

**SAFETY DATA SHEET**

according to Regulation (EC) No 1907/2006 (REACH) as amended


**G-LEAF Coating 00101**

Creation date	19th October 2021	Version	1.0
Revision date			

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

- 1.1. Product identifier**  
Substance / mixture G-LEAF Coating 00101  
UFI mixture  
Other mixture names XP80-2099-9002-G0AG  
Dispersion of graphene few layers
- 1.2. Relevant identified uses of the substance or mixture and uses advised against**  
**Mixture's intended use**  
Ingredients for solvent-based paints or coating paint. Industrial uses – coating and paint. Professional uses.  
**Mixture uses advised against**  
Other uses must be evaluated on a case-by-case.  
**Main intended use**  
PC-PNT-OTH Other paints and coating materials
- 1.3. Details of the supplier of the safety data sheet**  
**Manufacturer**  
Name or trade name BeDimensional S.p.A.  
Address Via Lungotorrente Secca, n. 30/r 16163 – Genoa  
Phone (+39) 010 2364170  
E-mail [info@bedimensional.it](mailto:info@bedimensional.it)  
**Competent person responsible for the safety data sheet**  
Name Andrea Gamucci  
E-mail [a.gamucci@bedimensional.it](mailto:a.gamucci@bedimensional.it)
- 1.4. Emergency telephone number**  
Poison Control Center of Milan 02 66101029 (CAV Ospedale Niguarda CaGranda -Milano)

**SECTION 2: Hazards identification**

- 2.1. Classification of the substance or mixture**  
**Classification of the mixture in accordance with Regulation (EC) No 1272/2008**  
The mixture is classified as dangerous.  
Flam. Liq. 3, H226  
Skin Irrit. 2, H315  
Skin Sens. 1B, H317  
Eye Irrit. 2, H319  
STOT SE 3, H336  
Full text of all classifications and hazard statements is given in the section 16.  
**Most serious adverse physico-chemical effects**  
Flammable liquid and vapour.  
**Most serious adverse effects on human health and the environment**  
May cause drowsiness or dizziness. Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction.
- 2.2. Label elements**  
**Hazard pictogram**  
  
**Signal word**  
Warning  
**Hazardous substances**  
1-methoxy-2-propanol  
4-Morpholinecarboxaldehyde

**SAFETY DATA SHEET**

according to Regulation (EC) No 1907/2006 (REACH) as amended

**G-LEAF Coating 00101**

Creation date	19th October 2021	Version	1.0
Revision date			

**Hazard statements**

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

**Precautionary statements**

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing mist/vapours/spray.
P280	Wear protective gloves.
P312	Call a POISON CENTER if you feel unwell.
P370+P378	In case of fire: Use powder extinguisher/sand/carbon dioxide to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.

**2.3. Other hazards**

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. Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures****Chemical characterization**

Mixture of substances and additives specified below.

**Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment**

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
Index: 603-064-00-3 CAS: 107-98-2 EC: 203-539-1	1-methoxy-2-propanol	80-90	Flam. Liq. 3, H226 STOT SE 3, H336	1
CAS: 1034343-98-0 EC: 801-282-5	Graphene	0-20	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	
CAS: 4394-85-8 EC: 224-518-3	4-Morpholinecarboxaldehyde	2-4	Skin Sens. 1B, H317	

**Notes**

1 Substance with a Union workplace exposure limit.

Full text of all classifications and hazard statements is given in the section 16.

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

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

**If inhaled**

Terminate the exposure immediately; move the affected person to fresh air. Protect the person against growing cold. Provide medical treatment if irritation, dyspnoea or other symptoms persist.

**If on skin**

Remove contaminated clothes. Wash the affected area with plenty of water, lukewarm if possible. Soap, soap solution or shampoo should be used if there is no skin injury. Provide medical treatment if skin irritation persists. Rinse skin with water or shower.



# SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

## G-LEAF Coating 00101

Creation date	19th October 2021	Version	1.0
Revision date			

**If in eyes**

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. Rinsing should continue at least for 10 minutes. Provide medical treatment, specialized if possible.

**If swallowed**

Rinse out the mouth with water and provide 2-5 dL of water. Provide medical treatment if the person has any health problems.

**4.2. Most important symptoms and effects, both acute and delayed****If inhaled**

May cause drowsiness or dizziness.

**If on skin**

May cause an allergic skin reaction.

**If in eyes**

Causes serious eye irritation.

**If swallowed**

Irritation, nausea.

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

Symptomatic treatment.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

**Unsuitable extinguishing media**

Water - full jet.

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

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

**5.3. Advice for firefighters**

Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Use a self-contained breathing apparatus and full-body protective clothing. Closed containers with the product near the fire should be cooled with water. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Provide sufficient ventilation. Flammable liquid and vapour. Remove all ignition sources. Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Do not inhale aerosols. Prevent contact with skin and eyes.

