

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 of the European Parliament and of the Council, in valid version

## G-LEAF Polymer 01202

Creation date	06/06/2022	Version number	3.0
Revision date			

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

<b>1.1. Product identifier</b>	G-LEAF Polymer 01202
Substance/mixture	composite
UFI	E6A3-A07C-G00W-SUWH
Other name of the mixture	
Graphene dispersion few layers	

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

#### Relevant identified uses of the mixture

The product is used as a polymeric, PEEK-based composite for injection moulding and extrusion. Industrial/professional uses.

#### Uses of the mixture not recommended

Uses other than recommended must be assessed on a case-by-case basis.

### 1.3. Details of the supplier of the safety data sheet

#### Manufacturer

Name or company name	BeDimensional S.p.A.
Address	Via Lungotorrente Secca, n. 30/r 16163 - Genova
Telephone	010 2364170
E-mail	info@bedimensional.it

#### The e-mail address of the competent person responsible for the safety data sheet

Name	Andrea Gamucci
E-mail	<a href="mailto:a.gamucci@bedimensional.it">a.gamucci@bedimensional.it</a>

### 1.4. Emergency telephone number

Niguarda Ca' Granda Hospital - Milan - +39 02-661029  
CAV National Centre for Toxicological Information - Pavia - +39 0382-24444  
Azienda Ospedaliera Papa Giovanni XXII - Bergamo - +39 800 883300  
Az. Osp. "Careggi" U.O. Medical Toxicology - Florence - +39 055-7947819  
CAV "A. Gemelli" Polyclinic - Rome - +39 06-3054343  
CAV Policlinico "Umberto I" - Rome - +39 06-49978000  
CAV Children's Hospital Bambino Gesù DEA Emergency and Acceptance Department - Rome - +39 06-68593726  
Az. Osp. "A. Cardarelli" - Naples - Naples - +39 081-7472870  
Az. Osp. Univ. Foggia - Foggia - +39 800 183459  
Azienda Ospedaliera Integrata Verona - Verona - +39 37126800011858

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

##### Classification of the mixture according to Regulation (EC) No 1272/2008 (CLP)

Criteria of Directive 67/548 / EC, 99/45 / EC and subsequent amendments:

Properties / Symbols: None.

Criteria of regulation EC 1272/2008 (CLP)

The mixture is not classified as dangerous according to Regulation EC 1272/2008 (CLP):

Adverse physicochemical, human health and environmental effects: No other hazards

#### 2.1. Label elements

The mixture is not classified as dangerous according to regulation EC 1272/2008 (CLP).

Symbols: None

Hazard statements: None

Precautionary statements: None

Special Provisions: None

Special provisions according to Annex XVII of REACH and subsequent amendments: None

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**2.3. Other dangers**

The substance does not meet the criteria for the identification of persistent, bioaccumulative and toxic substances (PBT substances) and very persistent and very bioaccumulative substances (vPvB substances) in accordance with Annex XIII of Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as amended.

**SECTION 3: composition/information on ingredients****3.2. Mixtures****Mixture contains these hazardous substances and substances with occupational exposure limit values**

Identification numbers	Substance name	Content in % by weight	Classification according to Regulation (EC) No 1272/2008	Ards
CAS: 1034343-98-0 EC: 801-282-5 Reg. No.: 01-2120768618-38-XXXX	Graphene	0,05-5	classification not indicated	

Full text of all classifications and hazard statements can be found in Section 16.

**Additional information**

Graphene is in one-dimensional nanoform, with a thickness between 2 and 100 nm.

**SECTION 4: First aid measures****4.1. Description of first aid measures****In case of inhalation**

Stop exposure immediately; remove the contaminated person to fresh air.

**In case of skin contact** Remove

contaminated clothing. **In case of**

**contact with eyes**

Rinse the eyes immediately with running water, open the eyelids (rubbing them open if necessary); remove contact lenses from the contaminated person immediately if they are damaged.

**In case of ingestion**

Rinse mouth with clean water. In case of discomfort, seek medical help.

**4.2. Main symptoms and effects, both acute and delayed****In case of inhalation**

Not foreseen.

**In case of skin contact**

Not foreseen.

**In case of contact with the eyes**

Not foreseen.

**In case of ingestion**

Not foreseen.

**4.3. Indication of any need for immediate medical attention and special treatment**

Symptomatic treatments.

**SECTION 5: Fire-fighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Variable arrangement of extinguishers depending on the location of the fire.

