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MATERIAL SAFETY DATA SHEET
Asia Pacific GHS Format

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1. IDENTIFICATION OF THE SUBSTANCE AND COMPANY

Trademark: THERMOCOMP*

Product Name: DX11354 -BKNAT -PGNA

Product Description: Poly (bisphenol-A-carbonate) [CASRN 111211-39-3]

Product Type: Commercial Product

Recommended use: May be used to produce molded or extruded articles or as a component of other industrial products.

Company:
SABIC Innovative Plastics Japan LLC.
Tokyo Club Building, 2-6 3Chome Kasumigaseki, Chiyoda-Ku Tokyo, 100-0013 Japan
SABIC Innovative Plastics (China) Ltd.or SABIC Innovative Plastics International Trading Shanghai Ltd 16F,Plaza 66,No 1266 Nanjing Rd(W),Shanghai 200040 China(Contact address)
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SABIC Innovative Plastics Singapore Pte Ltd
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2. HAZARDS IDENTIFICATION

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The additives in this product 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.

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.

Globally Harmonized System, UN(GHS) - Classification

GHS Category

Not hazardous

- Not classified

GHS-Labeling

GHS Labeling not required

Precautionary Statements

No GHS specific Precautionary Statements required - observe all other warnings and handling instructions in this MSDS.

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. See below for additional effects.
- Secondary operations, such as grinding, sanding, or sawing can produce dust which may present an explosion or respiratory hazard.

Other Information: Cool skin rapidly with cold water after contact with molten material Heating can release hazardous gases Hazardous fumes can also occur in post-processing operations

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 Conditions: 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

Product Type Mixture

Hazardous Components

Chemical Name	CAS Number	Weight %	EC-No.
COPPER CHROMIUM BLACK SPINEL MG M3	68186-91-4	1-10	024-017-00-8
Talc	14807-96-6	1-10	-

If present, components listed above are physical or health hazards as defined in the Hazard Communication Standard. The quantities represent typical or average values for the materials shown. Additional compositional data are provided in Section 15, REGULATORY INFORMATION.

4. FIRST AID MEASURES

If Inhalation: Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. If symptoms persist, call a physician.

On skin contact: Immediately cool the skin by rinsing with cold water after contact with hot material. Wash off immediately with soap and plenty of water. Consult a physician.

On contact with eyes: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If eye irritation persists, consult a specialist.

On ingestion: No hazards which require special first aid measures.

Precautions: Processing vapors inhalation may be irritating to the respiratory tract. If symptoms are experienced remove victim from the source of contamination or move victim to fresh air and obtain medical advice.

5. FIRE-FIGHTING 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 for Safety Reasons: Do not use a solid water stream as it may scatter and spread fire.

Hazards from Combustion Products: Fire will produce dense black smoke containing hazardous combustion products, carbon oxides, hydrocarbon fragments.

Specific Hazards: 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 vapors.

Special Protective Equipment for Firefighters: In the event of fire, wear self-contained breathing apparatus.

Exposure hazards: Do not release chemically contaminated water into drains, soil or surface water. Sufficient measures must be taken to retain the water used for extinguishing. Dispose of contaminated water and soil according to local regulations.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: See section 8.

Environmental Precautions: Do not flush into surface water or sanitary sewer system. Should not be released into the environment.

Clean 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: 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.

Storage: Store in closed container in a dry and cool area. Keep away from heat sources and sources of ignition. Keep away from food, drink and animal feeding stuffs. Keep container tightly closed in a dry and well-ventilated place.

Incompatible Products: Strong acids, strong oxidizing agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits: No components with information, unless noted below

Chemical Name	US OSHA PEL (8 Hr)	Japan OEL(TWA)	China OEL(TWA)	Korea OEL(TWA)	Singapore OEL(TWA)	Thailand OEL(TWA)
COPPER CHROMIUM BLACK SPINEL MG M3 68186-91-4	FRL_TWA: 0.5 mg/m^3 as Cr ; TL_PEL: 0.5 mg/m^3 as Cr	OEL_M: 0.5 mg/m^3	No Information	TWA: 0.05 mg/m^3 as Cr	PEL_LT: as Cr	1 mg/m^3
Talc 14807-96-6	FRL: See 29 CFR 1910.1001 ; FRL_TWA: 2 mg/m^3 ; TL_PEL: See Table Z-3	OEL_M: 2 mg/m^3 Total dust , 0.5 mg/m^3 Respirable dust	1 mg/m^3 Respirable dust. 3 mg/m^3 Total dust.	TWA: 2 mg/m^3	PEL_LT: 2 mg/m^3	20 MPPCF

