1. IDENTIFICATION

Trademark	:	NORYL™ resin
Product name	:	EN265-701
Product description	:	Polyphenylene ether / Polystyrene Blend
Appearance	:	pellets
Recommended use	:	May be used to produce molded or extruded articles or as a component of other industrial products. Manufacture of plastics products, including compounding and conversion
Restrictions on use	:	For industrial use only.
Supplier	:	SHPP US LLC 1 Noryl Avenue Selkirk, NY 12158-9765 USA Telephone: +1 (518) 475-5011
Emergency SABIC Telephone #	:	800 424-9300 (USA) +1 703-527-3887 (globally, outside USA)
Emergency Transportation #	:	CHEMTREC, U.S. : (800) 424-9300 International: +1 (703) 527-3887
E-mail address	:	sds.info@sabic.com
Website	:	http://www.sabic.com

2. HAZARDS IDENTIFICATION

GHS Remark
The additives in this product (if any) are bound in a thermoplastic resin matrix. In accordance with GHS for the classification of the product, the hazard potential may be assessed with respect to the physico-chemical form and/or bioavailability of the individual components in the thermoplastic resin. UN GHS says, that even if adverse effects are seen in animal studies or in-vitro tests, no classification is needed if the mechanism or mode of action is not relevant to humans. The European CLP Regulation also mentions, that no classification is indicated if the mechanism is not relevant to humans. Where GHS classifications are shown below, these are based on the individual components in the thermoplastic resin matrix. Under the typical use conditions for the resin, these hazardous components are unlikely to contribute to workplace exposure. Please read the entire safety data sheet and/or consult an EHS professional for a complete understanding.

GHS Classification
Not a hazardous substance or mixture.

GHS Label elements
Not a hazardous substance or mixture.

Other hazards which do not result in classification

SABIC Emergency Overview
Pellets with slight or no odor
Spilled material may create slipping hazard.
Can burn in a fire creating dense, toxic smoke
Molten plastic can cause severe thermal burns
Fumes produced during melt processing may cause eye, skin, and respiratory tract irritation. Severe over-exposure may result in nausea, headache, chills, and fever.
Secondary operations, such as grinding, sanding, or sawing can produce dust which may present an explosion or respiratory hazard.

Other information
OSHA, IARC and/or NTP have listed carbon, titanium dioxide, crystalline silica (quartz), respirable glass and certain heavy metals, present in some colorants and fillers, as carcinogens. If these materials are present in this product at significant quantities, they are shown in Section 2/3. These materials are essentially bound to the plastic matrix and are unlikely to contribute to workplace exposure under recommended processing conditions.

Processing Issues
Processing vapors may cause irritation to the eyes, skin, and respiratory tract. In cases of severe exposure, nausea and headache can also occur. Grease-like processing vapor condensates on ventilation ductwork, molds, and other surfaces can cause irritation and injury to skin.

Aggravated Medical Condition
MEDICAL RESTRICTIONS: There are no known health effects aggravated by exposure to this product. However, certain sensitive individuals and individuals with respiratory impairments may be affected by exposure to components in the processing vapors.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Mixture

Hazardous components

Chemical Name	CAS-No.	Concentration
Triphenyl Phosphate	115-86-6	>= 1 - < 3 %
Carbon Black	1333-86-4	>= 0.3 - < 1 %
White Mineral Oil	8042-47-5	>= 0.3 - < 1 %

Components which are considered potential hazards to health or the environment, if present above minimum concentrations, are listed above. Any concentration shown as a range is to protect confidentiality and/or is due to batch variation. Any non-hazardous components are being withheld as a trade secret. This product consists primarily of high molecular weight polymers which are not expected to be hazardous. Furthermore, any additives in this product are present within the polymer matrix and are not expected to be hazardous under recommended use conditions. Occupational exposure limits, if available, are listed in Section 8.

4. FIRST AID MEASURES

General advice : Thermal decomposition can lead to release of irritating gases and vapours. Move the victim to fresh air. Obtain medical attention.

If inhaled : Move to fresh air in case of accidental inhalation of dust or

fumes from overheating or combustion. If symptoms persist, call a physician.

In case of skin contact	:	After contact with skin, wash immediately with plenty of cold water. Wash off immediately with soap and plenty of water. Consult a physician. If skin irritation persists, call a physician.
In case of eye contact	:	Immediately flush eye(s) with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	Negligible or unlikely exposure pathways If accidentally swallowed obtain immediate medical attention.
Notes to physician	:	No information available.