**6.2. Environmental precautions**

Prevent contamination of the soil and entering surface or ground water.

**6.3. Methods and material for containment and cleaning up**

Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies. After removal of the product, wash the contaminated site with plenty of water. Do not use solvents.

**6.4. Reference to other sections**

See the Section 7, 8 and 13.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

Prevent formation of gases and vapours in flammable or explosive concentrations and concentrations exceeding the occupational exposure limits. The product should be used only in the areas where it is not in contact with open fire and other ignition sources. Use non-sparking tools. Use of antistatic clothes and footwear is recommended. Do not inhale aerosols. Prevent contact with skin and eyes. No smoking. Contaminated work clothing should not be allowed out of the workplace. Wash hands and exposed parts of the body thoroughly after handling. Use only outdoors or in a

**SAFETY DATA SHEET**

according to Regulation (EC) No 1907/2006 (REACH) as amended

**G-LEAF Coating 00101**

Creation date	19th October 2021	Version	1.0
Revision date			

well-ventilated area. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Take action to prevent static discharges.

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

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Do not expose to sunlight. Store locked up. Keep container tightly closed. Keep cool.

**The specific requirements or rules relating to the substance/mixture**

Solvent vapours are heavier than air and accumulate especially near the floor where they may form an explosive mixture with the air.

**7.3. Specific end use(s)**

not available

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters**

The mixture contains substances for which occupational exposure limits are set.

**European Union****Commission Directive 2000/39/EC**

Substance name (component)	Type	Value	Note
1-methoxy-2-propanol (CAS: 107-98-2)	OEL 8 hours	375 mg/m <sup>3</sup>	Skin
	OEL 8 hours	100 ppm	
	OEL 15 minutes	568 mg/m <sup>3</sup>	
	OEL 15 minutes	150 ppm	

**Italy****Leg. April 9, 2008, no. 81**

Substance name (component)	Type	Value	Note
1-methoxy-2-propanol (CAS: 107-98-2)	8 hours	375 mg/m <sup>3</sup>	Skin
	8 hours	100 ppm	
	Short term (15 minutes)	568 mg/m <sup>3</sup>	
	Short term (15 minutes)	150 ppm	

**8.2. Exposure controls**

Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. If exposure limits cannot be observed in this mode, suitable protection of airways must be used. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

**Eye/face protection**

Protective goggles.

**Skin protection**

Hand protection: Protective gloves resistant to the product. When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Observe other recommendations of the manufacturer. Other protection: protective workwear. Contaminated skin should be washed thoroughly.

**Respiratory protection**

Halfmask with a filter against organic vapours or a self-contained breathing apparatus as appropriate if exposure limit values of substances are exceeded or in a poorly ventilated environment.

**Thermal hazard**

Not available.

**Environmental exposure controls**

Observe usual measures for protection of the environment, see Section 6.2.



# SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

## G-LEAF Coating 00101

Creation date	19th October 2021	Version	1.0
Revision date			

### SECTION 9: Physical and chemical properties

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

Physical state	liquid
Colour	data not available
Odour	data not available
Melting point/freezing point	data not available
Boiling point or initial boiling point and boiling range	data not available
Flammability	data not available
Lower and upper explosion limit	data not available
Flash point	data not available
Auto-ignition temperature	data not available
Decomposition temperature	data not available
pH	data not available
Kinematic viscosity	data not available
Solubility in water	data not available
Partition coefficient n-octanol/water (log value)	data not available
Vapour pressure	data not available
Density and/or relative density	data not available
Relative vapour density	data not available
Particle characteristics	data not available
Form	
4-Morpholinecarboxaldehyde (CAS: 4394-85-8)	liquid
4-Morpholinecarboxaldehyde (CAS: 4394-85-8)	solid: bulk
Graphene (CAS: 1034343-98-0)	solid: bulk
Lithium chloride (LiCl) (CAS: 7447-41-8)	liquid
Lithium chloride (LiCl) (CAS: 7447-41-8)	solid: bulk
Lithium chloride (LiCl) (CAS: 7447-41-8)	solid: particulate/powder

#### 9.2. Other information

not available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

not available

#### 10.2. Chemical stability

The product is stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

Unknown.

#### 10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

#### 10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents.

#### 10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

### SECTION 11: Toxicological information

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Inhalation of solvent vapors above values exceeding exposure limits for working environment may result in acute inhalation poisoning, depending on the level of concentration and exposure time. No toxicological data is available for the mixture.

##### Acute toxicity

Based on available data the classification criteria are not met.