Chemical Name	India TWA	Malaysia OEL(TWA)	Taiwan OEL(TWA)	Australian OEL(TWA)	Phillipines OEL(TWA)	SABIC Recom.(8 Hr)*
COPPER CHROMIUM BLACK SPINEL MG M3 68186-91-4	0.05 mg/m^3 0.5 mg/m^3	TWA: 0.5 mg/m^3	0.5 mg/m^3	No Information	1 mg/m^3 0.5 mg/m^3	No Information
Talc 14807-96-6	No Information	PEL_TWA8: 0.1 Fibres/ml	PC: 2 mg/m^3 ; Remark: respirable dust	No Information	20 MPPCF 2.4 MPPCF	No Information

SABIC limit **SABIC Innovative Plastics Recommended Exposure Limits have been established for certain chemicals.*

Engineering Measures to Reduce Exposure: Handle in accordance with good industrial hygiene and safety practice. Provide for 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.

Hand Protection: Protective gloves should be worn

Eye Protection: Safety glasses with side-shields or chemical goggles. In addition, use full-face shield when cleaning processing vapor condensates from hood, ducts, and other surfaces.

Respiratory Protection: When using this product at elevated temperatures, implement engineering systems, administrative controls or a respiratory protection program (including a respirator approved for protection from organic vapors, acid, gases, and particulate matter) if processing vapors are not adequately controlled or operators experience symptoms of overexposure. If dust or powder are produced from secondary operations such as sawing or grinding, use a respirator approved for protection from dust.

Body Protection: Long sleeved clothing

Hygiene Measures: When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid
Appearance:	Pellets
Color:	Same as color code
Odor:	None or slight
Odor Threshold:	No information available.
pH	Not applicable
Melting point/range:	This product does not exhibit a sharp melting point but softens gradually over a wide range of temperatures.
Boiling point/range:	Not applicable
Flash Point:	Not applicable
Evaporation Rate:	Negligible
Flammability (solid, gas):	Blend; neither component is flammable
Explosive Limits	
upper:	Not determined
lower:	Not determined
Vapor Pressure:	Negligible
Vapor Density:	No information available
Specific gravity:	>1; (water = 1)
Water Solubility:	Insoluble
Autoignition Temperature:	630°C (1166°F) estimated
Explosive Properties:	Dust may form explosive mixture in air
Oxidising Properties:	Not oxidising
Molecular Weight:	Polymer
VOC content (%):	Negligible
Surface tension:	No data available

10. STABILITY AND REACTIVITY

Reactivity:	Not reactive under recommended conditions of handling, storage, processing and use.
Stability:	Stable under ambient conditions. Hazardous polymerization does not occur.
Polymerization:	Hazardous polymerization does not occur
Conditions to Avoid:	Avoid temperatures above 320°C. To avoid thermal decomposition, avoid elevated temperatures. Heating can result in the formation of gaseous decomposition products, some of which may be hazardous. 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.
Materials to Avoid:	May react with strong oxidizing agents, strong acids or other highly reactive chemicals.
Hazardous Decomposition Products:	Process vapors under recommended processing conditions may include trace levels of hydrocarbons, phenols, alkylphenols, diarylcarbonates.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information:

LD50/oral/rat:	>5000 mg/kg
LD50/dermal/rabbit:	>2000 mg/kg

11. TOXICOLOGICAL INFORMATION

Component Information:

Component Information Text: No data available

Sensitization

Respiratory Sensitization: Not classified

Irritation:

Eye Irritation: no data available

Subchronic Toxicity (28 days)

Repeated Oral Toxicity(28d): No information available
Repeated Dermal Toxicity(28d): No Information available
Subchronic Toxicity: No information available

Chronic Toxicity

Carcinogenicity: There are no known carcinogenic chemicals in this product except specifically mentioned below.

Chemical Name	IARC:
COPPER CHROMIUM BLACK SPINEL MG M3 68186-91-4	3
Talc 14807-96-6	3

Mutagenic Effects: No data is available on the product itself
Reproductive Toxicity: No information available
Developmental Toxicity: No information available

Neurological effects: No information available

Specific Target Organ Toxicity(STOT)

Target Organ Effects: Not established

Aspiration Hazard

Aspiration Hazard Statement: No data available

Other relevant toxicity information

IARC: Not listed
OSHA: Not regulated
NTP: Not tested

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

Special Studies: No Information

12. ECOLOGICAL INFORMATION

Ecotoxicity

Component Information:

99.8139388% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Chemical Name	Toxicity to Fish	Toxicity to Algae	Daphnia Magna (Water Flea)	Toxicity to Microorganisms
COPPER CHROMIUM BLACK SPINEL MG M3 68186-91-4	*No data available*	*No data available*	*No data available*	*No data available*

Talc 14807-96-6	*No data available*	*No data available*	*No data available*	*No data available*

Product Information:

Persistence and Degradability

Biodegradation: Not inherently biodegradable
Partition coefficient (n-octanol/water) Not established

Bioaccumulative Potential:
Bioaccumulation: Not established

Mobility
Mobility: May be separated mechanically in waste water plants.

