

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® BX13036
Novodur® C112
Novodur® E309
Novodur® E401
Novodur® H604
Novodur® H605
Novodur® H606LS
Novodur® HD 877M
Novodur® HD M203FC
Novodur® HD M205FC
Novodur® HD-15
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

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: Styrolution GmbH
Street/POB-No.: Erlenstraße 2
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 mixture is classified as not hazardous.

Classification according to Directive 67/548/EEC or 1999/45/EC

This preparation is classified as not hazardous.

2.2 Label elements

Labelling (CLP)

Hazard statements: not applicable

Safety precautions: not applicable

Labelling (67/548/EEC or 1999/45/EC)

R phrase(s): not applicable

S phrase(s): not applicable

2.3 Other hazards

Under the recommended processing conditions small amounts of emitted substance (e.g. residual monomers, residual solvents, decomposition products) may be discharged. In succession of overheating during the melting process potentially substances are released, which are considered as harmful and carcinogen. The maximum workplace exposure limits are expressed in Section 8, as may be required.

The melted product can cause severe burns.

SECTION 3: Composition / information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Chemical characterization: Acrylonitrile-butadiene-styrene copolymer

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

SECTION 4: First aid measures

4.1 Description of first aid measures

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

After inhalation: In case of inhalation of decomposition products, affected person should be moved into fresh air and kept still. In case of breathing difficulties administer oxygen. In case of breathing stop use artificial aspiration immediately. Seek medical attention.

In case of skin contact: After contact with molten product, cool skin area rapidly with cold water. Do not use force or solvents to remove product incrustations from affected skin areas. Cover with sterile dressing material to protect against infection. Seek medical attention.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. In case of troubles or persistent symptoms, consult an ophthalmologist.

After swallowing: Consult physician.

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.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media:

water fog, foam, dry extinguishing powder, carbon dioxide.

5.2 Special hazards arising from the substance or mixture

In case of fire may be liberated: Nitrogen oxides (NO_x), carbon monoxide and carbon dioxide.

5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear self-contained breathing apparatus. Suitable protective clothing.

Additional information:

Hazchem-Code: -

Seal off endangered area. Remove persons to safety.

Do not allow water used to extinguish fire to enter drains, ground or waterways. Treat runoff as hazardous.

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. Do not breathe vapours. Provide adequate ventilation. Provide a conveniently located respiratory protective device.

6.2 Environmental precautions

Avoid release to the environment.

6.3 Methods and material for containment and cleaning up

Take up mechanically.

Additional information:

Granulate: Special danger of slipping by leaking/spilling product.

6.4 Reference to other sections

Refer additionally to chapter 8 and 13.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Advices on safe handling:

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.

After work, wash hands and face.

For mechanical processing:

Do not breathe dust. Vent dust from the work area.

Avoid dust formation during regranulation.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Keep container dry. Store only in original container.

Storage class: 11 = Combustible solids

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
100-41-4	Ethylbenzene	Europe: IOELV: STEL	884 mg/m ³ ; 200 ppm (May be absorbed through the skin.)
		Europe: IOELV: TWA	442 mg/m ³ ; 100 ppm (May be absorbed through the skin.)
		Great Britain: WEL-STEL	552 mg/m ³ ; 125 ppm (May be absorbed through the skin.)
		Great Britain: WEL-TWA	441 mg/m ³ ; 100 ppm (May be absorbed through the skin.)
		Ireland: 15 minutes	884 mg/m ³ ; 200 ppm
	Ireland: 8 hours	442 mg/m ³ ; 100 ppm	
100-42-5	Styrene	Great Britain: WEL-STEL	1080 mg/m ³ ; 250 ppm
		Great Britain: WEL-TWA	430 mg/m ³ ; 100 ppm
		Ireland: 15 minutes	170 mg/m ³ ; 40 ppm
		Ireland: 8 hours	85 mg/m ³ ; 20 ppm
107-13-1	Acrylonitrile	Great Britain: WEL-TWA	4.4 mg/m ³ ; 2 ppm
		Ireland: 8 hours	4.5 mg/m ³ ; 2 ppm (May be absorbed through the skin.)
106-99-0	1,3-Butadiene	Great Britain: WEL-TWA	22 mg/m ³ ; 10 ppm (Carc)
		Ireland: 8 hours	2.2 mg/m ³ ; 1 ppm C1, Mut2
100-40-3	4-Vinylcyclohexene	Ireland: 8 hours	0.4 mg/m ³ ; 0.1 ppm

Additional information: Information about acrylonitrile and butadiene: carcinogenic effect.

