SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: Novodur® ABS Granulat
This safety data sheet pertains to the following products:
Novodur® C112
Novodur® E309
Novodur® E401
Novodur® GP-22 Q459
Novodur® H604
Novodur® H605
Novodur® H606LS
Novodur® HD 877M
Novodur® HD M203FC
Novodur® HD M205FC
Novodur® HD-15
Novodur® HG-36
Novodur® M201AS
Novodur® M203
Novodur® M204PG
Novodur® M210TF
Novodur® M307
Novodur® P2H-AT
Novodur® P2L-AT
Novodur® P2M-AT
Novodur® P2MC
Novodur® P2M-V
Novodur® P3H-AT
Novodur® P4LG
Novodur® PRECO BMGVP41
Novodur® PRECO EXP
Novodur® PRECO P60P50

CAS-Number: 9003-56-9
EC-number: -

1.2 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.

1.3 Details of the supplier of the safety data sheet

Company name: INEOS Styrolution Group GmbH
Street/POB-No.: Mainzer Landstraße 50
Postal Code, city: 60325 Frankfurt
Germany
WWW: www.styrolution.com
Dept. responsible for information:
Infopoint, Telephone: +49 (0) 2133 - 51- 4007
E-mail: infopoint.emea@styrolution.com

1.4 Emergency telephone number

Telephone: +44 (0) 1235 239 670

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)

This substance is classified as not hazardous.

2.2 Label elements

Labelling (CLP)

Hazard statements: not applicable

Precautionary statements: not applicable

2.3 Other hazards

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.

Results of PBT and vPvB assessment:

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

SECTION 3: Composition / information on ingredients

3.1 Substances

Chemical characterisation: (C8H8*C4H6*(C3H3)n)m Acrylonitrile-butadiene-styrene copolymer
2-Propenenitrile, polymer with 1,3-Butadiene and Ethylbenzene

CAS-Number: 9003-56-9

EC-number: -

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

SECTION 4: First aid measures

4.1 Description of 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: 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.
In case of troubles or persistent symptoms, consult an opthalmologist.

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.

4.2 Most important symptoms and effects, both acute and delayed

Dust: Skin irritation, eye irritations and redness

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Decontamination, vital functions

SECTION 5: Firefighting measures

5.1 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

5.2 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): May form explosible dust-air mixture if dispersed.

5.3 Advice for firefighters

Special protective equipment for firefighters:

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

Additional information: Hazchem-Code: -

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.

SECTION 6: Accidental release measures

6.1 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.

6.2 Environmental precautions

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

6.3 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.

6.4 Reference to other sections

Refer additionally to section 8 and 13.

SECTION 7: Handling and storage

7.1 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): May form explosible dust-air mixture if dispersed.

7.2 Conditions for safe storage, including any incompatibilities

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.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

Type	Limit value
Great Britain: WEL-TWA	10 mg/m³
Great Britain: WEL-TWA	4 mg/m³
Ireland: 8 hours	10 mg/m³
Ireland: 8 hours	4 mg/m³

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

8.2 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.

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.

SECTION 9: Physical and chemical properties

9.1 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/cm³
Water solubility:	insoluble
Partition coefficient: n-octanol/water:	No data available

Auto-ignition temperature:	not self-igniting
Decomposition temperature:	approx. > 300 °C
Viscosity, kinematic:	No data available
Explosive properties:	In case of dust formation (Fine dust): May form explosible dust-air mixture if dispersed.
Oxidizing characteristics:	No data available

9.2 Other information

Ignition temperature:	> 300 °C
Bulk density:	500 - 700 kg/m³

SECTION 10: Stability and reactivity

10.1 Reactivity

exothermic reactions

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

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

10.4 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.

10.5 Incompatible materials

Strong oxidizing agents, strong acids

10.6 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: approx. > 300 °C

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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. 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 appropiately, 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.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: no evidence of aquatic toxicity

12.2. Persistence and degradability

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

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

12.3 Bioaccumulative potential

To avoid bioaccumulation plastics should not be disposed in the sea or in other water environments.

Partition coefficient: n-octanol/water:
No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

12.6 Other adverse effects

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 07 02 13 = Waste plastic

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.

SECTION 14: Transport information

14.1 UN number

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

14.2 UN proper shipping name

ADR/RID, IMDG, IATA-DGR:
Not restricted

14.3 Transport hazard class(es)

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

14.4 Packing group

ADR/RID, IMDG, IATA-DGR:

not applicable

14.5 Environmental hazards

Marine pollutant: no

14.6 Special precautions for user

No dangerous good in sense of these transport regulations.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations - Great Britain

Hazchem-Code: -

No data available

15.2 Chemical Safety Assessment

For this substance a chemical safety assessment is not required.

SECTION 16: Other information

Further information

Reason of change: Changes in section 8: Glove material
Changes in section 10: Hazardous decomposition products
Changes in section 1: Changes of product list: + Novodur® GP-22 Q459 (APAC)

Date of first version: 4/9/2012

Department issuing data sheet

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

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

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.