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

1.1 Product identifier

Trade name: Novodur® ABS Pellets (Polycarbonate-modified)
This safety data sheet pertains to the following products:
Novodur® Ultra 4105
Novodur® Ultra 4140PG
Novodur® 5300
Novodur® H801

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

General use: For the production of moulded plastic articles
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 mixture is classified as not hazardous.

2.2 Label elements

Labelling (CLP)

Hazard statements: not applicable

Precautionary statements: 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, where necessary, listed in section 8.

The melted product can cause severe burns.

Results of PBT and vPvB assessment:

No data available

SECTION 3: Composition / information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Chemical characterisation: A blend of polymers based on acrylonitrile butadiene styrene/bisphenol A - polycarbonate copolymer

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. In case of breathing difficulties administer oxygen. If breathing has stopped, give artificial respiration immediately. Seek medical attention.

Following 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 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

The melted product can cause severe burns.
Thermal treatment, Processing: Can cause skin, eye and respiratory tract irritation.

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:
Chlorine decomposition products, nitrogen oxides (NOx), 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.

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 section 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.

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/m³; 200 ppm
		Europe: IOELV: TWA	442 mg/m³; 100 ppm
		Great Britain: WEL-STEL	552 mg/m³; 125 ppm
		Great Britain: WEL-TWA	441 mg/m³; 100 ppm
		Ireland: 15 minutes	884 mg/m³; 200 ppm
		Ireland: 8 hours	442 mg/m³; 100 ppm
100-42-5	Styrene	Great Britain: WEL-STEL	1080 mg/m³; 250 ppm
		Great Britain: WEL-TWA	430 mg/m³; 100 ppm
		Ireland: 15 minutes	170 mg/m³; 40 ppm
		Ireland: 8 hours	85 mg/m³; 20 ppm
107-13-1	Acrylonitrile	Great Britain: WEL-TWA	4.4 mg/m³; 2 ppm
		Ireland: 8 hours	4.5 mg/m³; 2 ppm
106-99-0	1,3-Butadiene	Great Britain: WEL-TWA	22 mg/m³; 10 ppm
		Ireland: 8 hours	2.2 mg/m³; 1 ppm
108-95-2	Phenol	Europe: IOELV: STEL	16 mg/m³; 4 ppm
		Europe: IOELV: TWA	8 mg/m³; 2 ppm
		Great Britain: WEL-STEL	16 mg/m³; 4 ppm
		Great Britain: WEL-TWA	7.8 mg/m³; 2 ppm
		Ireland: 15 minutes	16 mg/m³; 4 ppm
		Ireland: 8 hours	8 mg/m³; 2 ppm
80-05-7	4,4'-Isopropylidenediphenol	Europe: IOELV: TWA	10 mg/m³
		Great Britain: WEL-TWA	10 mg/m³
		Ireland: 8 hours	10 mg/m³
108-90-7	Chlorobenzene	Europe: IOELV: STEL	70 mg/m³; 15 ppm
		Europe: IOELV: TWA	23 mg/m³; 5 ppm
		Great Britain: WEL-STEL	14 mg/m³; 3 ppm
		Great Britain: WEL-TWA	4.7 mg/m³; 1 ppm
		Ireland: 15 minutes	70 mg/m³; 15 ppm
		Ireland: 8 hours	23 mg/m³; 5 ppm
100-40-3	4-Vinylcyclohexene	Ireland: 8 hours	0.4 mg/m³; 0.1 ppm

Biological limit values:

CAS No.	Designation	Type	Limit value	Parameter	Sampling
108-95-2	Phenol	Europe: BLV, urine	120 mg/g creatinine	phenol	no restriction

Additional information: The product contains very low levels of residual monomers and process chemicals (styrene, ethylbenzene, acrylonitrile, phenol, 4,4'-Isopropylidenediphenol, Chlorobenzene, 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.
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.
In case of dust formation: 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:	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) 100 - 115 °C
Initial boiling point and boiling range:	No data available
Flash point/flash point range:	No data available
Evaporation rate:	No data available
Flammability:	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
Auto-ignition temperature:	No data available
Decomposition temperature:	> 300 °C
Viscosity, kinematic:	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/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

No hazardous reactions known.

10.4 Conditions to avoid

Heating (Decomposition).

10.5 Incompatible materials

none

10.6 Hazardous decomposition products

In case of fire may be liberated:
Chlorine decomposition products, nitrogen oxides (NOx), carbon monoxide and carbon dioxide.

Thermal decomposition: > 300 °C

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: When handled appropiately, even after long years of experience with this product, no adverse health effects are known.

Symptoms

The melted product can cause severe burns.
Thermal treatment, Processing: Can cause skin, eye and respiratory tract irritation.

SECTION 12: Ecological information

12.1 Toxicity

Further details: No data available

12.2. Persistence and degradability

Further details: Product is not readily biodegradable.
Due to the consistency along with the low water solubility of the product a bioavailability is unlikely.

12.3 Bioaccumulative potential

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

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 mixture a chemical safety assessment is not required.

SECTION 16: Other information

Further information

Reason of change: General revision
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.