**Unsuitable extinguishing media**

not indicated

**5.2. Special hazards arising from the substance or mixture**

Combustible material. In the event of fire, carbon monoxide, carbon dioxide or other hazardous substances may be formed. Inhalation of hazardous products resulting from degradation (pyrolysis) could cause serious damage to health. During the fire, the polymer melts and drops of molten matter are formed, which can spread the fire.

**5.3. Recommendations for firefighters**

Self-contained breathing apparatus with chemical-resistant gloves. Use insulating self-contained breathing apparatus and full-body protective clothing.



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### SECTION 6: Measures in the event of accidental release

#### 6.1. Personal precautions, protective equipment and emergency procedures

Follow the instructions in section 7 and section 8.

#### 6.2. Environmental precautions

Avoid contamination of soil and sewage surfaces or groundwater.

#### 6.3. Methods and materials for containment and remediation

Collect the product mechanically in an appropriate manner. Dispose of the collected material in accordance with the instructions in section 13.

#### 6.4. Reference to other sections

See Sections 7, 8 and 13.

### SECTION 7: Handling and Storage

#### 7.1. Precautions for safe handling

Use personal protective equipment as explained in section 8. Observe legally valid safety and health protection regulations.

#### 7.2. Conditions for safe storage, including any incompatibilities

Store inside carefully closed, dry containers in well-ventilated areas suitable for this purpose.

#### 7.3. Particular end uses

not indicated

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control Parameters

The mixture contains no substances for which occupational exposure limits are set.

#### 8.2. Exposure controls

Do not eat, drink or smoke while working. Wash hands with soap and water after work and before a break.

##### Eye/face protection

This is not necessary.

##### Skin protection

For long-term or constant handling of the product, please use protective gloves (EN 374).

##### Respiratory protection

Not required.

##### Thermal hazard

Not available.

##### Environmental exposure controls

Observe the safety measures relating to the environment; for these, please refer to section 6.2.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical-solid state in granules

Colour black

Not available

Melting point/freezing point 345 °C

Boiling point or initial boiling point and boiling range date not available

Flammability date not available

Lower and upper explosive limit Date not available

Flash point date not available

Self-ignition temperature not available

Decomposition temperature >430 °C

pH data not available

Kinematic viscosity date not available

Water solubility not available

Partition coefficient n-octanol/water (logarithmic value) date not available

Vapour pressure date not available

Density and/or relative density date not available

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Relative vapour densitydate not available

Particle characteristics not available

Form

Graphene (CAS: 1034343-98-0)

nanoform

**9.2. Other information**

not

indicated

**SECTION 10: Stability and reactivity****10.1. Reactivity**

No hazardous reaction if storage and handling requirements/indications are observed.

**10.2. Chemical stability**

The product is stable under normal conditions of use.

**10.3. Possibility of dangerous reactions**

Under normal conditions of storage and use, no adverse reactions are known.

**10.4. Conditions to avoid**

The product is stable and does not degrade after normal use. Protect from flames, sparks, overheating and oxidising agents.

**10.5. Incompatible materials**

Protect against strong acids, bases and oxidising agents.

**10.6. Hazardous decomposition products**

No processing according to normal use. Due to high temperatures and contact with heat sources, hazardous substances such as carbon monoxide and carbon dioxide may be formed.

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

No toxicological data is available for the mixture.

**Acute toxicity**

Based on the available data, it is not possible to reveal a standard criteria classification.

**Skin corrosion/irritation**

Based on the available data, it is not possible to reveal a standard criteria classification.

**Severe eye damage/irritation**

Based on the available data, it is not possible to reveal a standard criteria classification.

**Respiratory or skin sensitisation**

Based on the available data, it is not possible to reveal a standard criteria classification.

**Germ cell mutagenicity**

Based on the available data, it is not possible to reveal a standard criteria classification.

**Carcinogenicity**

Based on the available data, it is not possible to reveal a standard criteria classification.

**Reproductive toxicity**

Based on the available data, it is not possible to reveal a standard criteria classification.

**Specific target organ toxicity (STOT) - single exposure**

Based on the available data, it is not possible to reveal a standard criteria classification.

**Specific target organ toxicity (STOT) - repeated exposure**

Based on the available data, it is not possible to reveal a standard criteria classification.

**Danger in case of aspiration**

Based on the available data, it is not possible to reveal a standard criteria classification.

**11.2. Information on other dangers**

not indicated

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**SECTION 12: ecological information****12.1. Toxicity****Acute toxicity**

Data for the mixture are not available.

**12.2. Persistence and degradability**

not indicated

**12.3. Bioaccumulative potential**

Not available.

