

NANOGRAFI NANOTECHNOLOGY

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1 Product identifiers

Product Identity	Shape Memory Polymer, Ether Type
Product Number	NG01SMP013

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	Research
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1.3 Details of the supplier of safety data sheet

Company	Nanografi Nanotechnology
Address	ODTÜ Teknokent İkizler Binası B-1/H ODTÜ Teknokent 06531- ANKARA
Phone	+90 312 285 85 09
Fax	+90 312 210 13 09

1.4 Emergency Telephone Number

Emergency Telephone Number	+90 312 285 85 09
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SECTION 2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification:

Flammable Liquid: Out of Category

Flammable Solid: Out of Category

Acute Toxicity: Oral Not Classification

Acute Toxicity: Dermal Not Classification

Acute Toxicity: Inhalation Out of Category

Skin Corrosion: Not Classification

Serious Eye Damage: Not Classification

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Sensitization Respiratory: Not Classification

Sensitization Skin: Not Classification

Carcinogenicity: Not Classification

Reproductive toxicity: Not Classification

Acute Hazards to the Aquatic Environment: Not Classification

Chronic Hazards to the Aquatic Environment: Not Classification

Other Hazards than Mentioned Above are Not Applicable or Classification not Possible

2.2 Label Element

None

2.3 Other Hazards

None.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical Family: THERMOPLASTIC POLYURETHANE ELASTMER (TPU)

Chemical structure : —

CAS Number: Registered

SECTION 4 FIRST AID MEASURES

4.1 Most important symptoms and effects, including acute and delayed

Eye contact: Rinse thoroughly with plenty of fresh water and seek medical advice.

Skin contact: Wash off completely with water and soap.

Inhalation: Remove the casualty into fresh air and keep him calm.

Summon a doctor immediately.

Ingestion: Rinse out mouth and give plenty of water to drink.

Summon a doctor immediately.

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SECTION 5 FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguish media: Carbon dioxide, Dry powder, foam, Water,

5.2 Special hazards arising from the substance or mixture

No data available.

5.3 Advice for firefighters

Fire-fighter should wear fully protective clothing and adequate breathing apparatus.

5.4 Further information

No data available

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions

Eye Protection: Wear safety glasses.

Wear protective gloves, protective clothing and shoes.

Precaution:

Place in closed containers.

Warning!

Causes irritation of respiratory tract and eyes if fumes and smoke generate during processing.

6.2 Environmental precautions

No data available.

6.3 Methods and material for containment and cleaning up

No special procedures needed.

6.4 Reference to other sections

See Section 13 for disposal information.

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SECTION 7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Precautions for Safe Handling

Wear safety glasses, protective gloves, protective clothing and shoes.

Provide safety shower and eye wash station.

Provide mechanical exhaust ventilation and local exhaust ventilation.

Avoid inhalation of vapor, fumes and smoke.

7.2 Conditions for safe storage, including any incompatibilities

Storage Conditions

Store in a cool, dry and dark place.

7.3 Specific end use(s)

No data available.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure controls

Personal protective equipment

Eye protection: goggles.

Hand protection: rubber gloves

Appropriate engineering controls:

General protective measures:

Do not inhale dust/fumes/aerosol. Avoid contact with eyes and skin.

Hygiene measures:

At work do not eat, drink, smoke or take drugs. After work-time and during work intervals the affected skin area must be thoroughly clean.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- a) Appearance: solid
- b) Odor: none
- c) Odor Threshold: no data available
- d) pH: no data available
- e) Melting point/freezing point: no data available
- f) Initial boiling point and boiling range: no data available
- g) Flash point: no data available
- h) Evaporation rate: no data available
- i) Flammability (solid, gas): no data available
- j) Upper/lower flammability or explosive limits: no data available
- k) Vapor pressure: no data available
- l) Vapor density: no data available
- m) Relative density: no data available
- n) Water solubility: N/A
- o) Partition coefficient - noctanol/water: no data available
- p) Auto-ignition temperature: no data available
- q) Decomposition temperature: no data available
- r) Viscosity: no data available
- s) Explosive properties: no data available
- t) Oxidizing properties: no data available

9.2 Other safety information

no data available

9.2 Other information

No data available.

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SECTION 10 STABILITY AND REACTIVITY

10.1 Reactivity

No data available.

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

Incompatible Materials: Strong oxidizing agent

10.5 Hazardous decomposition products

Toxic fumes & smoke is probably generated by thermal decomposition.

Combustion Products: Carbon monoxide, carbon dioxide and NOx.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Information on the Likely Routes of Exposure:

Health Hazards Information:

OSHA PEL-----Not listed

ACGIH TLV-----Not listed

Causes irritation of respiratory tract and eyes if fumes
and smoke generate during processing

SECTION 12 ECOLOGICAL INFORMATION

12.1 Ecotoxicity

No data available.

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12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects

No data available.

SECTION 13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Disposal Method: Dissolve or mix the material with a combustible solvent and burn in a chemical

Disposal Precaution: Avoid direct disposal.

SECTION 14 TRANSPORT INFORMATION

Classification: Material is not classified as dangerous for the purpose of conveyance.

SECTION 15 REGULATORY INFORMATION

Classified in accordance with the Chemical (Hazard, Information and Packing) Regulation.

SECTION 16 OTHER INFORMATION

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.