

**Safety Data Sheet (SDS) for KAPA T4 DNA Ligase**  
According to ISO & SANS 11014:2010 & SANS 10234

**SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION****Product identifier:**

**Identification as on the label/Trade name:** KAPA T4 DNA Ligase

**Additional information:** Product code KE6010; KE6011.

**Relevant identification uses of the substance and uses advised against:**

**Identified uses:** Enzyme for DNA ligation.

**Uses advised against:** Not known.

**Details of the supplier of the Safety Data Sheet:**

Kapa Biosystems  
2nd Floor, Salt Works  
271 Victoria Road  
Salt River, Cape Town  
7925, South Africa

**Emergency telephone numbers:**

+27 (0)21 448 8200 (08:00-16:00 GMT+2)

---

**SECTION 2: HAZARDS IDENTIFICATION****Classification of the substances or mixture:**

**The mixture is classified according to:** SANS 10234:2008, Regulation EC 1272/2008 [EU-GHS/CLP]

**Hazard classes/Hazard categories:**

Not classified

**Hazard statement:**

Not required

For full text of H-Statements see Section 16.

**The most important adverse effects:**

**The most important adverse physiochemical effects:** None

**The most important adverse human health effects:** None

**Label elements:**

**Hazard pictograms:** Not required.

**Signal Words:** Not required.

**Hazard Statements:** Not required.

**Precautionary Statements:** P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product.

**Special labelling of certain mixtures:** None known.

**Other hazards:** None known.

**Safety Data Sheet (SDS) for KAPA T4 DNA Ligase**  
According to ISO & SANS 11014:2010 & SANS 10234

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**Substance/Mixture:** Mixture

**Ingredients:** Not hazardous.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available listed in Section 8.

For the full text of the H-Statements mentioned in this Section, see Section 16.

---

### SECTION 4: FIRST-AID MEASURES

**Description of first aid measures:**

**Inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. In case of discomfort seek medical attention.

**Ingestion:** Not known.

**Skin Contact:** Not known.

**Eye Contact:** Not known.

**Most important symptoms and effects, both acute and delayed:**

**In case of inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. In case of discomfort seek medical attention.

**In case of skin contact:** Wash off with soap and plenty of water for at least 15 minutes. In case of discomfort seek medical attention.

**In case of eye contact:** Flush eyes thoroughly with water for 15 minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing. In case of discomfort seek medical attention.

**In case of ingestion:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. In case of discomfort seek medical attention.

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

---

### SECTION 5: FIRE-FIGHTING MEASURES

**Extinguisher media:**

**Suitable extinguisher media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Prevent contamination of drains or waterways.

**Unsuitable extinguishing media:** None known.

**Special hazards arising from the mixture:** Sealed containers may rupture when heated.

**Advice for fire-fighters:** Evacuate area and contact emergency services. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire.

**Safety Data Sheet (SDS) for KAPA T4 DNA Ligase**

According to ISO &amp; SANS 11014:2010 &amp; SANS 10234

**SECTION 6: ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures:**

**For non-emergency personnel:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**For emergency responders:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.

**Methods for containment and cleaning up:**

**For small spills:** Contain spilled material if possible. Clay, soil or commercially available absorbents may be used, collect in suitable and properly labelled containers.

**For large spills:** Contain area to prevent spill from spreading. Minimize adverse effects on the environment. Clay, soil or commercially available absorbents.

**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 information on disposal.

**Additional information:** None known.

---

**SECTION 7: HANDLING AND STORAGE****Precautions for safe handling:**

**Protective measures:** Observe directions on label and instructions for use. Avoid contact with skin and eyes.

Advice on general occupational hygiene: Do not smoke. Do not eat drink or smoke when handling this product.

**Conditions for safe storage, including incompatibilities:** Store in a cool place. Keep container tightly closed in a dry and well ventilated place.

**Specific end uses:** Analytical reagent use only as directed.

---

**SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION****Control parameters:**

**Occupational exposure limits:** No data available.

**Biological exposure indices (BEI):** No data available.

**Additional exposure limits under the conditions of use:** No data available.

**Exposure control:**

**Appropriate engineering controls:** Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended.

**Individual protection measures, such as personal protective equipment:**

**Eye/face protection:** Use safety glasses. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

**Safety Data Sheet (SDS) for KAPA T4 DNA Ligase**

According to ISO &amp; SANS 11014:2010 &amp; SANS 10234

**Hand protection:** Use chemical resistant gloves. Examples of preferred glove barrier materials include: Butyl rubber, Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, polyvinyl alcohol, Polyvinyl chloride.