**12.4. Mobility in the soil**

Not available.

**12.5. Results of PBT and vPvB assessment**

The product does not contain any substances fulfilling the criteria for the identification of persistent, bioaccumulative and toxic substances (PBT substances) and very persistent and very bioaccumulative substances (vPvB substances) in accordance with Annex XIII of Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (abbreviation: REACH) as amended.

**12.6. Endocrine-disrupting properties**

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

**12.7. Other adverse effects**

Not available.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

Danger of environmental contamination; waste disposal in accordance with local and/or national regulations. Act in accordance with current waste sorting regulations. Any unused product and any contaminated packaging must be placed in labelled waste collection containers and handed over for disposal to a waste disposal person (such as a specialised waste disposal company) who is authorised for each special waste disposal activity. Do not empty unused product into the sewage system. The product must not be considered as solid urban waste. Empty containers may be used as waste incinerators to produce energy or may be disposed of in landfills by appropriate classification. Perfectly cleaned containers may be recycled.

**Waste regulations**

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste with subsequent amendments. Decision 2000/532/EC for the establishment of a list of wastes with subsequent amendments.

**SECTION 14: Transport Information****14.1. UN or ID number**

not subject to transport regulations

**14.2. Official UN transport designation**

irrelevant

**14.3. Transport hazard classes**

irrelevant

**14.4. Packaging group**

irrelevant

**14.5. Environmental hazards**

irrelevant

**14.6. Special precautions for users**

Further recommendations can be found from section 4 to section 8.

**14.7. Maritime transport in bulk according to IMO Acts**

irrelevant

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**SECTION 15: Regulatory Information****15.1. Safety, health and environmental regulations specific to the substance or mixture**Seveso category:

None

Restrictions on the product or contained substances according to Annex XVII Regulation (EC) 1907/2006Product

None

Candidate List Substances (Art. 59 REACH)

None

Substances subject to authorisation (Annex XIV REACH)

None

**15.2. Chemical Safety Assessment**

not indicated

**SECTION 16: other information****Further important information concerning the health and safety of human beings**

The product must not be used for purposes other than those set out in section 1, unless there are specialised uses that are approved by the manufacturer or importer. The user is responsible for complying with all regulations related to health protection.

**Key to abbreviations and acronyms used in the safety data sheet**

ADR European Agreement concerning the International Carriage of Dangerous Goods by Road

AGW Workplace exposure limits

BCFF bioconcentration factor

CAS Chemical Abstracts Service

CEN Number ES is the numerical identifier of substances in the ES list

CLP Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

Volatile organic compounds

EINECS Inventory of Existing Commercial Chemical Substances

EmS Piano di emergenza

EuPCSS European Product Classification System

IATA Association of International Air Carriers

IBC The International Code for the Construction and Equipment of Ships Carrying Dangerous Chemical Substances

ICAO International Civil Aviation Organisation

IMDG International Maritime Transport of Dangerous Goods

International Nomenclature of Cosmetic Ingredients

ISOL International Organisation for Standardisation

IUPAC International Union for Pure and Applicable Chemistry

log Kow Coefficient of partition between octanol and water

MAK Maximum concentration at work

MARPOL The International Convention for the Prevention of Pollution from Ships

OEL Limits of workplace exposure

PBTP Persistent, bioaccumulative and toxic

ppm Parts per million

REACH Registration, Evaluation, Authorisation and Restriction of Chemicals

RID Agreement on the transport of dangerous goods by rail

EU European Union

UN The four-digit identification number of the substance or article taken from the UN Standard Regulations

UVCB Substances of unknown or variable composition, products of a complex reaction or biological materials

vPvBM Very persistent and very bioaccumulative

Eye Irrit. Eye irritation

Skin Irrit. Skin Irritation

STOT SET Specific Target Organ Toxicity - Single Exposure

**Guidelines for Training Courses**

Inform personnel about the recommended methods of use, about mandatory protective equipment, about first aid and about prohibited ways of handling the product.



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#### Recommended limited use

not indicated

**Information on the source of data used to compile the safety data sheet.** REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as amended.  
REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended.  
Submission of data provided by the manufacturer of the substance or mixture, if available; information from registration dossiers.

#### Other information

Classification procedure - calculation method.

#### Declaration

The safety data sheet provides information to ensure safety and health protection at work as well as environmental protection. The information provided refers to the current state of knowledge and experience regarding the product and complies with the legal regulations in force. The information is not to be understood as a guarantee for the compatibility and use of the product for particular purposes.