5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use dry chemical, CO2, water spray or "alcohol" foam. Water is the best extinguishing medium. Carbon dioxide and dry chemical are not generally recommended because their lack of cooling capacity may permit re-ignition on larger resin fires (blobs, drools, etc.).
Unsuitable extinguishing media	:	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards during firefighting	:	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Material is not sensitive to mechanical impact.
Hazardous combustion products	:	Fire will produce dense black smoke containing hazardous combustion products, carbon oxides, hydrocarbon fragments. If present, certain hazardous additives can also liberate halogenated hydrocarbons.
Further information	:	Take precautionary measures against static discharges. During processing, dust may form explosive mixture in air. Thermal decomposition can lead to release of irritating gases and vapours.
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary. Stay upwind/ keep distance from source.
Explosive properties	:	Not applicable

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Take precautionary measures against static discharges.
Environmental precautions	:	Do not flush into surface water or sanitary sewer system. Should not be released into the environment. SABIC is

committed to implementing Responsible Care® and global sustainability programs (such as The Alliance to End Plastic Waste, Operation Clean Sweep®, etc.) throughout the value chain that are designed to prevent and address accidental releases into the environment. Accordingly, SABIC recommends implementation of systems and practices by downstream users to prevent and address incidental releases in order to protect the aquatic environment from potential (long term) negative effects of plastic materials.

Methods and materials for containment and cleaning up : Sweep up and shovel into suitable containers for disposal. Do not create a powder cloud by using a brush or compressed air.

7. HANDLING AND STORAGE

Handling

Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice. Provide for appropriate exhaust ventilation and dust collection at machinery. Avoid dust formation. All metal parts of the mixing and processing equipment must be earthed. Open containers only in well-ventilated area.

Storage

Conditions for safe storage : Keep tightly closed in a dry and cool place. Keep away from heat and sources of ignition. Residual monomer vapors can accumulate in the headspace of closed containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Reference
Triphenyl Phosphate	115-86-6	TWA	3 mg/m3	ACGIH
Further information: Cholinesterase inhibition				
Triphenyl Phosphate	115-86-6	TWA	3 mg/m3	NIOSH REL
Triphenyl Phosphate	115-86-6	TWA	3 mg/m3	OSHA Z-1
Triphenyl Phosphate	115-86-6	TWA	3 mg/m3	OSHA P0
Carbon Black	1333-86-4	TWA (Inhalable fraction)	3 mg/m3	ACGIH
Further information: Bronchitis, Confirmed animal carcinogen with unknown relevance to humans				
Carbon Black	1333-86-4	TWA	3.5 mg/m3	NIOSH REL
Carbon Black	1333-86-4	TWA	3.5 mg/m3	OSHA Z-1
Carbon Black	1333-86-4	TWA	3.5 mg/m3	OSHA P0
Carbon Black	1333-86-4	TWA	0.1 mg/m3 (PAHs)	NIOSH REL
Further information: Potential Occupational Carcinogen, Carbon black in presence of polycyclic aromatic hydrocarbons (PAHs), See Appendix C, See Appendix A				
White Mineral Oil	8042-47-5	TWA (Mist)	5 mg/m3	OSHA Z-1

White Mineral Oil	8042-47-5	TWA (Inhalable fraction)	5 mg/m3	ACGIH
Further information: Upper Respiratory Tract irritation, Not classifiable as a human carcinogen				
White Mineral Oil	8042-47-5	TWA (Mist)	5 mg/m3	OSHA P0
White Mineral Oil	8042-47-5	TWA (Mist)	5 mg/m3	NIOSH REL
White Mineral Oil	8042-47-5	ST (Mist)	10 mg/m3	NIOSH REL

Engineering measures : Handle in accordance with good industrial hygiene and safety practice. Provide appropriate exhaust ventilation at machinery. Processing fume condensate may be a fire hazard and toxic; remove periodically from exhaust hoods, ductwork, and other surfaces using appropriate personal protection.

Personal protective equipment

Respiratory protection : Use adequate ventilation and/or engineering controls in high temperature processing to prevent exposure to vapours. If dust or powder are produced from secondary operations such as sawing or grinding, use a respirator approved for protection from dust.

Hand protection

Material : Wear protective gloves.

Eye protection : Safety glasses with side-shields Chemical resistant goggles must be worn.

