



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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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 Sb ₂ O ₃	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 (SiO ₂)	14808-60-7	2388784	<100 ppm	-

Chemical Name	SABIC Recom'd. (8 Hr)*	MAC (15 min. TWA)	MAC (8hr TWA)
Antimony trioxide Sb ₂ O ₃	0.5 mg/m ³ TWA as antimony compounds	not determined	0.5mg/m ³ (as Sb)
Talc	Not established	not determined	3 mg/m ³
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 (SiO ₂)	Not established	not determined	0.075 mg/m ³ (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, CO ₂ , 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.

No components with information, unless noted below

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Antimony trioxide Sb2O3 - 1309-64-4	0.5 mg/ m³	0.5 MG	0.5 MG	WEL _TW	0.5M GM3	GR: 0.5 mg/ m³	0.1 MG	0.5 MG	KONTWA S: 0.5	0.5 MG	HTP _8: 0.5	0.5 MG
	TWA	Sb	Sb	A:			Inhal	Total	mg/ m³	Sb	mg/ m³ ;	Sb
	as anti mon y com poun ds			mg/ m³ as Sb		bere gnet som Sb	able dust. Sb	dust.	som Sb; Anm : K	Sb	HTP _15: 40 mg/ m³ ; HOU : Sb	
Talc - 14807-96-6			0.25 MG	WEL _TW	NOT AS: A: 1 p_p		MAKNGV _We : 1	2 MG	TWADT 0.8 1 2	HTP _8: 0.5	2 MG	
			M3	A:		Res pirabm³ le respi dust. rable dust	rt: 2 mg/ m³ respi alve rabel olen t gangdam iger ;m, 2 Kol_ MG SS: M3 Grp_total C dam m	M3 Res pirabrespi T_1 ,a/cm rable10 3 dust. dust,mg/ 6 10 m³ MG mg/ T_3 M3 m³ Totaltotal dust. inhal able dust	M3 mg/ m³			



Tetrahydrofuran - 109-99-9	50	300 ARB	WN WEL VLA-	ANM	MAK KTV: VLE-KONTWADT_ HTP Vale VL-8
	ppm	MG EIT:	G_8: TWED:	:	_We 250 CD: S: 40 1 _8: urs : 50
TWA	M3 150	M3 150	300 A: 50	p_E	rt: 50MG 250 50 ppm 200 50 limit PPM
	100 mg/	100 mg/	mg/ 150 ppm	,	ppm M3 , ppm ppm , 118ppm ppm es - , 150
ppm m ³ ,	50	ppm m ³ ,	m ³ ; mg/ , 150	p_H	, 15080 ; , 150mg/ , 590, 1508 MG
	ml/m ³	ml/m ³	WN m ³ , mg/	;	mg/ PPM VLE-mg/ m ³ ; mg/ mg/ heur M3 ;
(ppm	) ;	) ;	B_1 50 m ³ ;	GR:	m ³ ; ; MP: m ³ ; STE m ³ ; m ³ ; es VL-1
	SPIT	SPIT	5: ppm VLA-	148	Kurz NGV200 Anm L DT_ HTP 150 5:
Z:	2(I) ;	Z:	600 ; EC:	mg/	_We : 150ppm : H 100 2 _15: mg/ 100
	BEM	BEM	mg/ WEL 100	m ³ ,	rt: MG ; (SKI ppm 250 100 m ³ , PPM
:	DFG	:	m ³ ; _ST ppm	50	100 M3 , NOT N) , 295ppm ppm 50 , 300
	p_H	p_H	Nota EL: , 300	ppm	ppm 50 : mg/ , 735, 300ppm MG
p_Y	,	,	tie: 300 mg/	GRL	, 300PPMIBE; m ³ ; mg/ mg/ ; M3 ;
			Skin mg/ m ³ ;	: 50	mg/ FUN NOT m ³ m ³ ; Vale NOT
			m ³ , NOT	ppm	m ³ ; D: IOEL HOUurs :
			100 AS:	;	HSB Irrita V, : iho limit Pelle
			ppm derm	ANM	: ção, Skin (SKI es - (SKI
			ica ,	:	N) ; CourN)
			p_R: VLB	p_H	R-la t
			R11 , VLI		usee term
			, ;		t: e
			R36/p_F		R11 300
			37 , R:		, mg/
			R19 R11		R19 m ³ ,
			; ,		, 100
			CO R19		R36/ ppm
			MM ,		37 ;
			ENT R36/		Note
			S: 37		:
			SKI		Pea
			N		u
Silica quartz (SiO2) - 14808-60-7	0.1	0.07 0.3 0.1M	0.1	0.1	0.15 Anm VLE-KONTWA
	MG 5	MG GM3	MG	MG	MG : MP: S: 0.1
	M3	M3 MG M3 fracti	M3	M3	M3 p_M; 0.05 0.1 mg/
		M3 Res on.	Res	Res	Res NGV mg/ mg/ m ³
		Res pirab	pirab	pirab	pirab: 0.1 m ³ m ³ respi
		pirable.	le.	le.	le MG p_R; respirable
		le	0.3	0.3	dust. M3 NOT rabeldust
		dust.	MG	MG	respi: t
			M3	M3	rabelA_2; støv,
			Total	Total	t FUN 0.3
					dam D: mg/
					m Can m ³
					cro, total
					Silic støv;
					ose, Anm
					Func: K
					ão
					pulm
					onar,
					Fibro
					se
					pulm
					onar

*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 from 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/m³ 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

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

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