SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 and 453/2010 (REACH)

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1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

Trademark:	VALOX™
Product Code:	V4760-BK1066-0000-PGNA
Product Description:	Poly (butylene terephthalate) [CASRN 30965-26-5], glass fiber filled
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 B.V. Plasticslaan 1 P.O. Box 117 4600 AC Bergen op Zoom The Netherlands
Manufacturer:	SABIC Innovative Plastics China Co. Ltd. No: 1 Plastics Avenue, P.C. 511548 Western Ind. District, Nansha ETDZ, Pan Yu, Guanndong China
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Website Address:	**www.sabic-ip.com**

2. HAZARDS IDENTIFICATION

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.

Skin Contact:	Contact causes skin irritation.
Eye Contact:	Resin particles, like other inert materials, are mechanically irritating to eyes.
Inhalation:	Irritating to respiratory system; avoid inhalation of dusts. Processing fumes evolved at recommended processing conditions may contain trace amounts of tetrahydrofuran (typically less than 1 ppm). NTP has listed tetrahydrofuran as a carcinogen. Extreme processing conditions or temperatures may result in higher levels. See section 8 for appropriate exposure controls and personal protection.
Ingestion:	Pellet ingestion unlikely due to physical form.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Not a hazardous substance or preparation according to EC-directives 1999/45/EC and 1272/2008/EC unless indicated.

HAZARDOUS COMPONENTS:

Chemical Name	CAS Number	ELINCS / EINECS-No.:	Weight %	Classification
Fiberglass, EU/GHS classified	65997-17-3	266-046-0	10-30	Classification: Carc.Cat.3; R40
Antimony trioxide Sb2O3	1309-64-4	2151750	1-5	Carc. Cat.3;R40
Carbon black	1333-86-4	2156099	0.1-1.0	-
Tetrahydrofuran	109-99-9	2037268	0.1-1.0	Classification: F; R11, R19 Xi; R36/37, R40
Silica quartz (SiO2)	14808-60-7	2388784	<100 ppm	-

Chemical Name	SABIC Recom'd. (8 Hr)*	MAC (15 min. TWA)	MAC (8hr TWA)
Antimony trioxide Sb2O3	0.5 mg/m³ TWA as antimony compounds	not determined	0.5mg/m³ (as Sb)
Talc	Not established	not determined	3 mg/m³
Carbon black	Not established	3.5 MGM3 10 MGM3 Inhalable dust. 5 MGM3 Respirable dust.	3.5 MG/M3 (TOT DUST)
Tetrahydrofuran	50 ppm TWA	not determined	not determined
Silica quartz (SiO2)	Not established	not determined	0.075 mg/m³ (resp.dust)

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.

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

Autoignition Temperature: 630°C (1166°F) estimated

Explosive Limits

upper: Not determined

lower: Not determined

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.

Hazardous Decomposition Products: Fire will produce dense black smoke containing hazardous combustion products, carbon oxides, hydrocarbons fragments.

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

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.

6. ACCIDENTAL RELEASE MEASURES

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

Personal Precautions: See section 8.

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

7. HANDLING AND STORAGE

Handling: Handle in accordance with good industrial hygiene and safety practices. 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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits: No components with information, unless noted below

Chemical Name	SABIC Recom'd. (8 Hr)*	EU TWA	EU STEL	German y (DFG) - MAK	France - Valeurs Limitesd'exposition (VLE)	France INRS (VME)	Netherlands OEL - MAC	UK EH40 MEL (TWA)	Spain - Valores Limite Ambientales - VLE	Russia TWA	Denmark TWAs Data - Threshold Limit Values (TLV):	Austria - MAK	Belgium OEL (TWA):	Switzerland SUVA Limit Values the Workplace Data - Time Weighted Average (TWA):	Sweden - Threshold Limit Values Data	Portugal - TWAs	Norway Exposure Limit Values Data - Threshold Limit Value:	Ireland Exposure Limit Values Data - Time Weighted Average (TWA):	Greece - OEL	Finland Exposure Limit Values Data - Time Weighted Average (TWA):	Luxembourg	Italy - OEL	Poland - OEL :TWAs
Fiberglass, EU/GHS classified - 65997-17-3		5 mg/m³					10 MG M3 Dust. 2 MG M3 Respirable dust. 2 FIBERS/CM3 Respirable fibers.	WEL_TWA: 1 mg/m³ as W; WEL_STEL: 3 mg/m³ as W	1FIBERS/CM3 0.5FIBERS/CM3					Kol_C: k_1 C ; Comments: No data			KONS: 5 mg/m³ total støv	TWA 5 mg/m³ , 1 fibres/cm3 of air				0.2 FIBERS/CM3 Fiber. 1 FIBERS/CM3 Fiber. 5 MG M3 Inhalable fraction.

