003-56-9 Styrene-acrylonitrile-butadiene 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

In case of inhalation: Provide fresh air. Put victim at rest and keep warm. Seek medical attention

Following skin contact: The melted product can cause severe burns.  
After contact with molten product, cool skin area rapidly with cold water.  
Burns caused by molten material must be treated clinically.

After eye contact: IF IN EYES: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Seek medical treatment in case of troubles.

After swallowing: Swallowing is not regarded as a possible way of exposition.  
In case of ingestion: 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 spray jet, foam, extinguishing powder, carbon dioxide (CO<sub>2</sub>).

#### Special hazards arising from the substance or mixture

In case of fire may be liberated:  
smoke, acrylonitrile, styrene, butadiene, carbon monoxide and carbon dioxide (CO<sub>2</sub>).  
Fine dust: May form explosible dust-air mixture if dispersed.

#### Advice for firefighters

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, protective equipment and emergency procedures

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: Particular danger of slipping on spilled product on the ground.

## 7. Handling and storage

### Precautions for safe 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 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.

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

Additional information: The product contains very low levels of residual monomers and process chemicals (styrene, ethylbenzene, acrylonitrile, methylstyrene and butadiene) 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.

### 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.  
Protective gloves made of fabric or leather.  
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: Physical state at 20 °C and 101.3 kPa: solid  
Colour: natural colors (whitish)
- Odour: weak characteristic
- Odour threshold: No data available
- pH value: not applicable
- Melting point/freezing point: > 100 °C (DIN EN ISO 306)
- Initial boiling point and boiling range: No data available
- Flash point/flash point range: Not applicable
- Evaporation rate: No data available
- Flammability: Not highly flammable.
- Explosion limits: No data available
- Vapour pressure: not applicable
- Vapour density: No data available
- Density: at 20 °C: (1000 hPa) 1.05 - 1.2 g/cm<sup>3</sup> (DIN 53479)
- Water solubility: insoluble
- Partition coefficient: n-octanol/water: not applicable
- Auto-ignition temperature: not self-igniting
- Thermal decomposition: 300 °C

### Additional information

- Viscosity, dynamic: not relevant
- Explosive properties: Fine dust: May form explosive dust-air mixture if dispersed.
- Oxidizing characteristics: not oxidising
- Bulk density: at 20 °C: (1000 hPa) approx. 600 kg/m<sup>3</sup> (DIN 53466)

## 10. Stability and reactivity

Reactivity:	No hazardous reaction when handled and stored according to provisions. refer to 10.3
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	Fine dust: May form explosible dust-air mixture if dispersed.
Conditions to avoid:	Protect from excessive heat. Keep away from open flames, hot surfaces and sources of ignition. Avoid dust formation.
Incompatible materials:	Strong oxidizing agents
Hazardous decomposition products:	When greatly overheated, material may release hazardous decomposition products: Hydrogen cyanide, monomers, hydrocarbons, gases/vapours, cyclic low molecular weight oligomers, carbon monoxide and carbon dioxide.
Thermal decomposition:	300 °C

## 11. Toxicological information

### Information on toxicological effects

<p>Toxicological effects:</p> <p>Acute toxicity (oral): Lack of data.</p> <p>Acute toxicity (dermal): Lack of data.</p> <p>Acute toxicity (inhalative): Lack of data.</p> <p>Skin corrosion/irritation: Lack of data.</p> <p>Serious eye damage/irritation: Lack of data.</p> <p>Sensitisation to the respiratory tract: Lack of data. Not to be expected</p> <p>Skin sensitisation: Lack of data. Not to be expected</p> <p>Germ cell mutagenicity/Genotoxicity: Lack of data.</p> <p>Carcinogenicity: Lack of data.</p> <p>Reproductive toxicity: Lack of data.</p> <p>Effects on or via lactation: Lack of data.</p> <p>Specific target organ toxicity (single exposure): Lack of data.</p> <p>Dusts: Irritating to eyes, respiratory system and skin.</p> <p>Specific target organ toxicity (repeated exposure): Lack of data.</p> <p>Aspiration hazard: Lack of data.</p>	<p>Other information:</p> <p>When handled appropriately, even after long years of experience with this product, no adverse health effects are known.</p>
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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

### Toxicity

Aquatic toxicity: No evidence of aquatic toxicity. (By analogy)

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

### Persistence and degradability

Further details: Biodegradation: Product is biodegradable with difficulty. (By analogy)

### Mobility in soil

No data available

### Additional ecological information

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

## 13. Disposal considerations

### Waste treatment methods

#### 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

### UN number

ADR/RID, IMDG, IATA-DGR:  
not applicable

### 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

Chemicals Control Act not applicable

**Further regulations, limitations and legal requirements**

No data available

**16. Other information**

Reason of change: + Grades HH-106 Q459 NR und HH-112 Q459 NR, gem ID. 68689;UHA 10.02.2017

Changes in section 8: Glove material

Changes in section 10: Decomposition products

Changes in section 9: flash point, ignition temperature

Changes in section 2, 5, 7, 10: General revision

Date of first version: 4/2/2013

**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.