

PLASTICYL™

CNT thermoplastic concentrates

1. Identification of the product and the company

Trade Name:	PLASTICYL™ PETG 1001
Type of product:	Carbon/Polyethylene terephthalate glycol polymer mixture
General use:	Extrusion, injection
Company:	Nanocyl S.A. Rue de l'Essor, 4 B-5060 Sambreville Belgium
Phone:	+ 32 71 750 380 (office hour)
Fax:	+ 32 71 750 390
E-mail:	info@nanocyl.com

2. Hazards identification

This product is not dangerous product for health and environment according regulation EC N° 1272/2008 and regulation OSHA GHS 29 CFR 1910.1200.

Hazards classification: not classified

Label elements including precautionary statements

- * Pictograms: not applicable
- * Signal words: not applicable
- * Hazard statements: not applicable
- * Precautionary statements: not applicable

Other hazards which do not result in classification:

Explosive hazard: dust may form explosive mixture with air.
May be irritating to eyes, respiratory and skin.

3. Composition/information on ingredients

Components	EC N°	CAS N°	% (wt.)	Classification
<i>Polyethylene terephthalate glycol copolyester polymer (PETG)</i>	/	25640-14-6	90 %	/
<i>Short tangled MWCNTs</i>	936-414-1	/	10 %	/

4. First aid measures

After skin contact:	In case of contact with molten product, immediately flood the affected area with cold water. Do not pull solidified product away from the skin. Transport to nearest medical facility for additional treatment.
Eye contact:	Hold the eyes open and rinse with water for a sufficiently long period of time (at least 10 minutes). Obtain medical attention if pain, blurred vision, swelling, burning or redness persist.
After inhalation:	If vapours are inhaled, move the person into fresh air, keep warm and allow to rest. If breathing is difficult, oxygen may be administered and medical attention should be obtained.
Ingestion:	Get medical if necessary. No specific measures have to be taken if the product is swallowed. Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

5. Fire-fighting measures

Suitable extinguishing media:	Water fog, Foam, Carbon Dioxide, Dry Chemical.
Unsuitable extinguishing: media	High volume water jet.
Specific hazards:	Dust can form explosive mixture with air.
Protective equipment's:	Wear self-contained breathing apparatus. Wear suitable protective clothing.
Combustion products:	May form toxic fumes, carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbon, aldehydes.
Further information:	Water used to extinguish fire should not enter drainage systems, soil or stretches of water. Ensure that there are sufficient retaining facilities for media used to extinguish fire.

6. Accidental release measures

Personal precautions:	Equip cleanup crew with proper protection (see chapter 8). Avoid contact with skin, eyes and clothing with molten product. Do not inhale vapours and dust. Avoid dust formation.
Environmental precautions:	Collect for disposal. Avoid discharge to natural waters, sewers and biological waste water treatment plants.
Spill procedures:	Collect spilled polymer, pellets; it could cause falls (danger of slipping). If molten, allow material to cool and place into an appropriate marked container for disposal. Avoid dust formation.

7. Handling and storage

Handling:	No specific requirements necessary, if handled at room temperature. Avoid spilling the product, as it might cause falls. When bringing the material to processing temperatures gases might develop. Provide appropriate ventilation for such processing conditions. Take precautionary measures against explosion risks, as all type of polymers may develop dust during transporting or grinding of pellets. Avoid dust formation. Open flames prohibited. Do not smoke.
Storage:	Store container in a dedicate place and under dry conditions. Ground equipment electrically. Open flames prohibited. Keep away from source of ignition, heat and direct sunlight. Avoid dust formation.

8. Exposure controls / Personal protection

Components with workplace parameters:

Provide local ventilation appropriate to the product decomposition risk. Apply technical measures to comply with the occupational exposure limits.

Particulates not otherwise classified (inhalable): TWA (8h): 10mg/m³ (dust)

Personal protective equipment:

Hand protection:	Wear heat resistant gloves when handling molten material.
Skin and body protection:	No special skin protection requirements during normal handling and use.
Respiratory protection:	Wear appropriate respirator when ventilation is inadequate and the product is heated.
Eye protection:	Chemical goggles or safety glasses.