Antimony trioxide Sb2O3 - 1309-64-4	0.5 mg/m³ TWA as antimony compounds	0.5 MG M3 Sb	0.5 MG M3 Sb	WEL_TWA: 0.5 mg/m³ as Sb	0.5M GM3	GR: 0.5 mg/m³ beregnet som Sb	0.1 MG M3 Inhalable dust. Sb	0.5 MG M3 Total dust. Sb	KONS: 0.5 mg/m³ som Sb; Anm: K	TWA 0.5 mg/m³ as Sb	0.5 MG M3 Sb	HTP_8: 0.5 mg/m³ ; HTP_15: 40 mg/m³ ; HOU: Sb	0.5 MG M3 Sb
Talc - 14807-96-6			0.25 MG M3 Respirable dust.	WEL_TWA: 1 mg/m³ respirable dust	NOT AS: p_p		MAK_Wert: 2 mg/m³ alveolengangiger ; Kol_SS: Grp_C	NGV: 1 MG M3 respirabelt dam, 2 MG M3 total dam	2 MG M3 Respirable dust. 6 MG M3 Total dust.	TWA 0.8 mg/m³ respirable dust, 10 mg/m³ total inhalable dust	DT_ 1 2 mg/m³ T_1 10 mg/m³ T_3	HTP_8: 0.5 kuitua/cm3	2 MG M3 Respirable fraction.
Carbon black - 1333-86-4		3.5 MG M3	3.5 mg/m³	WEL_TWA: 3.5 mg/m³ ; WEL_STEL: 7 mg/m³	VLA-ED: 3.5 mg/m³	ANM: p_K ; GR: 3.5 mg/m³		NGV: 3 MG M3 total dam	VLE-MP: 3.5 mg/m³ ; NOT: A_4; FUND: Pulmão	KONS: 3.5 mg/m³	TWA 3.5 mg/m³ ; STEL 7 mg/m³	DT_ 1 3.5 mg/m³ ; DT_ 2 7 mg/m³	HTP_8: 3.5 mg/m³ ; HTP_15: 7 mg/m³	3.5 mg/m³

Tetrahydrofuran - 109-99-9	50 ppm TWA	300 MG M3 100 ppm	ARBEIT: 150 mg/m³, 50 ml/m³ (ppm); SPITZ: 2(I); BEM: DFG, p_H, p_Y		WNG_8: 300 mg/m³; WNB_15: 600 mg/m³; Notatie: Skin	WEL_TWA: 150 mg/m³, 50 ppm; WEL_STEL: 300 mg/m³, 100 ppm; p_R: R11, R36/37, R19; COMMENTS: SKIN	VLA-ED: 50 ppm, 150 mg/m³; VLA-EC: 100 ppm, 300 mg/m³; NOTAS: dermica, VLB, VLI; p_FR: R11, R19, R36/37	ANM: p_E, p_H; GR: 148 mg/m³, 50 ppm GRL: 50 ppm; ANM: p_H	MAK_Wert: 50 ppm, 150 mg/m³; Kurz_Wert: 100 ppm, 300 mg/m³; HSB: p_H, p_B; Kol_SS: Grp_C; Zeitl.: 4x15 min	KTV: 250 MG M3, 80 PPM; NGV: 150 MG M3, 50 PPM	VLE-CD: 250 ppm; VLE-MP: 200 ppm; NOT: IBE; FUND: Irritação, Narcose	KONS: 50 ppm, 150 mg/m³; STEL 100 ppm, 295 mg/m³; NOTIOELV, Skin	TWA 40 ppm, 118 mg/m³, 590 mg/m³; DT_2 250 ppm, 735 mg/m³	DT_1 200 ppm, 1500 mg/m³; HTP_15: 100 ppm, 300 mg/m³; HOU: iho (SKIN); R-lausee t: R11, R19, R36/37	HTP_8: 50 ppm, 150 mg/m³; HTP_15: 100 ppm, 300 mg/m³; HOU: iho (SKIN); R-lausee t: R11, R19, 300 mg/m³, 100 ppm; Note: Peau	Valeurs limites - 8 heures 150 mg/m³, 50 ppm; Valeurs limites - Courte terme 300 mg/m³, 100 ppm; Note: Peau	VL-8: 50 PPM, 150 MG M3; VL-15: 100 PPM, 300 MG M3; NOT: Pelle (SKIN)
Silica quartz (SiO2) - 14808-60-7				0.1 MG M3	0.075 MG M3 Respirable dust.	0.3 MG M3 Respirable.	0.1MGM3 fraction.	0.1 MG M3 Respirable. 0.3 MG M3 Total	0.15 MG M3 Respirable dust.	Anm: p_M; NGV 0.1 MG M3 respirabelt damm	VLE-MP: 0.05 mg/m³ p_R; NOT: A_2; FUND: Cancro, Silicose, Funçao pulmonar, Fibrose pulmonar	KONS: 0.1 mg/m³ respirabelt støv, 0.3 mg/m³ total støv; Anm: K	TWA 0.1 mg/m³ respirable dust		HTP_8: 0.05 mg/m³		0.025 MG M3 Respirable fraction.

