SAFETY DATA SHEET

(In accordance with COMMISSION REGULATION (EU) No 453/2010)

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

Product identifier

Product code Q32854COMPONENTA
Product name Qubit ® dsDNA HS Reagent *200X concentrate in DMSO*
Chemical Name Not applicable
REACH registration number No registration number is given yet for this substance / substances in this mixture since the annual import quantity is less than one tonnage per annum or the transition period for its registration according to Article 23 of REACH has not yet expired.

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

Relevant identified uses For research use only
Use Description Code SU22 - Public domain (administration, education, entertainment, services, craftsmen), PROC15 - Use as a laboratory reagent, PC21 - Laboratory chemicals, SU24 - Scientific research and development
Uses advised against Not for consumer use.

Details of the supplier of the safety data sheet

Manufacturer/Supplier
LIFE TECHNOLOGIES EUROPE BV
KWARTSWEG 2
2665 NN BLEISWIJK
NETHERLANDS
31-(0)180 392 400
Email: MSDS@lifetech.com

24 hour Emergency Response: 866-536-0631
301-431-8585
Outside of the U.S. ++1-301-431-8585

Country specific Emergency Number (if available): . . . . 
CHEMTREC Ireland (Dublin) +(353)-19014670 (Greeting Language: English and Irish)
CHEMTREC UK (London) +(44)-870-8200418 (Greeting Language: English)
SECTION 2: Hazards identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

Physical hazards
Not Hazardous

Health hazards
Not Hazardous

Environmental Hazards
Not Hazardous

Additional information
Not applicable

Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard pictograms
No Pictogram

Signal word
None

hazard statements
Not applicable

Precautionary Statements
Not applicable

Other Hazards
This mixture does not contain any substances that are assessed to be a PBT or a vPvB

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>EINECS-No.</th>
<th>Weight percent</th>
<th>REACH registration number</th>
<th>Classification according to Regulation (EC) No 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide 67-68-5 ( 95-100 )</td>
<td>67-68-5</td>
<td>200-664-3</td>
<td>95-100</td>
<td>-</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Revision date 07-Mar-2016
Product code Q32854COMPONENTA
Product name Qubit ® dsDNA HS Reagent "200X concentrate in DMSO"

www.thermofisher.com
SECTION 4: First aid measures

Description of first aid measures

Skin contact  Rinse with plenty of water. Immediate medical attention is not required.
Eye contact  Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

INGESTION  Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

Inhalation  Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.

Notes to Physician  Treat symptomatically.

Most important symptoms and effects, both acute and delayed  Not applicable.

Indication of any immediate medical attention and special treatment needed  None.

SECTION 5: Firefighting measures

Extinguishing media

Unsuitable Extinguishing Media  No information available.

Special hazards arising from the substance or mixture  Not Known.

Advice for fire-fighters  Standard procedure for chemical fires.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Use personal protection equipment. See Section 8 for more detail.

Environmental precautions  No special environmental precautions required. Avoid discharge into drains and waterways whenever possible.

Methods and material for containment and cleaning up  Soak up with inert absorbent material.

Reference to other sections  See section 8 for more information.

SECTION 7: Handling and storage

Precautions for safe handling  Use personal protective equipment as required. No special handling advices are necessary.

Conditions for safe storage, including any incompatibilities  Keep in a dry, cool and well-ventilated place. Keep in properly labelled containers.

Specific end use(s)  For research use only.
SECTION 8: Exposure controls/personal protection

Control parameters

Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EU OEL (TWA)</th>
<th>EU OEL (STEL)</th>
<th>EU Skin Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>67-68-5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Austria</th>
<th>Belgium (TWA)</th>
<th>Denmark (TWA)</th>
<th>Finland OEL (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>50 ppm</td>
<td>160 mg/m³</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>67-68-5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>France OEL (VME)</th>
<th>Germany OEL (TWA)</th>
<th>Ireland (TWA)</th>
<th>Italy OEL (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>67-68-5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Sweden - Occupational Exposure Limits - TLVs (LLVs)</th>
<th>Netherlands OEL (MAC)</th>
<th>Spain OEL (TWA)</th>
<th>United Kingdom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>50 ppm LLV; 150 mg/m³ LLV</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>67-68-5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>European Union</th>
<th>United Kingdom</th>
<th>France OEL (VME)</th>
<th>Germany OEL (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>67-68-5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Italy OEL (TWA)</th>
<th>Portugal</th>
<th>Netherlands OEL (MAC)</th>
<th>Finland OEL (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>67-68-5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Austria</th>
<th>Denmark</th>
<th>Poland</th>
<th>Switzerland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>50 ppm</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>67-68-5</td>
<td>160 mg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Ireland</th>
<th>Norway</th>
<th>Lithuania OEL (TWA)</th>
<th>Spain OEL (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>None</td>
<td>None</td>
<td>50 ppm</td>
<td>None</td>
</tr>
<tr>
<td>67-68-5</td>
<td></td>
<td></td>
<td>150 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

Engineering measures
Ensure adequate ventilation, especially in confined areas.