Other Adverse Effects
Ecotoxicity Effects: Do not flush into surface water or sanitary sewer system.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products: Where possible recycling is preferred to disposal or incineration. Dispose of in accordance with local regulations.

Contaminated Packaging: Empty containers should be transported/delivered using a registered waste carrier for local recycling or waste disposal.

Waste Disposal: Recycling is encouraged. Landfill or incinerate in accordance with federal, state and local requirements. Collected processing fume condensates and incinerator ash should be tested to determine waste classification.

14. TRANSPORT INFORMATION

IMO / IMDG Not regulated

ICAO Not regulated

IATA-DGR Not regulated

DOT Not regulated

ADR/RID Not regulated

ADR Not regulated

ADN Not regulated

15. REGULATORY INFORMATION

International Inventories:
TSCA (USA): Listed
DSL (Canada): Listed
EINECS/ELINCS (Europe): Listed

15. REGULATORY INFORMATION

ENCS (Japan):	Listed
IECSC (China):	Listed
KECL (Korea):	Listed
PICCS (Philippines):	Listed - conditional or limited quantity approval
AICS (Australia):	Listed
NZIoC (New Zealand):	Listed

Other Inventory Information:
A "Listed" entry above means all chemical components are on the respective inventory list and/or a qualifying exemption exists for one or more components. A "Not listed" entry above indicates one or more components is restricted from import or manufacture into that country/region. Articles are exempt from registration and are therefore not listed on the national chemical inventories.

SARA (313) Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA)
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals that are subject to the reporting requirements of the Act and and Title 40 of the Code of Federal Regulations, Part 372:.

Chemical Name	CAS Number	Weight %	CERCLA/SARA 313 de minimus:
COPPER CHROMIUM BLACK SPINEL MG M3	68186-91-4	1-10	1.0

SARA (311, 312) hazard class:

Acute Health Hazard	N
Chronic Health Hazard	N
Fire Hazard	N
Sudden Release of Pressure Hazard	N
Reactive Hazard	N

Canada:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS hazard class:
Non-controlled

California Proposition 65:
Components in this product known to the State of California to cause cancer and/or reproductive effects, are listed below:

Chemical Name	Weight %	California Proposition 65:
Silica quartz (SiO2) 14808-60-7	<0.01	Listed: October 1, 1988 Carcinogenic.

RoHS EU Directive 2002/95/EC:
The subjected product is in compliance with EU RoHS Directive 2002/95/EC. All below chemicals are not employed in the manufacture of the product: a.Cadmium and its compounds, b.Lead and its compounds, c.Mercury and its compounds, d.Hexavalent chromium compounds, e.Polybrominated biphenyls (PBBs), f.Polybrominated diphenyl ethers (PBDEs including Deca-BDE). The trace levels of heavy metals may be present as impurities within threshold limits (<0.1% for Pb, Hg, Cr VI, and <0.01% for Cd). We are disclosing this information, to the best of our knowledge, based upon data from our raw material manufacturers.

Remarks:
This product consists primarily of high molecular weight polymers which are not expected to be hazardous. The ingredients in this product are present within the polymer matrix and are not expected to be hazardous.
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HMIS Rating **Health:** 0 **Flammability:** 1 **Reactivity:** 0

16. OTHER INFORMATION

THERMOCOMP* is a trademark of SABIC Innovative Plastics IP BV

MSDS Scope:
China: Conforms to Chinese Regulation on the Control over Safety of Hazardous Chemicals (Decree No 591) and GHS standards GB15258,GB13698,GB/T16483 etc.
Japan: Conforms to Industrial Safety and Health Law, Japan (2006) and Industrial GHS Standards JIS Z7250, JIS Z7251
Korea: Conforms to Industrial Safety & Health Act, Ministry of Labor, Korea
Singapore: Conforms to Singapore workplace Safety and Health (WSH) Act, WSH Regulations, and GHS Standard 586
Taiwan: Conforms to Taiwan Rules on Hazard Communication and Labeling of Hazardous Substances, (Council of Labor Affairs, Taiwan) and GHS standards Z1051
This document is also applicable in other countries and regions.

Prepared by: Product Stewardship & Toxicology.

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End of Material Safety Data Sheet