
Product name	Vandar		TNA/EN
MSDS number	870310031	Revision Date	Oct.01.2013
Revision Number	1	Issuing date	Nov.15.2013

1. Identification of the substance/preparation and of the company/undertaking

The following SDS applies to products described by combinations of the following trade name, product grade and color code listed below.

Trade Name

Vandar

Product Grade(s):

8000, 8000A

Color Code:

See Section 16 for list of Color Codes

Manufacturer, importer, supplier

Ticona Polymer, Inc.

A business of Celanese

8040 Dixie Hwy.

Florence, KY 41042

United States

www.celanese.com

Transportation emergency phone numbers:

In USA, call 800 424 9300

Outside USA, call 703 527 3887, collect calls accepted.

Product Information

info-engineeredmaterials-am@celanese.com

Synonyms:

Polybutylene terephthalate / PBT

Thermoplastic polyester

Identified uses

Plastic processing industry.

2. Hazards identification

Emergency Overview

WARNING!

Possible cancer hazard. Contains material which may cause cancer based on animal data. Risk of cancer depends on duration and level of exposure.

Potential health effects

Immediate effects**Skin**

Polymer particles may cause mechanical irritation. The molten product can cause serious burns.

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Eyes	Resin particles, like other inert materials, are mechanically irritating to eyes
Inhalation	Dust irritating to respiratory tract. Overheating in processing may generate hazardous, irritating vapours.
Ingestion	Low toxicity by this route is expected based on the biological activity of high molecular weight polymers.
Other:	Antimony Trioxide is listed as an IARC 2B, possible human carcinogen based on animal data.
Medical conditions which may be aggravated by exposure:	No specific information available on the product. Off-gases, which may be released if overheated, may affect those with chronic diseases of the respiratory system.

3. Composition/information on ingredients

Chemical characterization Polybutylene Terephthalate / PBT; Basic CAS-RN: 30965-26-5 and 26062-94-2 with flame retardant

Components	CAS-No	Percent %
Antimony trioxide	1309-64-4	1 - 10
Tetrahydrofuran	109-99-9	< 0.5

This product may contain proprietary ingredients.
 This is a polymeric material. Any hazardous constituents are wetted by the polymer system, and therefore are unlikely to present exposure under normal conditions of processing and handling.

4. First aid measures

Skin
 Cool skin rapidly with cold water after contact with molten polymer. Immediate medical attention is required. Do not peel solidified product off the skin.

Eyes
 Immediately flush eye(s) with plenty of water. Call a physician if irritation persists.

Inhalation
 Move to fresh air in case of accidental inhalation of vapors. Get medical attention immediately if symptoms occur.

Ingestion
 If swallowed, do not induce vomiting - seek medical advice.

Notes to physician
 This product is essentially inert and nontoxic. However, if it is heated at too high a temperature or if it is burned, gases may be released. Patients who have been exposed to off-gases may need to have their arterial blood gases and carboxyhemoglobin levels checked. If the carboxyhemoglobin levels are normal, asphyxia (carbon dioxide replacing oxygen) is a possibility. As with any fire, irritant gases may have formed. If patients may have inhaled high concentrations of irritating fumes, they should be monitored for delayed onset pulmonary edema

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5. Fire-fighting measures

Suitable extinguishing media

Water, Foam, Dry powder

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases

Carbon monoxide
 Carbon dioxide (CO₂)
 Hydrogen halides
 Sb(x)O(y)Br(z) compounds

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus and protective suit.

Other Information

Keep people away from and upwind of fire.

6. Accidental release measures

Personal precautions

Do not breathe dust. Avoid dust formation.

Environmental precautions

No special environmental precautions required.

Methods for cleaning up

Use mechanical handling equipment.

7. Handling and storage

Advice on safe handling

Do not handle hot or molten material without appropriate protective equipment. Maintain good housekeeping in work areas. Do not exceed recommended process temperatures to minimize release of decomposition products.

Protection - fire and explosion

Do not smoke in areas where polymer dust is present. Appropriate measures should be taken to control the generation and accumulation of dust during conveying and processing operations.

Material storage

Store in a cool dry place. Maintain dryness of resin.

