ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 453/2010

1. SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name	EMPERA General Purpose Polystyrene.
Trade name	EMPERA 116N, 116L, 124N, 124L, 153A, 153F, 156F, 251N, 251L, 332N, 332L, 342L, 350N, 350L. Microgranulate 130M, 170M, 171M.
Chemical Family	Polymer.
Alternative names	Styrene Homopolymer.
Synonyms	GPPS.
CAS No.	9003-53-6
EINECS No.	Polymer exempt.
REACH Registration No.	Polymer exempt.

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

Identified use(s)	Primarily used in injection moulding and extrusion for food packaging, toys, technical parts and various other articles.
Uses advised against	None known.

1.3 Details of the supplier of the Safety Data Sheet

1.3.1 Non EU Supplier

INEOS Styrenics International SA
Avenue de la Gare 14
CH - 1700 Fribourg
Switzerland.

Telephone	+ 41-26-426-5656.
Fax	+ 41-26-426-5657.

1.3.2 EU Representative

INEOS Styrenics Wingles SAS
Avenue de la Verrerie
Boîte Postale N°62
62140 Wingles
France.

Telephone	+ 33-3-21773200.
Fax	+ 33-3-21773299.
E-Mail (competent person)	msdsemail@ineosstyrenics.com
Technical contact	http://www.ineosstyrenics.com/Contact/ContactMenu.htm

1.4 Emergency telephone number

Emergency Phone No.	+ 44 (0) 1235 239 670.

2. SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Directive 67/548/EEC & Directive 1999/45/EC Not classified as dangerous for supply/use.

2.1.2 Regulation (EC) No. 1272/2008 (CLP) Not classified as dangerous for supply/use.

2.2 Label elements

2.2.1 Label elements According to Directive 67/548/EEC & Directive 1999/45/EC

Product Name	EMPERA General Purpose Polystyrene.
Hazard Symbol	None.
Risk Phrases	None.
Safety Phrases	None.

2.2.2	**Label elements**	According to Regulation (EC) No. 1272/2008 (CLP)
	Product Name	EMPERA General Purpose Polystyrene.
	Hazard Pictogram	None.
	Signal word(s)	None.
	Hazard statement(s)	None.
	Precautionary statement(s)	None.

2.3 Other hazards

The following information is based on a consideration of the properties of the main components of this mixture.

- Molten material can cause severe burns.
- Dust may have irritant effect on skin, eyes and air passages.
- Danger of dust explosion in fine dusty form or when ground to a small particle size.

2.4 Additional Information

None.

3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Contains no hazardous ingredients: Directive 2001/58/EC and EC Regulation (EC) No. 1907/2006.

EC Classification No. 67/548/EEC

Hazardous ingredient(s)	%W/W	CAS No.	EC No.	REACH Registration No.	EC Classification and Risk Phrases
No classifiable hazardous ingredient(s).	-	-	-	-	-

EC Classification No. 1272/2008

Hazardous ingredient(s)	%W/W	CAS No.	EC No.	REACH Registration No.	Hazard pictogram(s) and Hazard statement(s)
No classifiable hazardous ingredient(s).	-	-	-	-	-

4. SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation	Remove patient from exposure, keep warm and at rest.
Skin Contact	Molten material can cause severe burns. Do NOT try to peel molten polymer from the skin. Cool rapidly with water. Obtain medical attention.
Eye Contact	After initial flushing, remove any contact lenses and continue flushing. Continue irrigation until medical attention can be obtained.
Ingestion	Do not induce vomiting. Provided the patient is conscious, wash out mouth with water and give 200-300 ml (half a pint) of water to drink.

4.2 Most important symptoms and effects, both acute and delayed — Eyes and Skin Contact: Redness, Irritation.

4.3 Indication of immediate medical attention and special treatment needed — Unlikely to be required but if necessary treat symptomatically.

5. SECTION 5: FIRE-FIGHTING MEASURES

Product is not classified as flammable, but will burn on contact with flame or exposure to high temperature (see Section 9).