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

Engineering Measures toExposure:	In the case of hazardous fumes, wear self-contained breathing apparatus. Wear face-shield and protective suit for abnormal processing problems. Handle in accordance with good industrial hygiene and safety practice for diagnostics. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. Polybutyleneterephthalate fumes and condensates may contain trace quantities of tetrahydrofuran (typically less than 1 ppm, see section 2, 3 and 11).
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
Melting point/range:	This product does not exhibit a sharp melting point but softens gradually over a wide range of temperatures.
Autoignition Temperature:	630°C (1166°F) estimated
Vapor Pressure:	Negligible
Water Solubility:	Insoluble
Evaporation Rate:	Negligible
Specific gravity:	>1; (water = 1)
VOC content (%):	Negligible
Explosive Limits	
Explosion Limits	Not determined
upper:	Not determined
Explosion Limits	Not determined
lower:	Not determined

10. STABILITY AND REACTIVITY

Stability:	Stable under ambient conditions. Hazardous polymerization does not occur.
Conditions to Avoid:	Avoid temperatures above 630°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.
Hazardous Decomposition Products:	Process vapors under recommended processing conditions may include trace levels of hydrocarbons, phenols, alkylphenols, diarylcarbonates, bromine, hydrogen bromide, brominated hydrocarbons.
Incompatible Products:	Strong acids, strong oxidizing agents

11. TOXICOLOGICAL INFORMATION

LD50/oral/rat:	>5000 mg/kg
LD50/dermal/rabbit:	>2000 mg/kg
Subchronic Toxicity:	No information available
Primary Irritation:	Skin irritation.
IARC:	Not listed
OSHA:	Not regulated
NTP:	Tetrahydrofuran: In 2-year carcinogenicity bioassays conducted by the National Toxicology Program (NTP), mice and rats (50/sex/group) were exposed to concentrations of 0, 200, 600, or 1,800 ppm via inhalation 6 hours/day, 5 days/week for 104 weeks. Under the conditions of these 2-year inhalation studies, there was some evidence of carcinogenic activity of tetrahydrofuran in male F344/N rats based on increased incidences of renal tubule adenoma or carcinoma (combined) at 600 and 1,800 ppm. There was no evidence of carcinogenic activity of tetrahydrofuran in female F344/N rats exposed to 200, 600, or 1,800 ppm or male B6C3F1 mice exposed to 200, 600, or 1,800 ppm. There was clear evidence of carcinogenic activity of tetrahydrofuran in female B6C3F1 mice based on increased incidences of hepatocellular neoplasms observed at 1,800 ppm.
Remarks:	The toxicological data has been taken from products of similar composition.

