## 1. Identification of the substance/preparation and of the company

**Product identifier**

**Product Name:** DMSO Molecular biology grade

**Catalogue-No.:** M6324
**CAS-No.:** 67-68-5
**EC-No.:** 200-664-3
**REACH-No.:** 01-2119431362-50-XXXX.

**Relevant identified uses of the substance or mixture and uses advised against**
Chemical analytics
Solvent
Laboratory chemical

**Details of the supplier of the safety data sheet**
**Manufacturer /Supplier:**
Genaxxon bioscience GmbH, Söflinger Str. 70, 89077 Ulm/Germany.
Tel.: +49 (0)731 3608 123, info@genaxxon.com

**Further information obtainable from: Geschäftsleitung / General Management**
**Emergency telephone number: +**49 (0)731 3608 123 (Monday till Friday: 7:30 – 18:30 o'clock)

**NOTE:** If this product is a kit or supplied with more than one material, please refer to the MSDS for each component for hazard information.

**Product Use:**
This products are for laboratory research use only and are not intended for human or animal diagnostics, therapeutics or other clinical uses.

## 2. Hazardous identification

**Classification of the substance or mixture**
**Classification according to Regulation (EC) No1272/2008**
The substance is not classified according to the CLP regulation.

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC:** Not applicable

**Label elements**
**Labelling according to Regulation (EC) No. 1272/2008:** Void
**Hazard pictograms:** Void
**Signal word:** Void
**Hazard statement(s):** Void
**Other hazards**
**Results of PBT and vPvB assessment**
**PBT:** Not applicable
**vPvB:** Not applicable

## 3. Composition/Information on ingredients

**Chemical characterization: Substances**
**Description:** Mixture of substances listed below with non-hazardous additions

| **CAS-No.** | **description** | |
|---|---|---|
| CAS: 67-68-5 | Dimethyl sulfoxide | |
| **Identification number(s)** | | |
| EINECS: 200-664-3 | | |

## 4. First Aid measures

**Description of first aid measures**
**General information:** No special measures required.
After inhalation: Supply fresh air; consult doctor in case of complaints.
**After skin contact:** Wash of with plenty of water.
If skin irritation continues, consult a doctor.
**After eye contact:**
Rinse opened eye for several minutes under running water.
If symptoms persist, consult a doctor.
**After swallowing**
make victim drink water (maximum of 2 drinking glasses).
Seek medical treatment.
**Information for doctor:**
**Most important symptoms and effects, both acute and delayed:** No further relevant information available.

Contd. on page 2

Contd. of page 1

**Indication of any immediate medical attention and special treatment needed:**
No further relevant information available.

## 5. Firefighting measures

**Extinguishing media**
**Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
**Special hazards arising from the substance or mixture:**
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be released:
Carbon oxides (CO, CO2).
Sulphur oxides (SO2, SO3...)
**Advice for fire-fighters**
**Protective equipment:** Wear self-contained respiratory protective device.
**Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Contain escaping vapours with water

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedure**
Do not inhale steam/aerosols**.**
Ensure adequate ventilation.
**Environmental precautions:** No special measures required.
**Methods and materials for containment and cleaning up**
Do not allow product to reach sewage system, surface or ground water.
**Methods and material for containment and cleaning up**
Absorb with liquid-binding material (saw dust, acid binder, universal binder, etc.).
Clean up affected area.
Dispose of the material collected according to regulations
**Reference to other sections:**
See Section 7 of this material safety data sheet for information on safe handling
See Section 8 of this material safety data sheet for information on personal protection equipment.
See Section 13 of this material safety data sheet for disposal information.

## 7. Handling and storage

**Handling:**
**Precautions for safe handling:** No special precautions are necessary if used correctly.
**Information about fire – and explosion protection:** Normal measures for preventive fire protection.

**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 closed.
**Recommended storage temperature:** 15°C to 25°C.
**Storage class:** 10-13
**Specific end use(s):** No further relevant information available.

## 8. Exposure controls/personal protection

**Additional information about design of technical facilities:** No further data; see item 7 of this material safety data sheet.

**Control parameters**
**Ingredients with limit values that require monitoring at the workplace:** Not required.
**Additional information:** The lists valid during the making were used as basis.

**Exposure controls**
**Personal protective equipment:**
**General protective and hygienic measures:**
Handle in accordance with good industrial hygiene and safety practice.
Wash hands before breaks and at the end of workday.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Avoid contact with eyes and skin.

Contd. on page 3

Contd. of page 2

**Respiratory protection:**



EN149

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Protection of hands:**



Protective gloves (EN 374)

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
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.