5.1	**Extinguishing Media**	
	Suitable Extinguishing Media	Extinguish preferably with waterspray, fog or foam. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
	Unsuitable Extinguishing Media	Do not use water jet.
5.2	**Special hazards arising from the substance or mixture**	This product may give rise to hazardous fumes in a fire. Hazardous Decomposition Product(s): Carbon monoxide, Carbon dioxide, styrene.
5.3	**Advice for fire-fighters**	Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Keep containers cool by spraying with water if exposed to fire.

6. SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1	**Personal precautions, protective equipment and emergency procedures**	Avoid inhalation of dusts. Wear suitable protective clothing and eye/face protection.
6.2	**Environmental precautions**	Prevent entry into drains.
6.3	**Methods and material for containment and cleaning up**	Small spillages: Sweep up and shovel into waste drums or plastic bags. Transfer to a container for disposal. Large spillages: Use vacuum equipment for collecting spilt materials, where practicable. Transfer to a lidded container for disposal or recovery.
6.4	**Reference to other sections**	See Also Section 8 and 13.

7. SECTION 7: HANDLING AND STORAGE

7.1	**Precautions for safe handling**	Avoid contact with heated or molten product. Avoid generation of dust. Do not breathe dust. Do not breathe fumes/vapour. Provide adequate ventilation, including appropriate local extraction. Take precautionary measures against static discharges. Ensure adequate earthing. Use non-sparking hand tools and explosion proof electrical equipment.
	Process Hazards	The molten form can cause thermal burns if in contact with skin or eyes. Avoid generation of dust. If permitted to accumulate, these fines or dust can, under certain conditions, pose an explosion hazard. Take precautionary measures against static discharges. Ensure adequate earthing.
7.2	**Conditions for safe storage, including any incompatibilities**	Keep container tightly closed and in a well-ventilated place. Keep away from sources of ignition. Keep away from heat and direct sunlight.
	Storage Temperature	Ambient.
	Storage Life	Stable under normal conditions.
	Incompatible materials	Strong oxidising agents.
7.3	**Specific end use(s)**	Primarily used in injection moulding and extrusion for food packaging, toys, technical parts and various other articles.

8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits

No Occupational Exposure Limit assigned. It is recommended that the following are adopted:

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
Dust (Respirable Dust)	-	-	4	-	-	None.

8.1.2 Biological limit value Not established.

8.1.3 PNECs and DNELs Not established.

8.2 Exposure controls

8.2.1 Appropriate engineering controls Provide adequate ventilation.

8.2.2 Personal protection equipment Wear protective equipment to comply with good occupational hygiene practice.

Eye/face protection — Safety spectacles.

Skin protection (Hand protection/ Other) — Not normally required. Wear suitable gloves if prolonged skin contact is likely. Wear safety shoes or boots. Wear suitable protective clothing.

Respiratory protection — An approved dust mask or organic vapour respirator should be worn if exposure to levels above the occupational exposure limit is likely.

Thermal hazards — Use gloves with insulation for thermal protection, when needed. Wear insulating gloves EN407 (heat).

8.2.3 Environmental Exposure Controls Prevent entry into drains.

9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	Granules/Solid.
Colour	Colourless.
Odour	Faint.
Odour Threshold (ppm)	Not established
Flash Point (°C)	> 350°C.
Auto Ignition Temperature (°C)	ca. 490°C.
Vapour Pressure (mm Hg)	Not applicable.
Density (g/ml)	ca. 1050kg/m³ @ 20°C (ISO 1183).
Bulk Density (g/ml)	620kg/m³ (Solid).
Solubility (Water)	Insoluble.
Solubility (Other)	Not available.
Partition Coefficient (n-Octanol/water)	Not available.
Decomposition Temperature (°C)	Not available.
Viscosity (mPa.s)	Not applicable.

	Explosive properties	Danger of dust explosion in fine dusty form or when ground to a small particle size.
	Oxidising properties	Not oxidising.
9.2	**Other information**	None.

10. SECTION 10: STABILITY AND REACTIVITY

10.1	**Reactivity**	Stable under normal conditions.
10.2	**Chemical stability**	Stable under normal conditions.
10.3	**Possibility of hazardous reactions**	Danger of dust explosion in fine dusty form or when ground to a small particle size.
10.4	**Conditions to avoid**	Avoid generation of dust.
10.5	**Incompatible materials**	Strong oxidising agents.
10.6	**Hazardous Decomposition Product(s)**	Trace quantities of styrene monomer, carbon monoxide, aldehydes, and organic acids may be formed.