Additional protective measures:

- Measurements for the early detection of increased exposure as a result of an unforeseen incident;
- The danger areas must be delimited and identified using relevant warning and safety signs. Smoking is forbidden.
- The exhaust air must only be let back to the working area after sufficient cleaning using approved equipment.

8.2 Exposure controls

In case of melting:

Provide for good ventilation or exhaust system or work with completely self-contained equipment.

Occupational exposure controls

Respiratory protection: In case of dust: Particulates filter P1 according to EN 143.

Respiratory protection must be worn whenever the WEL levels have been exceeded.
 Use filter type A (= against vapours of organic substances) according to EN 14387.

Hand protection:	Chemically resistant gloves according to EN 374 or Protective gloves against thermic risks according to EN 407. Glove material: Leather. Observe glove manufacturer's instructions concerning penetrability and breakthrough time. In case of melting: Protective gloves against thermic risks.
Eye protection:	Tightly sealed goggles according to EN 166.
Body protection:	Wear suitable protective clothing. In case of dust: Overall
General protection and hygiene measures:	Change contaminated clothing. Wash contaminated clothing prior to re-use. When using do not eat, drink or smoke. Wash hands before breaks and after work. Safety shower and eye wash station should be easily accessible to the work area.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Physical state: solid, granulate Colour: varying, depends on colouring
Odour:	characteristic
Odour threshold:	no data available
pH value:	no data available
Melting point/melting range:	(Softening temperature) 95 - 105 °C
Boiling temperature/boiling range:	no data available
Flash point/flash point range:	no data available
Vapourisation rate:	no data available
Flammability:	no data available
Explosive properties:	no data available
Explosion limits:	no data available
Vapour pressure:	no data available
Vapour density:	no data available
Density:	no data available
Water solubility:	insoluble
Partition coefficient n-octanol/water:	no data available
Autoflammability:	no data available
Thermal decomposition:	> 300 °C
Viscosity, dynamic:	no data available
Explosive properties:	no data available
Oxidizing characteristics:	no data available

9.2 Other information

Ignition temperature:	> 300 °C
Bulk density:	500-700 kg/m ³
Additional information:	no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

exothermic reactions

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

No hazardous reactions known.

10.4 Conditions to avoid

Protect against heat /sun rays. Decomposition!

10.5 Incompatible materials

none

10.6 Hazardous decomposition products

Thermal decomposition:	In case of fire may be liberated: Nitrogen oxides (NO _x), carbon monoxide and carbon dioxide. > 300 °C
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SECTION 11: Toxicological information

11.1 Information on toxicological effects

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

Other information:	There are no known health risks. Under the recommended processing conditions small amounts of emitted substance (e.g. residual monomers, residual solvents, decomposition products) may be discharged. In succession of overheating during the melting process potentially substances are released, which are considered as harmful and carcinogen. The melted product can cause severe burns.
Ethylbenzene:	Harmful if inhaled. May be fatal if swallowed and enters airways. May cause damage to organs through prolonged or repeated exposure. May cause respiratory irritation. Causes serious eye irritation. Causes skin irritation.
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. May cause cancer. May cause genetic defects.
4-Vinylcyclohexene:	Suspected of causing cancer. Suspected of damaging fertility or the unborn child. Causes skin irritation.

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.

SECTION 12: Ecological information

12.1 Toxicity

Water Hazard Class: nwg = non-hazardous to water (WGK catalog number 766) (plastic granulate)

12.2. Persistence and degradability

Further details: 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

no data available

12.6 Other adverse effects

General information: Discharge into the environment must be avoided.

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: Non-contaminated packages may be recycled. If recycling is not practicable, dispose of in compliance with local regulations.

SECTION 14: Transport information

14.1 UN number

not applicable

14.2 UN proper shipping name

ADR/RID, IMDG, IATA: Not restricted

14.3 Transport hazard class(es)

not applicable

14.4 Packing group

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 73/78 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: -

National regulations - USA

Hazard rating systems:



NFPA Hazard Rating:

Health: 1 (Slight)

Fire: 0 (Minimal)

Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 1 (Slight)

Flammability: 0 (Minimal)

Physical Hazard: 0 (Minimal)

Personal Protection: X = Consult your supervisor

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
	X

15.2 Chemical Safety Assessment

no data available

SECTION 16: Other information**Further information**

Date of first version: 04.09.2012

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.