

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY UNDERTAKING

- **Product identifiers**

Product Name: ExoFLARE™ Kit  
Catalogue Number:  
IUPAC Number:

- **Relevant identified uses of the substance or mixture and uses advised against**

Research use only. Not for human use.

- **Details of the supplier of the safety data sheet**

Company Cell Guidance Systems  
Moneta Building, Babraham Research Campus,  
Cambridge CB22 3AT, UK  
  
Web [www.cellgs.com](http://www.cellgs.com)  
Email [tech@cellgs.com](mailto:tech@cellgs.com)  
Telephone +44 (0)1223 967316

- **Emergency Information**

In case of a chemical emergency, spill, fire, or exposure, call Cell Guidance Systems at +44 (0) 1223 967316 (09.00 - 17.00 GMT). In US call 760 450 4304.

## 2. HAZARDS IDENTIFICATION

- **Classification of the substance or mixture**

Not a hazardous substance or mixture.

This substance does not meet the classification criteria of the EC Directives 67/548/EEC, 1999/45/EC or 1272/2008.

- **Label elements**

The product does not need to be labeled in accordance with EC directives or respective national laws.

- **Other hazards**

None

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

- **Substances**

DMSO - 25%; CAS: 67-68-5

The product does not contain any more hazardous substances at concentrations of 1% or greater. The product is not known to contain carcinogens at a concentration of 0.1% or greater. No MSDS is required.

#### 4. FIRST AID MEASURES

- **Description of first aid measures**

General advice:	Consult a doctor and show this safety data sheet.
If inhaled:	Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.
In case of skin contact:	Immediately wash skin with copious amounts of soap and water and rinse thoroughly. Generally the product does not irritate the skin. Consult a doctor.
In case of eye contact:	Flush with copious amounts of water for several minutes. Consult a doctor.
If swallowed:	Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

#### 5. FIRE-FIGHTING MEASURES

- **Classification of substance**

The product is non-flammable.

- **Suitable extinguishing media**

Use water spray, carbon dioxide, dry chemical powder or alcohol-resistant foam.

- **Protective Equipment**

Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

#### 6. ACCIDENTAL RELEASE MEASURES

- **Personal precautions, protective equipment and emergency procedures**

Use standard laboratory practices including proper personal protective equipment. Implement appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

- **Environmental precautions**

Do not let product enter drains.

- **Methods and materials for containment and cleaning up**

Cover spillage with suitable absorbent material. Using non-spark tools, sweep up material and place in an appropriate container. Ventilate area until after disposal is complete. Hold all material for appropriate disposal as described under section 13 of MSDS.

- **Additional information**

None

#### 7. HANDLING AND STORAGE

- **Precautions for safe handling**

No special measures required. No special precautions are necessary if used correctly. Avoid inhalation, contact with eyes, skin and clothing.

- **Conditions for safe storage, including any incompatibilities**

Keep away from direct sunlight. Keep container tightly sealed until ready for use. Recommended storage temperature: Store at 4°C

- **Specific end uses**

None

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- **Control parameters**

Components with workplace control parameters    None known. Contains no substances with occupational exposure limit values.

- **Exposure controls**

Appropriate engineering controls    Ensure all engineering measures described under section 7 of MSDS are in place.  
Follow usual standard laboratory practices. Use appropriate personal protective work clothing.

- **Personal protective equipment**

Eye / face protection    Use appropriate safety glasses.  
Skin protection    Use appropriate chemical resistant gloves. Gloves should be inspected before use.  
Wash and dry hands thoroughly after handling.  
Body protection    Wear appropriate protective clothing.  
Respiratory protection    Respiratory equipment is not required.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- **Information on basic physical and chemical properties**

### ExoFLARE™ Dye

Appearance	No data available
Vapor pressure	No data available
Vapor density	No data available
Odor	No data available
Odor threshold	No data available
Relative density	No data available
pH	No data available
Solubility(ies)	No data available
Melting / freezing point	No data available
Partition coefficient	No data available
Boiling point / range	No data available
Auto-ignition temperature	No data available
Flash point	No data available
Decomposition temperature	No data available
Evaporation rate	No data available
Viscosity	No data available
Flammability (solid, gas)	No data available
Explosive properties	No data available
Upper / lower flammability or explosive limits	No data available
Oxidising properties	No data available