**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.

**For the permanent contact gloves made of the following materials are suitable:**

Recommended thickness of the material: >0.65mm
Chloroprene rubber, CR
Value for the permeation: Level > 480 min

**As protection from splashes gloves made of the following materials are suitable:**

Recommended thickness of the material: ≥0.6 mm
Natural rubber, NR
Value for the permeation: Level ≥ 240 min

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

**Eye/face protection:**



Safety glasses (EN 166)

**Body protection:**

Complete suit protection against chemicals. Protective clothing should be selected specifically for the working place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

## 9. Physical and chemical properties

**Identification on basic physical and chemical properties**
**General Information**
**Appearance**

| | |
|---|---|
| **Form:** | Liquid |
| **Colour:** | colourless |
| **Odour:** | characteristic |

**Change in conditions**

| | |
|---|---|
| **Melting Point:** | 18.45°C |
| **Boiling Point:** | 189°C |
| **Sublimation:** | not applicable |

| | |
|---|---|
| **Flash Point:** | 95°C |
| **Ignition temperature:** | 300°C |
| **Danger of explosion:** | Product does not present an explosion hazard. |

**Explosion limits**

| | |
|---|---|
| **Lower:** | 1.8 Vol % |
| **Upper:** | 63 Vol % |
| **Vapour pressure at 20°C:** | 0.6 hPa |

Contd. on page 4

Contd. of page 3

**Density at 20°C:** 1.1 g/cm3

**Solubility in / Miscibility with**
**water at 20°C** fully miscible
**Organic solvents:** fully miscible

**Solvent content:**
**Organic solvents:** 100.0%
**VOC (EC):** 100.00%
**Other information:** No further relevant data available

## 10. Stability and Reactivity

**Reactivity**
No further relevant information available
**Chemical stability:**
**Thermal decomposition / conditions to be avoided:**
Warming. A range from approx. 15 Kelvin below the flash point is to be rated as critical.
**Possibility of hazardous reactions:** No dangerous reactions known.
**Conditions to avoid:**
No further relevant information available.
**Incompatible materials:**
alkali metals
strong oxidants
**Hazardous decomposition products:**
In the event of fire see chapter 5 of this material safety data sheet.

## 11. Toxicological information

**Information on toxicological effects**
**Acute toxicity**

| | **LD50/LC50 values relevant for classification:** | | | |
|---|---|---|---|---|
| | **67-68-5 dimethyl sulfoxide** | | | |
| | Oral | LD50 | >14,500mg/kg (rat) | |
| | Notes: - | | | |
| | Inhalation | LC50 | >40,250 ppm (rat - 4h) | |
| | Notes: - | | | |
| | Dermal | LD50 | >5,000mg/kg (rabbit) | |
| | Notes: - | | | |

**Primary irritant effect:**
**on the skin:** Slight irrtations.
**on the eye:** Slight irritation.
**After inhalation:** No irritant effect.
**Sensitization:** No sensitizing effects known.
**Additional toxicological information:**
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.
The substance is not subject to classification according to the latest version of the EU lists.

## 12. Ecological Information

**Toxicity**
**Aquatic toxicity:** No further relevant information available.
**Persistence and degradability:** No further relevant information available.
**Behaviour in environmental systems:**
**Bioaccumulative potential:** No further relevant information available.
**Mobility in soil:** No further relevant information available.
**Additional ecological information:**
**General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
Do not allow to enter waters, waste water, or soil.
**Results of PBT and vPvB assessment**
**PBT:** Not applicable

Contd. on page 5

Contd. of page 4

**vPvB:** Not applicable
**Other adverse effects:** No further relevant information available.

## 13. Disposal considerations

**Waste treatment methods:**
**Recommendation:** Chemicals must be disposed in compliance with the respective national regulations.

**Uncleaned/contaminated packaging:**
**Recommendation:**
Disposal must be made according to official regulations.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.
**Recommended cleansing agents:**
Water, if necessary together with cleansing agents.

## 14. Transport information

| | |
|---|---|
| **UN-Number**<br>**ADR/RID, ADN, IMDG, IATA:** | Void |
| **UN proper shipping name**<br>**ADR/RID, ADN, IMDG, IATA:** | Void |
| **Transport hazard class(es)**<br>**ADR/RID, ADN, IMDG, IATA:**<br>**Class** | Void |
| **Packaging group**<br>**ADR/RID, IMDG, IATA:** | Void |
| **Environmental hazards:**<br>**Marine pollutant:** | No |
| **Special precautions for user:** | Not applicable |
| **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** | Not applicable |
| **Transport/Additional information:** | Not dangerous according to the above specifications. |
| **UN “Model Regulation”:** | Void |

## 15. Regulatory information

**Chemical safety assessment:** A chemical Safety Assessment has not been carried out.

## 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. Genaxxon bioscience GmbH, shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

**Disclaimer**
This product is for R&D use only. Not for drug, household or other uses.

**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)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the “International Air Transport Association” (IATA)
ICAO: International Civil Aviation Organization
ACAO-TI: Technical Instructions by the “International Civil Aviation Organization” (ICAO)
GHS: Globally Harmonized System of Classification and labeling of Chemicals
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

Contd. on page 6

Contd. of page 5

VOC: Volatile Organic Compounds (USA, EU)
CAS: Chemical Abstracts Service (division of the American Chemical Society).
EINECS: European Inventory of Existing Commercial Chemical Substances.