11. SECTION 11: TOXICOLOGICAL INFORMATION

This assessment is based on information available on similar products.

11.1	**Information on toxicological effects**	
11.1.1	**Polymer**	
	Acute toxicity	
	Inhalation	Low acute toxicity.
	Ingestion	Low oral toxicity. LD50 > 2000mg/kg.
	Skin Contact	Low acute toxicity. LD50 > 2000mg/kg.
	Eye Contact	Low acute toxicity.
	Irritation	Dust may have irritant effect on skin, eyes and air passages. During thermal processing: May cause irritation to skin, eyes and respiratory system.
	Corrosivity	Not classified.
	Sensitisation	It is not a skin sensitiser.
	Repeated dose toxicity	Dusts **-** Repeated exposure to high levels may cause irritation to skin, eyes and respiratory system.
	Carcinogenicity	No data.
	Mutagenicity	No data.
	Toxicity for reproduction	No data.
11.2	**Other information**	The molten form can cause thermal burns if in contact with skin or eyes.

12. SECTION 12: ECOLOGICAL INFORMATION

This environmental hazard assessment is based on information available on similar products. Small particles may have physical effects on aquatic and terrestrial organisms.

12.1	**Toxicity**	Non-toxic to aquatic life.
12.2	**Persistence and degradability**	Not readily biodegradable. Styrene homopolymers are susceptible to degradation by exposure to sunlight. Integrated environmental half-life expected to be >= 100 days.
12.3	**Bioaccumulative potential**	The product has low potential for bioaccumulation.
12.4	**Mobility in soil**	The product is essentially insoluble in water. The product has low mobility in soil. Sinks in water.

12.5	**Effect on Effluent Treatment**	No information available.
12.6	**Results of PBT and vPvB assessment**	Not classified as PBT or vPvB.

13. SECTION 13: DISPOSAL CONSIDERATIONS

13.1	**Waste treatment methods**	Remove all packaging for recovery or disposal. Recover or recycle if possible. Bury on an authorised landfill site or incinerate under approved controlled conditions.
13.2	**Additional Information**	Disposal should be in accordance with local, state or national legislation. See Also Section 7.

14. SECTION 14: TRANSPORT INFORMATION

Not classified as dangerous for transport.

14.1	**UN number**	Not applicable.
14.2	**Proper Shipping Name**	Not applicable.
14.3	**Transport hazard class(es)**	Not applicable.
14.4	**Packing Group**	Not applicable.
14.5	**Environmental hazards**	Not applicable.
14.6	**Special precautions for user**	Not applicable.
14.7	**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.

15. SECTION 15: REGULATORY INFORMATION

15.1	**Safety, health and environmental regulations/legislation specific for the substance or mixture**	
15.1.1	**EU regulations**	
	Authorisations and/or restrictions on use	None known.
15.1.2	**National regulations**	None known.
15.2	**Chemical Safety Assessment**	Not available.

16. SECTION 16: OTHER INFORMATION

This Safety Data Sheet was prepared in accordance with EC Regulation (EC) 1907/2006 (REACH), 1272/2008 (CLP) & 453/2010.

The following sections contain revisions or new statements: 1-16.

LEGEND

LTEL	Long Term Exposure Limit
STEL	Short Term Exposure Limit
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic
vPvB	very Persistent very Bioaccumulative

Training advice:
Suitable information on safety in handling, storage and conversion of the product should be given to employees based on all the existing information.

Information contained in this publication or as otherwise supplied to Users is believed to be accurate and is given in good faith, but it is for the Users to satisfy themselves of the suitability of the product for their own particular purpose. INEOS Styrenics gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that exclusion is prevented by law. INEOS Styrenics accepts no liability for loss or damage (other than that arising from death or personal injury caused by defective product, if proved), resulting from reliance on this information. Freedom under Patents, Copyright and Designs cannot be assumed.

Annex to the extended Safety Data Sheet (eSDS)
No information available.