**Body protection:** Not necessary under normal use.

**Respiratory protection:** If discomfort is experienced, use an approved air-purifying respirator. Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines.

**Environmental exposure controls:** None required.

---

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

**Appearance (form):** Liquid.

**Colour:** Colourless.

**Odour:** Odourless.

**Odour threshold:** Not known.

**pH (concentration):** Not known.

**Melting point/range (°C):** Not known.

**Boiling point/range (°C):** Not known.

**Flash point (°C):** Not known.

**Evaporation rate:** Not known.

**Flammability (solid, gas):** Not known.

**Ignition temperature (°C):** Not known.

**Upper/lower flammability/explosive limits:** Not known.

**Vapour pressure (20 °C):** Not known.

**Vapour density:** Not known.

**Relative density (25 °C):** Not known.

**Water solubility (g/L) at 20 °C:** Not known.

**n-Octanol/Water partition coefficient:** Not known.

**Auto-ignition temperature:** Not known.

**Decomposition temperature:** Not known.

**Viscosity, dynamic (mPa s):** Not known.

**Physical hazards:**

None.

**Other information:**

**Fat solubility (solvent-oil to be specified):** Not known.

**Bulk density:** Not known.

**Dissociation constant in water (pKa):** Not known.

**Oxidation-reduction potential:** Not known.

---

**SECTION 10: STABILITY AND REACTIVITY**

**Reactivity:** No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability:** Stable under recommended conditions of storage. Product will not undergo hazardous polymerization.

**Safety Data Sheet (SDS) for KAPA T4 DNA Ligase**

According to ISO &amp; SANS 11014:2010 &amp; SANS 10234

**Possibility of hazardous reactions:** Hazardous polymerization is not expected to occur.

**Conditions to avoid:** Do not store next to heat source, in direct sunlight, or elevated storage temperature.

**Incompatible materials:** Not known.

**Hazardous decomposition products:** Under normal conditions of storage and use, hazardous decomposition products should not be produced.

---

**SECTION 11: TOXICOLOGICAL INFORMATION****Toxicokinetics, metabolism and distribution:**

**Non-human toxicological data:** No data available.

**Method:** No data available.

**Dosage:** No data available.

**Routes of administration:** No data available.

**Results:** No data available.

**Absorption:** No data available.

**Distribution:** No data available.

**Metabolism:** No data available.

**Excretion:** No data available.

**Information on toxicological effects:**

**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:** Not data available.

**Reproductive toxicity:** No data available.

**STOT-single exposure:** No data available.

**STOT-repeated exposure:** No data available.

**Aspiration hazard:** No data available.

---

**SECTION 12: ECOLOGICAL INFORMATION**

**Toxicity:** No data available.

**Persistence and degradability:** No data available.

**Bioaccumulative potential:** No data available.

**Mobility in soil:** No data available.

**Results of PBT& vPvB assessment:** No data available.

**Other adverse effects:** No data available.

---

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste treatment methods:** Dispose of in accordance with municipal, provincial and national regulations.

**Product/packaging disposal:** Recycle where possible.

---

**Safety Data Sheet (SDS) for KAPA T4 DNA Ligase**  
 According to ISO & SANS 11014:2010 & SANS 10234

**SECTION 14: TRANSPORT INFORMATION**

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
<b>UN-Number:</b>	Not required	Not required	Not required
<b>UN Proper shipping name:</b>	Not required	Not required	Not required
<b>Transport hazard class:</b>	Not required	Not required	Not required
<b>Packaging group:</b>	Not required	Not required	Not required
<b>Marine pollutant:</b>	Not required	Not required	Not required
<b>Special precautions for user:</b>	Not required	Not required	Not required
<b>Transport in bulk according to MARPOL 73/78 Annex II and the IBC code:</b>	Not required	Not required	Not required

**SECTION 15: REGULATORY INFORMATION**
**Safety, health and environmental regulations/legislation for the mixture:**

**Relevant information regarding authorization:** Occupational Health and Safety Act 1993 Regulation for Hazardous Chemical Substances.

**Relevant information regarding restrictions:** None known.

**EU regulations:** Regulation EC 1272/2008 [EU-GHS/CLP]

**Other National regulations:** None.

**Chemical Safety Assessment carried out?** No.

**SECTION 16: OTHER INFORMATION**

**Indication of changes:** GHS aligned.

**Relevant classification and H statements (number and full text):** None.

**Training instructions:** Use as instructed.

**Further information:** This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

**Notice to readers:** Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees.

This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.