# SAFETY DATA SHEET

## Pico-Break™ in 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctan-1-ol

This Safety Data Sheet contains information concerning the potential risks to those involved in handling, transporting and working with the material. This information should be made available to those who may come into contact with the material or are responsible for the use of the material. This Safety Data Sheet is prepared in accordance with formatting described in the REACH Regulation (EC) No 1907/2006, and described in CLP Regulation (EC) No 1272/2008. However, the product is not classified as hazardous and contains no hazardous ingredients and this SDS is considered to be non-mandated and is provided for information only.

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

**1.1 Product identifier**
Pico-Break™ in 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctan-1-ol

**1.2 Relevant identified uses of the substance or mixture and uses advised against**
Laboratory chemical

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

Sphere Fluidics Limited
Building One,
Granta Park,
Granta Centre,
Cambridge
CB21 6AL
support@spherefluidics.com

**1.4 Emergency telephone number**

**In case of emergency** **01223 9422015** (Mon - Fri 8am to 5pm)

## SECTION 2: Hazards Identification

### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) no. 1272/2008 [CLP/GHS]**

WARNING

### 2.2 Label elements

**Hazard statements**
H315 Causes Skin irritation
H319 Causes Serious eye irritation
H335 May cause respiratory irritation

Combustible liquid.
H302 Harmful if swallowed.
H373 May cause damage to organs (liver, teeth) through prolonged or repeated exposure through ingestion.

**Precautionary statements**
P264 Wash hands thoroughly after use
P280 Wear Protective Gloves/protective clothing/eye protection/face protection
P332 + P313 If skin irritation occurs get medical advice/attention.
P302 + P352 IF ON SKIN: wash with plenty of soap and water.
P337 + P313 IF eye irritation persists get medical advice/attention.
P304 + P340 IF INHALED Remove to fresh air and keep at rest in a position comfortable for breathing.
P312 call a poison centre/doctor/physician if you feel unwell.

**2.3 Other hazards**
No known hazards. However, the product must be used in accordance with instructions for use.

## SECTION 3: Composition

**3.1 Substances**
Not applicable – product is a mixture.

**3.2 Mixtures**

| Ingredient | EC | % | Classification |
|---|---|---|---|
| Tridecafluorooctyl-1 dabsylate | n/a | < 0.1 | n/a |
| 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctan-1-ol | 211-477-1 | To 100 | Acute Tox 4 H302<br>STOT RE 2 H373 |

## SECTION 4: First Aid Measures

**4.1 Description of first aid measures**
EYE CONTACT: Rinse cautiously with water for 15 minutes. Remove contact lenses if present and easy to do so. Consult a physician
INHALATION: Move person into fresh air. If not breathing, give artificial respiration. Consult a physician if symptoms occur.
SKIN CONTACT: Wash with soap and water. If irritation or rash develops, seek medical attention.
INGESTION: If swallowed, Do not induce vomiting. Rinse mouth out with water and seek medical advice.

**4.2 Most important symptoms and effects, both acute and delayed**
INGESTION: No obvious symptoms from single administration
INHALATION: No known symptoms
EYES: Discomfort if first aid not administered
SKIN: Mild discomfort and possible reaction such as itching or redness

For most important known symptoms and effect see sections 2.2 and/or section 11.

**4.3 Indication of any immediate medical attention and special treatments needed**
Dilute affected areas. No special medical treatment needed.

## SECTION 5: Firefighting Measures

**5.1 Extinguishing media**
Small (incipient) fire must be extinguished with alcohol resistant foam, dry chemical powder or carbon dioxide. Large amounts of water are ineffective. Cool containers with large amounts of water.

### 5.2 Special hazards arising from the substance or mixture
Carbon Oxides, Hydrogen fluoride.

### 5.3 Advice for fire fighters
Wear Self-contained breather apparatus for firefighting if necessary. Use water spray to cool unopened containers.

## SECTION 6: Accidental Release Measures

### 6.1 Personal precautions, protective equipment and emergency procedures
For spillage of bulk material or quantities > 1 litre, gloves resistant to fluorinated solvents and eye protection recommended. Avoid skin contact and breathing vapours/ mist or gas. Remove all sources of ignition, beware vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

### 6.2 Environmental precautions
Prevent further spillage or leakage if safe to do so. Do not let product enter drains.

### 6.3 Methods and materials for containment and clearing up
SMALL SPILLS (under 1 litre): Use absorbent material and place in a suitable container for disposal. Wash area with water and detergent.
LARGE SPILLS: (more than 1 litre): Use appropriate containment to avoid contamination of surrounding area.

### 6.4 References to other sections
See section 8 for further advice on protective equipment and section 13 for further advice on disposal.

## SECTION 7: Handling and Storage

### 7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition, no smoking. Take measures to prevent build-up of electrostatic charge.

### 7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed when not in use. For professional use only. Store in a cool, dry and well-ventilated place.

### 7.3 Specific end uses(s)
Use only as directed as a laboratory chemical

## SECTION 8. Exposure Controls/Personal Protection

### 8.1 Control parameters
**Occupational Exposure limit values**

No exposure limits

### 8.2 Exposure controls

**Engineering controls**
Normal room ventilation is adequate.

**Respiratory protection**
Not required for normal handling.

**Hand Protection**
In case of prolonged or repeated contact, wear gloves suitable for fluorinated solvents. Change gloves in accordance with manufacturer's recommendations.

**Eye protection**
Eye protection recommended

**Skin protection**
For handling, laboratory coats recommended.

**General Hygiene Considerations**
Wash hands after handling. Launder contaminated clothing before reuse.

**Environmental exposure controls**
Precautions should be taken to avoid accidental release of material to water courses.

## SECTION 9: Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

| | |
|---|---|
| **Appearance:** | Orange liquid |
| **Odour:** | No discernible odour |
| **Odour threshold:** | no data |
| **pH:** | Neutral (not applicable due to low solubility in water) |
| **Melting point:** | Liquid at 0°C |
| **Boiling point:** | > 100°C |
| **Flashpoint:** | Considered non-flammable and will not support combustion |
| **Evaporation rate:** | No data |
| **Flammability (solid, gas):** | Considered non-flammable and will not support combustion |
| **Upper/lower flammability limits:** | No data |
| **Vapour pressure:** | No data. Not considered volatile |
| **Vapour density** | No data |
| **Relative density** | Estimated 1.5 based on starting materials |
| **Solubility in water:** | Not soluble in water. |
| **Solubility in other solvents:** | Only soluble in fluorinate solvents |
| **Partition coefficient (log Kow)** | Solvent Log Kow > 4 |
| **Autoignition temperature** | No data |
| **Decomposition temperature** | > 100°C |
| **Viscosity** | Solvent of low viscosity and may enter lungs if swallowed |
| **Explosive properties** | Not classified as explosive |
| **Oxidising properties** | Not classified as oxidising; contains low level of oxidising agent |

**9.2 Other information**
None

## SECTION 10: Stability and Reactivity

### 10.1 Reactivity
Functionally inert.

### 10.2 Chemical stability
Stable under recommended conditions.

### 10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

### 10.4 Conditions to avoid
Heat, Flames and Sparks. Extremes of temperatures and direct sunlight.

### 10.5 Incompatible materials
Strong oxidizing agents

### 10.6 Hazardous decomposition products
Hazardous decomposition products form under fire conditions. – Carbon Oxides, Hydrogen fluoride.

## SECTION 11: Toxicological Information

### 11.1 Information on toxicological effects
This product has not been tested. Judgements on the expected toxicity of this product have been made based upon consideration of its major components.

| | |
|---|---|
| **(a) acute toxicity** | Based on the solvent, estimated to be harmful if swallowed with ATE considered to be 1750 mg/kg |
| **(b) skin corrosion/irritation** | Estimated to be slightly irritant to skin, but not classified. |
| **(c) serious eye damage/irritation** | Estimated to be slightly irritant to eyes, but not classified. |
| **(d) respiratory/skin sensitisation** | Not considered to be a potential skin sensitiser |
| **(e) germ cell mutagenicity** | This chemical class is not known to be mutagenic. |
| **(f) carcinogenicity** | This chemical class is not known a carcinogen by IARC or U.S. ACGIH, NTP or OSHA. |
| **(g) reproductive toxicity** | This chemical class is not known to be toxic for reproduction |
| **(h) STOT-single exposure** | This chemical class is not considered hazardous to organs from single exposure |
| **(i) STOT-repeated exposure** | The solvent is considered STOT SE2 based on effects to the liver and other haematological changes following repeated oral exposure . |
| **(j) aspiration hazard** | The solvent is of low viscosity, but not classified by supplier as Aspiration Toxic |

## SECTION 12: Ecological Information

This product has not been tested. Judgements on the expected toxicity of this product have been made based upon consideration of its major components.

### 12.1 Toxicity
This chemical class is not known to be toxic to aquatic organisms. The extremely low water solubility and high molecular weight will make exposure to aquatic organisms unlikely.

### 12.2 Persistence and degradability
Not considered to be biodegradable. Will persist.

### 12.3 Bioaccumulative potential
Not considered to be potentially bioaccumulative due to high molecular weight.

### 12.4 Mobility in soil
The product will not be mobile in the environment due to high molecular weight and low water solubility.

### 12.5 Results of PBT and vPvB assessment
The product is predicted to be persistent. It is not predicted to be bioaccumulate or toxic.

### 12.6 Other adverse effects
None known

## SECTION 13: Disposal Considerations

### 13.1 Waste treatment methods

Recover and recycle product if possible. If recovery and recycling are not possible disposal to waste water treatment may be possible if in accordance with local regulations.

## SECTION 14: Transport Information

Not classified as dangerous goods, no labelling for transport is required

| | ADR | IMDG | ICAO |
|---|---|---|---|
| 14.1 UN Number | Not applicable | Not applicable | Not applicable |
| 14.2 UN Proper shipping name | Not applicable | Not applicable | Not applicable |
| 14.3 Transport hazard class(es) | Not applicable | Not applicable | Not applicable |
| 14.4 Packing group | Not applicable | Not applicable | Not applicable |
| 14.5 Environmental hazards | Not applicable | Not applicable | Not applicable |
| 14.6 Special precautions for user | Not applicable | Not applicable | Not applicable |
| 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not applicable | Not applicable | Not applicable |

## SECTION 15: Regulatory Information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
No specific legislation

**15.2 Chemical Safety Assessment**
A Chemical Safety Assessment has not been carried out for this product.
Chemical safety assessment has been performed on some of the components and no concerns noted in respect to the intended us of this product.

## SECTION 16: Other Information

**Revision information:**
Rebranding updates only

**List of Abbreviations used in this SDS:**

| | |
|---|---|
| ATE | Acute Toxicity Estimate |
| CAS | Chemical Abstracts Service |
| CLP | Classification, Labelling and Packaging Regulation (EC) no 1272/2008 |
| DSD | Dangerous Substances Directive 67/548/EEC |
| DPD | Dangerous Preparations Directive 1999/45/EC |
| EC | European Commission |
| PBT | Persistent, Bioaccumulative and Toxic |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) no 1907/2006 |
| STOT | Specific target organ toxicity |
| vPvB | very Persistent, very Bioaccumulative |

**References**
Source: European Chemicals Agency, http://echa.europa.eu/

**Method used for classification:**
Consideration of starting reagents

**H and P Statements used in Section 2 and/or 3**
H302 Harmful if swallowed.
H373 May cause damage to organs (liver, teeth) through prolonged or repeated exposure through ingestion

**Training requirements for workers**
No special training requirements. For professional use only