Incompatible products

strong bases

8. Exposure controls/personal protection

OSHA Exposure Limits

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8. Exposure controls/personal protection	
Components	TWA
Tetrahydrofuran	200 PPM
Antimony trioxide	0.5 mg/m ³ Sb

ACGIH Exposure Limits

Components	TWA
Tetrahydrofuran	50 PPM
Antimony trioxide	0.5 mg/m ³

Components	STEL
Tetrahydrofuran	100 PPM

Components	Manufacturer Workplace Exposure Limit
Antimony trioxide	0.5 mg/m ³

Mexico National Exposure Limits

Components	LMPE - PPT	
Tetrahydrofuran	590 mg/m ³	200 PPM
Antimony trioxide	0.5 mg/m ³	

Components	STEL	
Tetrahydrofuran	735 mg/m ³	250 PPM

Components	Mexican Carcinogen Category
Antimony trioxide	A2

Exposure controls

Engineering measures

General: May not be adequate as the sole means to control employee exposure.
 Local Exhaust: Recommended when appropriate to control employee exposure to dust or process vapors

General advice

Do not breathe dust. Avoid contact with skin and eyes.

Respiratory protection

In case of insufficient ventilation wear suitable respiratory equipment

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Skin protection:

When thermal or melt processing, wear long pants, long sleeves, well insulated gloves, and face shield when there is a chance of contact.

Eye/face protection:

safety glasses with side-shields. Safety goggles.

Comments:

Operations involving grinding and machining of parts should be reviewed to assure that particulate levels are kept below recommended standards

9. Physical and chemical properties

Appearance

Form	pellets
Odor	slight , specific .
Flash point	Not applicable
Ignition temperature	>420°C (788°F)
Melting Point	228 °C (442°F)
Density	approx 1.38 - 1.55 g/ml @ 20°C
Bulk density	approx 600 - 900 kg/m ³ @20 °C
Water solubility	insoluble
VOC Content(%)	None

10. Stability and reactivity

Chemical stability

Stable under normal conditions.

Conditions to avoid

Flame. Avoid prolonged heating at or above the recommended processing temperature.

Incompatible Materials

strong bases.

Hazardous Combustion or Decomposition Products:

Aldehydes, ketones, esters, acids, alcohols, butadiene, tetrahydrofuran, toluene, benzoic acid, terephthalic acid.

11. Toxicological information

No data is available on the product itself

12. Ecological information

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12. Ecological information

Ecotoxicity:

The effects of resin pellets on the wildlife that may ingest them is not well understood. In the case of seabirds, some marine biologists believe that the fowl may not be able to pass plastic pellets through their digestive tracts. Thus, large quantities of ingested pellets may cause intestinal blockage, false feelings of satiation or reduction in absorption of nutrients, causing malnutrition and starvation. The goal of SPI's Operation Clean Sweep is zero loss of pellets into the environment.

Environmental Fate/Information:

This material is considered to be non-biodegradable.

13. Disposal considerations

Disposal considerations

Recycling is encouraged. Dispose of spilled material in accordance with state and local regulations for waste that is non-hazardous by Federal definition. Note that this information applies to the material as manufactured; processing, use, or contamination may make this information inappropriate, inaccurate, or incomplete.

This product as shipped is not a RCRA hazardous waste under present EPA regulations

14. Transport information

US Department of Transportation Not regulated

TDG Not regulated

Mexico Transport Information Not regulated

ICAO/IATA Not restricted

IMDG Not regulated

15. Regulatory information

U.S. FEDERAL REGULATIONS

TSCA Inventory

This product complies with the U.S. Toxic Substances Control Act (TSCA).

SARA 313 Chemicals

Antimony Compounds (1-10 % wt%)

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CANADIAN REGULATIONS

WHMIS Classification:

Not a WHMIS controlled product.

WHMIS Ingredient Disclosure List IDL:

Antimony Trioxide (1309-64-4)

16. Other information

NFPA:	Health: 1	Flammability: 0	Instability: 0
HMIS:	Health: 1	Flammability: 0	Physical Hazard: 0

Color Code(s):

MD3060, MF2001, MG3164

Prepared By

Product Stewardship Department
Celanese

Other Information:

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Changes against the previous version are marked by ***

This product is not intended for use in medical or dental implants.

The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. Celanese makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances. Effects can be aggravated by other materials and/or this material may aggravate or add to the effects of other materials. User has sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards.

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Abbreviation and Acronym:

ADR = Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID = Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG = International Maritime Code for Dangerous Goods

IATA = International Air Transport Association

ICAO = International Civil Aviation Organization

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

EINECS = European Inventory of Existing Commercial Chemical Substances

CAS = Chemical Abstracts Service (division of the American Chemical Society)

CLP = Classification, Labelling and Packaging

PBT = Persistent, Bioaccumulative and Toxic

vPvB = very Persistent and very Bioaccumulative

R-Phrases = Risk Phrases

S-Phrases = Safety Phrases

DNEL = Derived No Effect Level

PNEC = Predicted No Effect Concentration