SAFETY DATA SHEET

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

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1. IDENTIFICATION OF THE SUBSTANCE AND COMPANY

Trademark:	VESTOLEN™ A
Product Name:	6060R - 63363
Product Description:	Poly (ethylene-1-butene) [CASRN 25087-34-7]
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 SALES Europe B.V. or any of its Affiliates Europaboulevard 1, 6135 LD SITTARD P.O. Box 5151, 6130 PD SITTARD The Netherlands
Manufacturer:	SABIC Polymers Genk, Belgium Geleen, The Netherlands Wilton, United Kingdom and/or Gelsenkirchen, Germany
Emergency Telephone Number:	SITTARD +31 (0)46 476 55 55 (0h - 24h)
E-mail:	sds.info@sabic.com
Website Address:	**www.sabic.com**

2. HAZARDS IDENTIFICATION

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.

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.

Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Not hazardous Not classified

Classification according to EU Directives 67/548/EEC or 1999/45/EC

CLP/GHS-Labeling

GHS Labeling not required

Precautionary Statements

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

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 %	Classification (67/548/EEC):	GHS Classification (EC) No. 1272/2008 [CLP]:
Titanium Antimony Chromium Oxide Rutile	68186-90-3	0.3-1.0	Classification: Xn; R20/22 N; R51, R53	Acute Tox. 4 (H332) Acute Tox. 4 (H302) Aquatic Chronic 2 (H411)
Iron oxide	1309-37-1	0.1-0.3		
Titanium dioxide	13463-67-7	0.1-0.3	R23-33-36/37/38/25-29	

For the full text of the H-phrases, if mentioned in this section, see Section 16.

The non-hazardous components and exact percentage (concentration) of the composition have been withheld as a trade secret.

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: Cool molten product on skin with plenty of water. Do not remove solidified product. Do not peel polymer from the skin.

5. FIRE-FIGHTING MEASURES

Autoignition Temperature: >350°C

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.

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 (EU: NEN-EN137)

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. If spilled, take caution, as material can cause surfaces to become very slippery.

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. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

Storage: Store in a dry and cool area. Keep away from heat sources and sources of ignition. Keep away from direct sunlight.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits: No components with information, unless noted below

Chemical Name	**Titanium Antimony Chromium Oxide Rutile**
	68186-90-3
France INRS (VME)	0.5 MGM3 Sb
Netherlands OEL - MAC	0.5 MGM3 Sb
UK EH40 MEL (TWA)	WEL_TWA: 0.5 mg/m³ as Sb
Spain - Valores Limite Ambientales - VLE	0.5MGM3
	0.5MGM3
Denmark TWA Data - Threshold Limit Values (TLV):	GR: 0.5 mg/m³ beregnet som Sb
Switzerland SUVA Limit Values at the Workplace Data - Time Weighted Average (TWA):	0.5 MGM3 Inhalable dust. Cr
Sweden Threshold Limit Values Data -	0.5 MGM3 Total dust. Cr
Norway Exposure Limit Values Data - Threshold Limit Value:	KONS: 0.5 mg/m³ som Sb; Anm: K
Ireland Exposure Limit Values Data - Time Weighted Average (TWA):	TWA 0.5 mg/m³ as Sb
Greece - OEL	0.5 MGM3 Sb
	0.5 MGM3 Cr
Italy - OEL	0.5 MGM3 Sb
	0.5 MGM3 Cr
	2 MGM3
Chemical Name	**Iron oxide**
	1309-37-1
France INRS (VME)	5 MGM3 Fume. Fe
Netherlands OEL - MAC	5 MGM3 Fume. Fe
	10 MGM3
UK EH40 MEL (TWA)	WEL_TWA: 4 mg/m³ respirable, 10 mg/m³ total inhalable
Spain - Valores Limite Ambientales - VLE	5MGM3
	and fume.Fe
Denmark TWA Data - Threshold Limit Values (TLV):	GR: 3.5 mg/m³ beregnet som Fe
Switzerland SUVA Limit Values at the Workplace Data - Time Weighted Average (TWA):	MAK_Wert: 3 mg/m³ alveolengangiger
Sweden Threshold Limit Values Data -	NGV: som Fe, 3.5 MGM3 respirabelt damm
Portugal - TWAs	VLE-MP: 10 mg/m³ p_E; NOT: A_4; FUND: Pulmão, Siderose, Irritação
Norway Exposure Limit Values Data - Threshold Limit Value:	KONS: 3 mg/m³ som Fe
Ireland Exposure Limit Values Data - Time Weighted Average (TWA):	TWA 5 mg/m³ as Fe; STEL 10 mg/m³ as Fe
Greece - OEL	DT_1 10 mg/m³ Fe ; DT_2 10 mg/m³ Fe
Finland Exposure Limit Values Data - Time Weighted Average (TWA):	HTP_8: 5 mg/m³ ; HOU: Fe
Italy - OEL	5 MGM3 Respirable fraction.
Chemical Name	**Titanium dioxide**
	13463-67-7
France INRS (VME)	10 MGM3 Ti
Netherlands OEL - MAC	10 MGM3
UK EH40 MEL (TWA)	WEL_TWA: 4 mg/m³ respirable, 10 mg/m³ total inhalable
Spain - Valores Limite Ambientales - VLE	VLA-ED: 10 mg/m³
Denmark TWA Data - Threshold Limit Values (TLV):	GR: 6 mg/m³ beregnet som Ti
Switzerland SUVA Limit Values at the Workplace Data - Time Weighted Average (TWA):	MAK_Wert: 3 mg/m³ alveolengangiger ; Kol_SS: Grp_C
Sweden Threshold Limit Values Data -	NGV: 5 MGM3 totaldamm
Portugal - TWAs	VLE-MP: 10 mg/m³ ; NOT: A_4; FUND: Pulmão
Norway Exposure Limit Values Data - Threshold Limit Value:	KONS: 5 mg/m³

Ireland Exposure Limit Values Data - Time Weighted Average (TWA):	TWA 4 mg/m³ respirable dust, 10 mg/m³ total inhalable dust
Greece - OEL	DT_1 5 mg/m³ T_1 , 10 mg/m³ T_3
Italy - OEL	10 MGM3
Poland - OEL:TWAs	10 mg/m³ NDS

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

Engineering Measures to Reduce Exposure:	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. Provide for appropriate exhaust ventilation at machinery.
Hand Protection:	Protective gloves should be worn. (EU: NEN-EN 374). When handling hot material, wear heat-resistant protective gloves that are able to withstand the temperature of molton resin.
Eye Protection:	Safety glasses with side-shields. (EU: NEN-EN 165-166).
Respiratory Protection:	In the case of hazardous fumes, wear self contained breathing apparatus. In case of insufficient ventilation wear suitable respiratory equipment. (EU: NEN-EN149).
Body Protection:	Long sleeved clothing. (EU: NEN-EN 340-369-465).
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:	Characteristic
Melting point/range:	120-140°C
Boiling point/range:	decomposition starting from 300°C
Autoignition Temperature:	>350°C
Vapor Pressure:	Negligible
Density:	0.94-0.97 g/cm³
Water Solubility:	Insoluble
Evaporation Rate:	Negligible
Explosive Limits	
upper:	Not determined
lower:	Not determined
VOC content (%):	Negligible

10. STABILITY AND REACTIVITY

Stability:	Stable under ambient conditions. Hazardous polymerization does not occur.
Conditions to Avoid:	Avoid temperatures above 300°C. 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, carbon oxides.

11. TOXICOLOGICAL INFORMATION

LD50/oral/rat:	>5000 mg/kg
LD50/dermal/rabbit:	>2000 mg/kg
Subchronic Toxicity:	No information available
Primary Irritation:	Substance does not generally irritate and is only mildly irritating to the skin
Remarks:	The toxicological data has been taken from products of similar composition
Special Studies:	Titanium Dioxide: The International Agency for Research on Cancer (IARC) has determined titanium dioxide to be a possible human carcinogen (class 2B) based on evidence in experimental animals. Rats exposed to high doses of titanium dioxide by inhalation or intratracheal instillation showed an increased incidence of lung tumors.

12. ECOLOGICAL INFORMATION

Ecotoxicity Effects:	Ecological damages are not known or expected under normal use. Small particles can have an effect on water and soil organisms.
Other information:	none.

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

Further regulatory information can be requested via your local sales office.

International Inventories:

TSCA (USA):	Listed
DSL (Canada):	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 sds.info@sabic.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.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3
H332 - Harmful if inhaled
H302 - Harmful if swallowed
H411 - Toxic to aquatic life with long lasting effects

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

Prepared by: Product Stewardship & Toxicology

DISCLAIMER: The information contained in the Safety Data Sheet is at the date of its issuance to the best of our knowledge correct according to the data available to us. The information is meant as a guideline for safe use, handling, disposal, storage and transport of products and does not imply any warranty (not implied nor explicitly) or specification. The Supplier shall to the extent permitted by law not be liable for any error or incorrectness in the information contained in this Safety Data Sheet. The information relates exclusively to the specified products, which may not be suitable for combination with other materials or use in processes other than those specifically described here.

End of Safety Data Sheet