In case of contact, ensure prompt removal from eyes, skin and clothing. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and leaving work. Facilities storing or utilizing this material should be equipped with an eyewash facility. Change contaminated clothing immediately.

9. Physical and chemical properties

Form and Color:	black pellets (granules or powder)
Odor:	odorless
Melting point/range:	210°C
Boiling point/range:	not applicable
Vapor pressure:	not applicable
Density:	> 1 g/cm ³
Solubility in water:	insoluble
pH:	not applicable
Danger of explosion:	product is not explosive
Flash point:	>350°C

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. Stability and reactivity

Stability:	Stable under normal handling and storage conditions. Hazardous polymerization will not occur.
Materials to avoid:	Strong oxidizing and reducing agents.
Conditions to avoid:	Exposure direct sunlight and/or heat and accumulation of electrostatic charges. Avoid dust formation. Do not heat to temperature exceeding 300°C.
Hazardous decomposition:	No hazardous decomposition products known at room temperature (see also section 5).

11. Toxicological information

Acute toxicity, oral:	No data available.
Acute toxicity, dermal:	No data available.
Inhalation:	No data available.
Skin irritation:	No data available.
Ingestion:	No data available.
Cytotoxicity:	No data available.
Carcinogenicity:	No data available.

When used and handled according to specifications, the product does not have harmful effects according to our experience and the information provides to us. From the toxicological point of view, the material behaves as the base polymer if there is no dust formation and the operators follow the manipulation instructions of Section 7 and 8.

12. Ecological information

Biodegradability:	No biodegradation expected.
Toxicity to fish:	No data available.
Toxicity for daphnia:	No data available.
Toxicity for algae:	No data available.
Environmental precautions:	Avoid losses to the environment whenever possible.

13. Disposal considerations

Product:	If the material becomes a waste, consider it as special waste. It can be destroyed by incineration in accordance with local, state and federal regulations. For all countries, the disposal methods must be in compliance with national and provincial laws and any municipal or local by-laws.
Container:	Empty containers can be landfilled after have been emptied as thoroughly as possible, when in compliance with the Environmental Protection Regulation and with local, state and federal regulations.

14. Transport information

According to national and international guidelines, which regulate the road-, rail-, air-, and sea transport, this product is classified as not dangerous.

15. Regulation information

REACH Status: the substance(s) in this product has (have) been Pre-Registered and/or Registered, or are exempted from registration according to EEC Regulation REACH 1907/2006.

All components of this product are listed on the following chemical inventories: Toxic Substances Control Act (TSCA-USA), European Inventory of Existing Commercial Chemical Substances (EINECS), Canadian Domestic Substance List (DSL) or non-Domestic Substances List (NDSL), Japanese Existing and New Chemical Substance (ENCS), Korean Existing Chemical Substance (ECL), Australian Inventory of Chemicals Substance (AICS), Philippines Inventory of Chemicals and Chemical Substances (PICCS), Swiss Giftliste 1 Inventory of Notified New Substances, Chinese Chemical Inventory of Existing Chemical Substance (IECS) and Taiwan Existing Chemical Substance Nomination (ECN).

This product contains one or more substance(s) which is/are subject to a TSCA Section 5(e) consent order that imposes certain restrictions on handling, storage, distribution, use and disposal. Contact Nanocyl S.A. for details.

In Canada, since a component of this product is not listed on the Canadian Domestic Substance List (DSL) or non-Domestic Substances List (NDSL), schedule 5 of the New Substances Notification Regulations (Chemicals and Polymers) of the Canadian Environmental Protection Act, 1999, have been granted.

Labelling according to GHS Directive (CLP/OSHA)

Symbol(s) : /

H Phrase(s) : /

P Phrase(s) : /

16. Other information

The contents and format of this MSDS are in accordance with EEC Regulation REACH 1907/2006 art.32, EEC Regulation 1272/2008 (CLP/GHS) and OSHA GHS Regulation 29 CFR 1910.1200, and its amendments.

Vertical lines in the left hand margin indicate an amendment from the previous version.

Disclaimer:

Nanocyl S.A. provides the information contained herein in good faith and makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this material.