Exposure controls

Personal protection equipment

Respiratory protection
In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.

Hand Protection
Wear suitable gloves Glove material: Compatible chemical-resistant gloves.

Eye protection
Tight sealing safety goggles.

Skin and body protection
Wear suitable protective clothing.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls
No special environmental precautions required. Avoid discharge into drains and waterways whenever possible.
SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odour</td>
<td>no data available</td>
</tr>
<tr>
<td>pH</td>
<td>6-8</td>
</tr>
<tr>
<td>Melting point / melting range</td>
<td>°C 18 - 19</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>°C 188 - 190</td>
</tr>
<tr>
<td>Flash point</td>
<td>°C 87 - 89</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>°C 214 - 216</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>°C Mixture has not been tested</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>no data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>no data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>61% - 64%</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>2.4% - 2.8%</td>
</tr>
<tr>
<td>Vapour Pressure</td>
<td>Mixture has not been tested</td>
</tr>
<tr>
<td>Relative density</td>
<td>Mixture has not been tested</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>no data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>no data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>no data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Mixture has not been tested</td>
</tr>
<tr>
<td>OTHER INFORMATION</td>
<td>no data available</td>
</tr>
</tbody>
</table>

SECTION 10: Stability and reactivity

Reactivity

None known.

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

Hazardous reaction has not been reported.

Conditions to Avoid

No information available.

Incompatible Materials

Strong acids. Strong oxidising agents.

Hazardous decomposition products

no data available.
### SECTION 11: Toxicological information

#### Information on toxicological effects

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 (oral, rat/mouse)</th>
<th>LD50 (dermal, rat/rabbit)</th>
<th>LC50 (inhalation, rat/mouse)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>14500 mg/kg Oral LD50</td>
<td>&gt;40000 mg/kg bw</td>
<td>&gt;5000 mg/l</td>
</tr>
</tbody>
</table>

#### Principle Routes of Exposure, Potential health effects

**Irritation**
- Mild skin irritant, Mild eye irritation, Components of the product may be absorbed into the body through the skin

**Corrosivity**
- Conclusive but not sufficient for classification

**Sensitisation**
- Conclusive but not sufficient for classification

**STOT - Single Exposure**
- Conclusive but not sufficient for classification

**STOT - Repeated Exposure**
- Conclusive but not sufficient for classification

**Carcinogenicity**
- Conclusive but not sufficient for classification

**Mutagenicity**
- Conclusive but not sufficient for classification

**Reproductive toxicity**
- Conclusive but not sufficient for classification

### SECTION 12: Ecological information

#### Toxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Freshwater Algae Data</th>
<th>Water Flea Data</th>
<th>Freshwater Fish Species Data</th>
<th>Microtox Data</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>Skeletonema costatum EC50 12350 - 25500 mg/L (96 h)</td>
<td>Daphnia species EC50=7000 mg/L (24 h)</td>
<td>no data available</td>
<td>no data available</td>
<td>logPow-2.03</td>
</tr>
</tbody>
</table>

**Persistence and degradability**
- Inherently biodegradable.

**Bioaccumulative potential**
- Material does not bioaccumulate.

**Results of PBT and vPvB assessment**
- This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other adverse effects**
- No information available.

### SECTION 13: Disposal considerations

**Waste treatment methods**
- The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in according to approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.
SECTION 14: Transport information

IATA / ADR / DOT-US / IMDG
Not classified as dangerous in the meaning of transport regulations.

UN Number
Not applicable

UN proper shipping name
Not applicable

Transport hazard class(es)
Not applicable

Packing group
Not applicable

Environmental Hazards
Not applicable

Special precautions for user
Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

Product code Q32854COMPONENTA
Product name Qubit ® dsDNA HS Reagent "200X concentrate in DMSO"
SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Substances of Very High Concern
None.

Restricted substances under EC 1907/2006, Annex XVII
None.

Substances listed under Annex I of Regulation (EC) No 689/2008
None.

Restricted substances under Annex V of Regulation (EC) No 689/2008
None.

None.

German Water hazard classes (Wassergefährdungsklassen)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Weight percent</th>
<th>Germany - Water Classification (VwVwS) - Annex 1</th>
<th>Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes</th>
<th>Germany - Water Classification (VwVwS) - Annex 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>95-100</td>
<td></td>
<td>hazard class 1 - low hazard to waters</td>
<td></td>
</tr>
</tbody>
</table>

Other International Inventories

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EINECS (European Union)</th>
<th>ELINCS (European List of Notified Chemical Substances)</th>
<th>ENCS (Japan)</th>
<th>PICCS (Philippines)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>Listed</td>
<td>-</td>
<td>Listed</td>
<td>Listed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>AICS (Australia)</th>
<th>South Korea (KECL)</th>
<th>Canada (DSL)</th>
<th>NDSL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>Listed</td>
<td>Listed</td>
<td>Listed</td>
<td></td>
</tr>
</tbody>
</table>

Chemical Safety Assessment
No Chemical safety assessment has been carried out.
Reason for revision

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

“The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS SDS DOES NOT CONSTITUTE A WARRENTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE"