

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 25.11.2015

Version number 2

Revision: 25.11.2015

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

- **1.1 Product identifier**
- **Trade name:** JBL ProFlora u401
- **Article number:** 6302600
- **CAS Number:**  
124-38-9
- **EC number:**  
204-696-9
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture**  
Pressure gas bottle with carbon dioxide for fertilising ornamental plants in the aquarium.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
JBL GmbH & Co. KG  
Dieselstraße 3  
67141 Neuhofen  
Germany  
+49 6236 41800  
info@jbl.de
- **Further information obtainable from:** Product safety department: info@jbl.de
- **1.4 Emergency telephone number:** +49 6236 4180 0

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS04 gas cylinder

Press. Gas L H280 Contains gas under pressure; may explode if heated.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS04

- **Signal word** Warning
- **Hazard statements**  
H280 Contains gas under pressure; may explode if heated.
- **Precautionary statements**  
P101 If medical advice is needed, have product container or label at hand.  
P102 Keep out of reach of children.  
P103 Read label before use.  
P410+P403 Protect from sunlight. Store in a well-ventilated place.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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### SECTION 3: Composition/information on ingredients

- **3.1 Chemical characterisation: Substances**
- **CAS No. Description**  
124-38-9 carbon dioxide
- **Identification number(s)**
- **EC number: 204-696-9**

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:** Dilute with plenty of water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

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**· 8.1 Control parameters****· Ingredients with limit values that require monitoring at the workplace:****124-38-9 carbon dioxide**

WEL	Short-term value: 27400 mg/m <sup>3</sup> , 15000 ppm Long-term value: 9150 mg/m <sup>3</sup> , 5000 ppm
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· **Additional information:** The lists valid during the making were used as basis.

**· 8.2 Exposure controls****· Personal protective equipment:**

· **General protective and hygienic measures:** Wash hands before breaks and at the end of work.

· **Respiratory protection:** Use suitable respiratory protective device in case of insufficient ventilation.

**· Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Notes: Wear when handling the container work gloves, safety shoes and if required face protection.

Guideline: EN 388 Protective gloves

**· Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**· Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**· Eye protection:**

Goggles recommended during refilling

Protect eyes, face and skin from liquid splashes. Eye protection, goggles or face shields entprechend of EN 166 should be used to avoid the effect of splashes (cryogenic) of liquid gases. Use eye protection to EN 166 when using gases.

· **Body protection:** Protect eyes, face and skin from contact with the product.

\* **SECTION 9: Physical and chemical properties**

**· 9.1 Information on basic physical and chemical properties****· General Information****· Appearance:**

<b>Form:</b>	Fluid
<b>Colour:</b>	Colourless
<b>· Odour:</b>	Odourless
<b>· Odour threshold:</b>	Not determined.

· **pH-value:** Not determined.

**· Change in condition**

<b>Melting point/Melting range:</b>	-56.6 °C
<b>Boiling point/Boiling range:</b>	-78.5 °C

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

**· Ignition temperature:**

**Decomposition temperature:** Not determined.

· **Self-igniting:** Not determined.

· **Danger of explosion:** Not determined.

**· Explosion limits:**

**Lower:** Not determined.

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<b>Upper:</b>	Not determined.
· <b>Vapour pressure at 20 °C:</b>	57300 hPa
· <b>Density at 20 °C:</b>	0.00197 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with water at 20 °C:</b>	2000 g/l
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>VOC (EC)</b>	0.00 %
· <b>9.2 Other information</b>	No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water

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- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Contact waste processors for recycling information.  
Do not discharge into drains, cellars, working pits and similar places where its accumulation could be dangerous escape. Consult the supplier if guidance is required. In a well-ventilated place discharge to atmosphere. Discharge of large quantities into the atmosphere should be avoided.
- **Uncleaned packaging:**
- **Recommendation:** Non contaminated packagings may be recycled.

### SECTION 14: Transport information

- **14.1 UN-Number**  
· **ADR, IMDG, IATA** UN1013
- **14.2 UN proper shipping name**  
· **ADR** 1013 CARBON DIOXIDE  
· **IMDG** CARBON DIOXIDE  
· **IATA** Carbon dioxide
- **14.3 Transport hazard class(es)**  
· **ADR**  
  
· **Class** 2 2A Gases.  
· **Label** 2.2
- **IMDG, IATA**  
  
· **Class** 2 Gases.  
· **Label** 2
- **14.4 Packing group**  
· **ADR, IMDG, IATA** Void
- **14.5 Environmental hazards:**  
· **Marine pollutant:** No
- **14.6 Special precautions for user** Warning: Gases.  
· **Danger code (Kemler):** 20  
· **EMS Number:** 2-09  
· **Stowage Category** A
- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.

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**· Transport/Additional information:****· ADR****· Limited quantities (LQ)**

120 ml

**· Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

**· Transport category**

3

**· Tunnel restriction code**

C/E

**· IMDG****· Limited quantities (LQ)**

120 ml

**· Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

**· UN "Model Regulation":**

UN 1013 CARBON DIOXIDE, 2.2

**SECTION 15: Regulatory information****· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****· Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

**· Hazard pictograms**

GHS04

**· Signal word** Warning**· Hazard statements**

H280 Contains gas under pressure; may explode if heated.

**· Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P410+P403 Protect from sunlight. Store in a well-ventilated place.

**· Directive 2012/18/EU****· Named dangerous substances - ANNEX I** Substance is not listed.**· 15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**· Department issuing MSDS:** Department of Environmental Protection**· Contact:** Research & Development**· Abbreviations and acronyms:**

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised 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)

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

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vPvB: very Persistent and very Bioaccumulative  
Press. Gas L: Gases under pressure; Liquefied gas

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· **\* Data compared to the previous version altered.**

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