Skin and body protection : Long sleeved clothing

Protective measures : Wear suitable protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: pellets
Physical state	: solid
Colour	: black
Odour	: none or slight
Odour Threshold	: No information available.
pH	: No data available
Melting point/range	: This product does not exhibit a sharp melting point but softens gradually over a wide range of temperatures.
Boiling point/boiling range	: not determined
Flash point	: Not applicable
Flammability	: No information available.
Upper explosion limit	: not determined
Lower explosion limit	: not determined
Vapour pressure	: negligible
Relative vapour density	: not determined
Relative density	: >1 (water = 1)
Density	: not determined
Bulk density	: 500 kg/m3

Water solubility	:	insoluble
Solubility in other solvents	:	not determined
Partition coefficient: n-octanol/water	:	No information available.
Auto-ignition temperature	:	490 °C estimated
Decomposition temperature	:	not determined
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	Not applicable

10. STABILITY AND REACTIVITY

Reactivity	:	Stable under recommended storage conditions.
Chemical stability	:	Stable at normal ambient temperature and pressure. Hazardous polymerisation does not occur.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	To avoid thermal decomposition, do not overheat. Heating can release hazardous gases. Do not exceed melt temperature recommendations in product literature. Purgings of hot material should be collected in small, flat, thin shapes and quenched with water to allow for rapid cooling. Do not allow product to remain in barrel at elevated temperatures for extended periods of time.
Incompatible materials	:	No special restrictions on storage with other products.
Hazardous decomposition products	:	Process vapors under recommended processing conditions may include trace levels of ,Hydrocarbons, alkylphenols, aldehydes, alcohols, aliphatic amines, dimethylcyclohexanone, trimethylanisole, dihydrobenzofuran,If present, certain hazardous additives can also liberate triarylphosphate esters.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity
Remarks: >5000 mg/kg (estimated)

Acute dermal toxicity
Remarks: >2000 mg/kg (estimated)

Carcinogenicity

IARC

Components	Rating
Carbon Black	Group 2B: Possibly carcinogenic to humans

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

STOT - repeated exposure

Components:

115-86-6:

Components	Exposure routes	Target Organs	Assessment
Triphenyl Phosphate		Blood, Nervous system, Peripheral nervous system	

1333-86-4:

Components	Exposure routes	Target Organs	Assessment
Carbon Black		Lungs	

8042-47-5:

Components	Exposure routes	Target Organs	Assessment
White Mineral Oil		Eyes, Lungs, Respiratory Tract, Skin	

Experience with human exposure

Product:

Inhalation : Remarks: Inhalation unlikely due to physical form. Processing fumes evolved at recommended conditions may contain trace amounts of hazardous chemicals. Extreme processing conditions or temperatures may result in higher levels. Processing vapors may cause irritation to the eyes, skin, and respiratory tract. In cases of severe exposure, nausea and headache can also occur. Grease-like processing vapor condensates on ventilation duct work, molds, and other surfaces can cause irritation and injury to skin.

Skin contact : Remarks: Not a hazard during normal industrial use. If present, some additives (like glass fiber or flame retardants) may cause skin irritation in susceptible persons.

Eye contact : Remarks: Resin particles, like other inert materials, are mechanically irritating to eyes.

Ingestion : Remarks: Ingestion unlikely due to physical form.

Further information

Product:

Special Studies: The toxicological data has been taken from products of similar composition.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

115-86-6:
Toxicity to fish

Components	Value type	Value	Species	Exposure time
Triphenyl Phosphate	LC50	0.36 mg/l	Oncorhynchus mykiss (rainbow trout)	96 h

Toxicity to daphnia and other aquatic invertebrates

Components	Value type	Value	Species	Exposure time
Triphenyl Phosphate	EC50	1 mg/l	Daphnia magna (Water flea)	48 h
Triphenyl Phosphate	EC50	0.36 mg/l	Chironomus sp. (midge)	48 h

Toxicity to algae

Components	Value type	Value	Species	Exposure time
Triphenyl Phosphate	EC50	2 mg/l	Pseudokirchneriella subcapitata (green algae)	96 h

M-Factor (Acute aquatic toxicity) 1

Toxicity to fish (Chronic toxicity)

Components	Value type	Value	Species	Exposure time
Triphenyl Phosphate	EC10	0.037 mg/l	Oncorhynchus mykiss (rainbow trout)	30 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

Components	Value type	Value	Species	Exposure time
Triphenyl Phosphate	NOEC	0.254 mg/l	Daphnia magna (Water flea)	21 d

M-Factor (Chronic aquatic toxicity) 1

Ecotoxicology Assessment

Acute aquatic toxicity Very toxic to aquatic life.

Chronic aquatic toxicity Toxic to aquatic life with long lasting effects.

Persistence and degradability

Components:

115-86-6:
Biodegradability

Components	Test Type	Biodegradation	Result	Exposure time	Concentration	Inoculum
Triphenyl Phosphate	aerobic	83 - 94 %	Readily biodegradable	28 d	100 mg/l	activated sludge

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects

Product:

Additional ecological information: Do not flush into surface water or sanitary sewer system. Ecological injuries are not known or expected under normal use.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods

Waste from residues : Waste must be classified and labelled prior to recycling or disposal. Empty containers should be taken to an approved waste handling site for recycling or disposal. Where possible recycling is preferred to disposal or incineration. SABIC is committed to implementing Responsible Care® and global sustainability programs (such as The Alliance to End Plastic Waste, Operation Clean Sweep®, etc.) throughout the value chain that are designed to prevent and address accidental releases into the environment. Accordingly, SABIC recommends implementation of systems and practices by downstream users to prevent and address incidental releases in order to protect the aquatic environment from potential (long term) negative effects of plastic materials.