**SAFETY DATA SHEET**

according to Regulation (EC) No 1907/2006 (REACH) as amended

**G-LEAF Coating 00101**

Creation date	19th October 2021	Version	1.0
Revision date			

**Skin corrosion/irritation**

Causes skin irritation.

**Serious eye damage/irritation**

Causes serious eye irritation.

**Respiratory or skin sensitisation**

May cause an allergic skin reaction.

**Germ cell mutagenicity**

Based on available data the classification criteria are not met.

**Carcinogenicity**

Based on available data the classification criteria are not met.

**Reproductive toxicity**

Based on available data the classification criteria are not met.

**Toxicity for specific target organ - single exposure**

May cause drowsiness or dizziness.

**Toxicity for specific target organ - repeated exposure**

Based on available data the classification criteria are not met.

**Aspiration hazard**

Based on available data the classification criteria are not met.

**11.2. Information on other hazards**

not available

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

Data for the mixture are not available.

**12.2. Persistence and degradability**

not available

**12.3. Bioaccumulative potential**

Not available.

**12.4. Mobility in soil**

Not available.

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

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (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**

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

**Waste management legislation**

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

**SAFETY DATA SHEET**

according to Regulation (EC) No 1907/2006 (REACH) as amended

**G-LEAF Coating 00101**

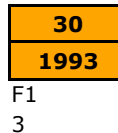
Creation date	19th October 2021	Version	1.0
Revision date			

**SECTION 14: Transport information**

- 14.1. UN number or ID number**  
UN 1993
- 14.2. UN proper shipping name**  
FLAMMABLE LIQUID, N.O.S.
- 14.3. Transport hazard class(es)**  
3 Flammable liquids
- 14.4. Packing group**  
III - substances presenting low danger
- 14.5. Environmental hazards**  
not relevant
- 14.6. Special precautions for user**  
Reference in the Sections 4 to 8.
- 14.7. Maritime transport in bulk according to IMO instruments**  
not relevant

**Additional information**

Hazard identification No.  
UN number  
Classification code  
Safety signs

**Marine transport - IMDG**

EmS (emergency plan)  
MFAQ

F-E, S-E  
310

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Legislative Decree No. 200/2011 - Sanctions for the violation of the provisions on the export and import of dangerous chemical substances - Official Gazette no. 283 of 05 December 2011. Legislative decree no. 81 of 09 April 2008 on health and safety protection of employees in the workplace. Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006, as amended.

**15.2. Chemical safety assessment**

not available

**SECTION 16: Other information****A list of standard risk phrases used in the safety data sheet**

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

**Guidelines for safe handling used in the safety data sheet**

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing mist/vapours/spray.
P280	Wear protective gloves.

# SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

## G-LEAF Coating 00101

Creation date	19th October 2021	Version	1.0
Revision date			

P312 Call a POISON CENTER if you feel unwell.  
 P370+P378 In case of fire: Use powder extinguisher/sand/carbon dioxide to extinguish.  
 P403+P235 Store in a well-ventilated place. Keep cool.

### Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

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

ADR European agreement concerning the international carriage of dangerous goods by road  
 BCF Bioconcentration Factor  
 CAS Chemical Abstracts Service  
 CLP Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures  
 EC Identification code for each substance listed in EINECS  
 EINECS European Inventory of Existing Commercial Chemical Substances  
 EmS Emergency plan  
 EU European Union  
 EuPCS European Product Categorisation System  
 IATA International Air Transport Association  
 IBC International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals  
 ICAO International Civil Aviation Organization  
 IMDG International Maritime Dangerous Goods  
 INCI International Nomenclature of Cosmetic Ingredients  
 ISO International Organization for Standardization  
 IUPAC International Union of Pure and Applied Chemistry  
 log Kow Octanol-water partition coefficient  
 MARPOL International Convention for the Prevention of Pollution from Ships  
 OEL Occupational Exposure Limits  
 PBT 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  
 UN Four-figure identification number of the substance or article taken from the UN Model Regulations  
 UVCB Substances of unknown or variable composition, complex reaction products or biological materials  
 VOC Volatile organic compounds  
 vPvB Very Persistent and very Bioaccumulative  
 Eye Irrit. Eye irritation  
 Flam. Liq. Flammable liquid  
 Skin Irrit. Skin irritation  
 Skin Sens. Skin sensitization  
 STOT SE Specific target organ toxicity - single exposure

### Training guidelines

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

### Recommended restrictions of use

not available

### Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended.  
 REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

### More information

Classification procedure - calculation method.





**BEDIMENSIONAL**

## **SAFETY DATA SHEET**

according to Regulation (EC) No 1907/2006 (REACH) as amended

### **G-LEAF Coating 00101**

Creation date	19th October 2021	Version	1.0
Revision date			

#### **Statement**

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.