### PBS

Appearance	Clear liquid colourless
Vapor pressure	No data available
Vapor density	No data available
Odor	No data available
Odor threshold	No data available
Relative density	No data available
pH	No data available
Solubility(ies)	No data available
Melting / freezing point	No data available
Partition coefficient	No data available
Boiling point / range	No data available

Auto-ignition temperature	No data available
Flash point	No data available
Decomposition temperature	No data available
Evaporation rate	No data available
Viscosity	No data available
Flammability (solid, gas)	No data available
Explosive properties	No data available
Upper / lower flammability or explosive limits	No data available
Oxidising properties	No data available

## **DMSO**

Appearance	Liquid colourless
Vapor pressure	No data available
Vapor density	No data available
Odor	No data available
Odor threshold	No data available
Relative density	No data available
pH	No data available
Solubility(ies)	Water
Melting / freezing point	Melting point range: 16-19°C
Partition coefficient	No data available
Boiling point / range	189°C
Auto-ignition temperature	No data available
Flash point	87°C - closed cup
Decomposition temperature	No data available
Evaporation rate	No data available
Viscosity	No data available
Flammability (solid, gas)	No data available
Explosive properties	No data available
Upper / lower flammability or explosive limits	No data available
Oxidising properties	No data available

## **ExoFLARE™ plasmid**

Appearance	Dry powder; Colourless
Vapor pressure	No data available
Vapor density	No data available
Odor	No data available
Odor threshold	No data available
Relative density	No data available
pH	No data available
Solubility(ies)	No data available
Melting / freezing point	No data available
Partition coefficient	No data available
Boiling point / range	No data available
Auto-ignition temperature	No data available
Flash point	No data available
Decomposition temperature	No data available
Evaporation rate	No data available
Viscosity	No data available
Flammability (solid, gas)	No data available
Explosive properties	No data available
Upper / lower flammability or explosive limits	No data available
Oxidising properties	No data available

- **Other safety information**

No data available

## 10. STABILITY AND REACTIVITY

### ExoFLARE™ Dye

#### Reactivity

No data available.

#### Chemical stability

Stable under recommended storage and handling conditions.

#### Possibility of hazardous reactions

No data available.

#### Conditions to avoid

No data available.

#### Incompatible materials

Strong oxidising agents.

#### Hazardous decomposition products

In the event of fire see section 5.

### PBS

#### Reactivity

No data available.

#### Chemical stability

Stable under recommended storage and handling conditions.

#### Possibility of hazardous reactions

No data available.

#### Conditions to avoid

No data available.

#### Incompatible materials

Strong oxidising agents.

#### Hazardous decomposition products

In the event of fire see section 5.

### DMSO

#### Reactivity

No data available.

#### Chemical stability

Stable under recommended storage and handling conditions.

#### Possibility of hazardous reactions

No data available.

**Conditions to avoid**

Avoid sources of ignition

**Incompatible materials**

Acid chlorides, phosphorus halides, strong acids, strong oxidizing agents, strong reducing agents

**Hazardous decomposition products**

Other decomposition products - No data availables

**ExoFLARE™ plasmid****Reactivity**

No data available.

**Chemical stability**

No data available.

**Possibility of hazardous reactions**

No data available.

**Conditions to avoid**

No data available.

**Incompatible materials**

Alcohols

**Hazardous decomposition products**

No data available.

**11. TOXICOLOGICAL INFORMATION****• Information on toxicological effects****ExoFLARE™ Dye**

Acute Toxicity	No data available
Skin corrosion/irritation	No data available
Serious eye damage/irritation	No data available
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	No data available
Carcinogenicity	No data available
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Specific target organ toxicity - repeated exposure	No data available

Additional Information Not available

**PBS**

Acute Toxicity	No data available
Skin corrosion/irritation	No data available
Serious eye damage/irritation	No data available
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	No data available

Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Specific target organ toxicity - repeated exposure	No data available
Additional Information	Not available
<b>DMSO</b>	
Acute Toxicity	LD50 Oral - Rat- 14,500 mg/m <sup>3</sup> . LC50 Inhalation - Rat - 4h - 40250 ppm LD50 Dermal - Rabbit - >5,000 mg/kg
Skin corrosion/irritation	Mild skin irritation
Serious eye damage/irritation	No data available
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	Mouse - Lymphocyte - Cytogenetic analysis Mouse - Lymphocyte - Mutation in mammalian somatic cells Rat - Cytogenetic analysis Mouse - DNA damage
Carcinogenicity	Carcinogenicity - Rat - Oral Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Skin and Appendages: Other: Tumours  Carcinogenicity - Mouse - Oral Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Leukaemia Skin and Appendages: Other: Tumours.  IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity	Reproductive toxicity - Rat - Intraperitoneal Effects on fertility: Abortion; Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).  Reproductive toxicity - Rat - Subcutaneous Effects on fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants); Litter size (e.g.; number of fetuses per litter, measured before birth).  Reproductive toxicity - Mouse - Oral Effects on fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea). Effects on embryo or fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific developmental abnormalities: musculoskeletal system.  Developmental toxicity - Mouse - Intraperitoneal Effects on Embryo or fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system.
Specific target organ toxicity - single exposure	No data available
Specific target organ toxicity - repeated exposure	No data available
Additional Information	RTECS: PV6210000

Exposure to large amounts can cause: redness of skin, itching, burning, sedation, headache, nausea, dizziness.

### **ExoFLARE™ plasmid**

Acute Toxicity	No data available
Skin corrosion/irritation	No data available
Serious eye damage/irritation	No data available
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	No data available
Carcinogenicity	No data available
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Specific target organ toxicity - repeated exposure	No data available
Additional Information	Not available

## **12. ECOLOGICAL INFORMATION**

### **ExoFLARE™ Dye**

#### **Ecotoxicity**

No data available

#### **Persistence and degradability**

No data available

#### **Bioaccumulative potential**

No data available

#### **Mobility in soil**

No data available

#### **Results of PBT and vPvB assessment**

Not available

#### **Other adverse effects**

No data available

### **PBS**

#### **Ecotoxicity**

No data available

#### **Persistence and degradability**

No data available

#### **Bioaccumulative potential**

No data available

#### **Mobility in soil**

No data available



**Results of PBT and vPvB assessment**

Not available

**Other adverse effects**

No data available

**DMSO****Ecotoxicity**

Toxicity to fish - LC50 - Pimephales promelas (fathead minnow) - 34,000 mg/l - 96h

- LC50 - Oncorhynchus mykiss (rainbow trout) - 35,000 mg/l - 96h

Toxicity to daphnia and other aquatic invertebrates - EC50 - Daphnia magna (Water flea) - 24,600 mg/l - 48h (OECD Test Guideline 202)

Toxicity to algae - EC50 - Pseudokirchneriella subcapitata (green algae) - 17,000 mg/l - 72h (OECD Test Guideline 201)

**Persistence and degradability**

Biodegradability - Result: 31% - According to the results of tests of biodegradability this product is not readily biodegradable. (OECD Test Guideline 301D)

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Results of PBT and vPvB assessment**

This substance contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**Other adverse effects**

No data available

**ExoFLARE™ plasmid****Ecotoxicity**

No data available

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Results of PBT and vPvB assessment**

Not available

**Other adverse effects**

No data available

## 13. DISPOSAL CONSIDERATIONS

- **Waste treatment methods**

Product    Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with national, regional, or local legislation.

Contaminated packaging                    Dispose in accordance with national, regional, or local legislation.

## 14. TRANSPORT INFORMATION

- **UN Number**

Not regulated.

- **DOT regulations**

Not regulated.

- **Land transport ADR/RID (cross-border)**

Not regulated.

- **Maritime transport IMDG**

Not regulated.

- **Marine pollutant**

No.

- **Air transport ICAO-TI and IATA-DGR**

Not regulated.

- **Transport/Additional information**

Not dangerous according to the above specifications.

- **Environmental hazards**

No.

- **Special precautions for users**

No data available.

## 15. REGULATORY INFORMATION

- **USA**

**TSCA (Toxic Substances Control Act)**

The product is not listed.

**SARA 313**

The product is not listed.

**SARA 311/312 Hazards**

None known.

**CERCLA Reportable Quantity**

The product is not reportable under 40 CFR Part 302.4.

**California Proposition 65**

The product is not listed on California's listing of known or potential carcinogens.

- **EU**

This MSDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.

- **Canada**

Not WHMIS controlled. This MSDS was prepared in accordance with Hazardous Products Regulations (HPR) and WHMIS 2015.

**16. OTHER INFORMATION**

- **Disclaimer**

THIS PRODUCT IS FOR RESEARCH USE ONLY. NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES.

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**End of safety data sheet**