Contaminated packaging : Where possible recycling is preferred to disposal or incineration. Can be landfilled or incinerated, when in compliance with local regulations.

14. TRANSPORT INFORMATION

ADR
Not regulated as a dangerous good

IATA-DGR
Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

UNRTDG
Not regulated as a dangerous good

National Regulations

49 CFR [DOT]
Not regulated as a dangerous good

15. REGULATORY INFORMATION

The components of this product are reported in the following inventories:

REACH (European Union)	:	For further information, please contact: Manufacturer, importer, supplier
CH INV (Switzerland)	:	The formulation contains substances listed on the Swiss Inventory Not in compliance with the inventory
TSCA (USA)	:	On TSCA Inventory
DSL (Canada)	:	All components of this product are on the Canadian DSL
AICS (Australia)	:	On the inventory, or in compliance with the inventory
NZIoC (New Zealand)	:	On the inventory, or in compliance with the inventory
ENCS (Japan)	:	On the inventory, or in compliance with the inventory
ISHL (Japan)	:	For further information, please contact: Manufacturer, importer, supplier
KECI (Korea)	:	On the inventory, or in compliance with the inventory
PICCS (Philippines)	:	On the inventory, or in compliance with the inventory
IECSC (China)	:	On the inventory, or in compliance with the inventory
TCSI (Taiwan)	:	For further information, please contact: Manufacturer, importer, supplier
EHSNR (Malaysia)	:	For further information, please contact: Manufacturer, importer, supplier
CICR (Turkey)	:	For further information, please contact: Manufacturer, importer, supplier

Other applicable national regulatory information

TSCA list

TSCA - 5(a) Significant New Use Rule List of Chemicals

Not relevant

TSCA - 12(b) Export Notification List of Chemicals
Not relevant

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Toluene	108-88-3	1000	*

*Note: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Bromine	7726-95-6	500	*

*Note: Calculated RQ exceeds reasonably attainable upper limit.

SARA 302 Extremely Hazardous Substances

Components	CAS-No.
Bromine	7726-95-6

Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

US State Regulations

California Prop 65

WARNING! This product contains a chemical known to the State of California to cause cancer.

Components	CAS-No.	Concentration (%)
Carbon Black	1333-86-4	> 0.3 - <= 1
Styrene	100-42-5	> 0.01 - <= 0.1

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Components	CAS-No.	Concentration (%)
Toluene	108-88-3	> 0.01 - <= 0.1

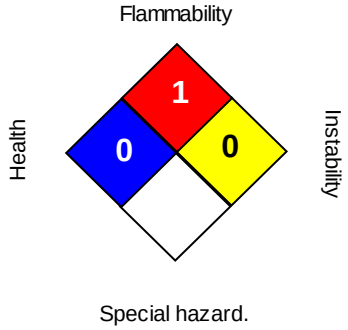
16. OTHER INFORMATION

Further information

Registered trademark : SABIC and brands marked with ™ are trademarks of SABIC or its subsidiaries or affiliates.

Prepared by : Product Stewardship

NFPA:



HMIS III:

HEALTH	0
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Disclaimer

This Safety Data Sheet (SDS) information is provided based on the hazard communication regulations for the region or country in which the purchaser is located and for the use of the persons required to receive this information under those regulations. The information is neither designed nor recommended for any other use or for use by any other person, including for compliance with other laws. This SDS is valid and applicable only to this product as initially sold by us. This SDS is not valid unless it has been obtained directly from Saudi Basic Industries Corporation or any of its affiliates, or posted or viewed on a SABIC website. Modification of this SDS, unless specifically authorized by us, is strictly prohibited. This SDS is based on information that is believed to be reliable at the date of its issuance, but may be subject to change as new information becomes available. Because it is not possible to anticipate all conditions of use, each purchaser and user of this product is responsible for making its own determination as to: (i) the safe and proper handling of this product in its own particular use of this material; and (ii) the suitability of this product for the user's particular use. THE INFORMATION SET FORTH HEREIN DOES NOT CONSTITUTE OR CREATE ANY REPRESENTATION OR WARRANTY, EITHER EXPRESS OR IMPLIED, INCLUDING AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND DOES NOT ALTER OUR STANDARD CONDITIONS OF SALE.

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US / EN

End of Safety Data Sheet