Special Studies:	PROCESSING FUMES: Processing fumes evolved at recommended processing conditions may contain trace amounts of tetrahydrofuran (typically less than 1 ppm). Extreme processing conditions or temperatures may result in higher levels. See section 8 for appropriate exposure controls and personal protection. In 2-year carcinogenicity bioassays conducted by the National Toxicology Program (NTP), mice and rats (50/sex/group) were exposed to tetrahydrofuran at concentrations of 0, 200, 600, or 1,800 ppm via inhalation 6 hours/day, 5 days/week for 104 weeks. Under the conditions of these 2-year inhalation studies, there was some evidence of carcinogenic activity of tetrahydrofuran in male F344/N rats based on increased incidences of renal tubule adenoma or carcinoma (combined) at 600 and 1,800 ppm. There was no evidence of carcinogenic activity of tetrahydrofuran in female F344/N rats exposed to 200, 600, or 1,800 ppm or male B6C3F1 mice exposed to 200, 600, or 1,800 ppm. There was clear evidence of carcinogenic activity of tetrahydrofuran in female B6C3F1 mice based on increased incidences of hepatocellular neoplasms observed at 1,800 ppm. Carbon Black: The International Agency for Research on Cancer (IARC) has determined that carbon black is a class 2B known animal and possible human carcinogen by the route of inhalation. Rats exposed to high doses of carbon black by inhalation developed statistically significant increases in lung fibrosis and lung tumors. Carbon Black: The scientific discussions about the carcinogenic potential of inorganic low solubility particles (fine dust) including carbon black has not been concluded. Many inhalation toxicologists believe the lung fibrosis and tumors that developed in rats following exposure to carbon black result form massive accumulation of small dust particles that overwhelm the clearance mechanism and produce what is termed "lung overload," an effect considered to be rat specific and not relevant to humans. In addition, based on epidemiological studies, no causal link between carbon black exposure and cancer risk in humans has been demonstrated. Antimony trioxide: Tested in a chronic inhalation of 45 mg/m^3 by guinea pigs resulted in extensive pneumonitis and fatty degeneration of the liver. Other long-term inhalation studies in rats and rabbits found lipid pneumonitis. One epidemiology study of process workers exposed to antimony metal suggests an increase in lung cancer. Animal studies and epidemiological studies suggests developmental toxicity. Fibrous Glass: The International Agency for Research on Cancer (IARC) has determined special-purpose fibrous glass to be a possible human carcinogen (class 2B) based on evidence in experimental animals. Chronic exposure of rats by inhalation to high levels of E-glass fiber resulted in significant increases in lung tumors and mesotheliomas.

12. ECOLOGICAL INFORMATION

Ecotoxicity Effects:	Do not flush into surface water or sanitary sewer system.
Ecotoxicity - Invertebrate Data:	Ecological damages are not known or expected under normal use.

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
EWC waste disposal no:	702 - waste from the manufacture, formulation, supply and use of plastics, synthetic rubber and man-made fibres.

14. TRANSPORT INFORMATION

Transport Classification:	Not regulated as hazardous for shipment, unless noted below, under current transportation guidelines.

DOT

ADR/RID/ADN

IMDG

ICAO

IATA-DGR

15. REGULATORY INFORMATION

This substance is classified and labelled according to Annex I of Directive 67/548/EEC, as amended.

International Inventories:

TSCA (USA):	Listed
DSL (Canada):	Listed - One or more components listed on NDSL
EINECS/ELINCS (Europe):	Listed
ENCS (Japan):	Listed
IECSC (China):	Listed
KECL (Korea):	Listed
PICCS (Philippines):	Listed
AICS (Australia):	Listed
NZIoC (New Zealand):	Listed
REACH Information:	For this product's REACH related information, please contact webinquiries@sabic-ip.com

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.

SVHC (REACH Regulation (EC) No 1907/2006 and 453/2010, as amended):

This product does not intentionally contain SVHC chemicals except as noted below. Incidental amounts of impurities, if present, would be below the threshold limit of 0.1% by weight.

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:
Fiberglass, EU/GHS classified 65997-17-3	10-30	Listed: July 1, 1990 Carcinogenic. (airborne, unbound particles of respirable size)
Antimony trioxide Sb2O3 1309-64-4	1-5	Type of Toxicity: cancer
Carbon black 1333-86-4	0.1-1.0	Listed: February 21, 2003 Carcinogenic. (airborne, unbound particles of respirable size)
Silica quartz (SiO2) 14808-60-7	<100 ppm	Listed: October 1, 1988 Carcinogenic.
lead oxide 1317-36-8	<100 ppm	Listed: October 1, 1992 Carcinogenic
arsenic trioxide 1327-53-3	<100 ppm	Listed February 27, 1987 Carcinogenic and May 1, 1997 Developmental toxicity
Toluene 108-88-3	<100 ppm	Type of Toxicity: female ; Type of Reproductive Toxicity: developmental

RoHS EU Directive 2011/65/EU:

This product complies with RoHS - it does not intentionally contain banned chemicals.

16. OTHER INFORMATION

R40 - Limited evidence of a carcinogenic effect

SDS Scope:
Europe: Conforms to Regulation (EC) No 1907/2006 and 453/2010 (REACH)
This document is also applicable in other countries and regions.

Prepared by: Product Stewardship & Toxicology

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End of Safety Data Sheet