

**KAPA2G Fast HotStart
ReadyMix PCR Kits**

Prepared in accordance with EU directive 91/155/EEC. Revision date: 2011-02-11

IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING
Product details: Engineered DNA polymerase premixed with PCR reagents

Trade name: KAPA2G Fast HotStart ReadyMix PCR Kits

Catalog number: KK5601, KK5602, KK5603, KK5604, KK5605, KK5607, KK5608, KK5609, KK5610, KK5611, KK5620, KK5621

Application of the substance/preparation:
Laboratory chemicals

Manufacturer/Supplier:

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Or contact the Kapa Biosystems representative in your country

COMPOSITION/INFORMATION ON INGREDIENTS
Chemical characterization

- Description:** Solutions, consisting of the following components:

CAS: 56-81-5 EINECS: 200-289-5	Glycerol	5 – 15 %
CAS: 77-86-1 EINECS: 201-064-4	2-amino-2-(hydroxymethyl)-1,3-propanediol Xi, R 36/37/38	1 – 5%
	Proprietary additive T; R 21-25-36/37/38; S 28-26-45-36/37	1 – 5%

Other components:

- Components not listed here are not dangerous or their concentrations do not exceed the limits specified in the EU directive 1999/45/EC.

Additional information:

- For the wording of the listed risk phrases refer to section "OTHER INFORMATION".

HAZARDS IDENTIFICATION
Hazard description:

- Irritant to eyes, respiratory system and skin.
- Harmful in contact with skin.
- Toxic if swallowed.

Information concerning particular hazards for humans and environment:

- The product does not have to be labeled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

- The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

OSHA hazards ratings:

- Health: 2
- Fire: 1
- Reactivity: 0

FIRST AID MEASURES

General information:

- Avoid skin contact, wearing of gloves is recommended. Do not swallow.

After inhalation:

- Supply fresh air. Give artificial respiration if not breathing. Consult a physician in case of complaints.

After skin contact:

- Flush skin with plenty of water. Remove contaminated clothing. Consult a physician in case of complaints.

After eye contact:

- Rinse opened eye for several minutes under running water. Consult a physician if necessary.

After ingestion:

- Rinse mouth with water if person is conscious. Do not induce vomiting unless directed to do so by medical personnel. If symptoms persist consult doctor.

FIRE-FIGHTING MEASURES

Suitable extinguishing agents:

- CO₂, powder or water spray. Fight larger fires with water spray or appropriate foam.

Special risks:

- Emits toxic fumes under fire conditions.

Protective equipment for fire-fighters:

- Wear a breathing apparatus and protective clothing to prevent contact with skin and eyes.

ACCIDENTAL RELEASE MEASURES

Person-related safety precautions:

- Wear respirator, chemical safety goggles, rubber boots and gloves.

Measures for environmental protection:

- Dilute with plenty of water. Do not allow undiluted or large quantities of product to enter sewers/surface or ground water.

Measures for cleaning/collecting:

- Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Additional information:

- None.

HANDLING AND STORAGE

Information for safe handling:

- Keep away from heat. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure.

Information for safe storage:

- No special requirements to be met by storerooms and receptacles.
- No special requirements to be met for storage in one common storage facility.
- No further information about storage conditions provided.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information:

- The lists valid during the making of this MSDS were used as basis.

Ingredients with limit values that require monitoring at the workplace:

- Glycerol: PEL () 15 mg/m³ total dust, 5 mg/m³ respirable fraction
TLV () 10 ppm
- Proprietary additive: WEEL () 250 ppm

General protective and hygienic measures:

- The usual precautionary measures are to be adhered to when handling chemicals.

Respiratory protection:

- Not required for the levels present in this product.

Protection of hands:

- The glove material has to be impermeable and resistant to the product/the substance/the preparation.

Material of gloves:

- Neoprene or nitrile rubber. 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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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.

Eye protection:

- Chemical safety goggles recommended.

PHYSICAL AND CHEMICAL PROPERTIES

General information:

Form: Solution	Boiling point/Boiling range: Undetermined
Colour: Colourless	Flash point: Not applicable
Odour: Some components have an ammonia-like odour	Self-igniting: Product is not self igniting
Melting point/Melting range: Undetermined	Danger of explosion: Product does not present an explosion hazard
Density: Undetermined	pH-value at 20°C: 7.4-8.6
Solubility in / Miscibility with water: Fully miscible	

STABILITY AND REACTIVITY

Thermal decomposition / conditions to be avoided:

- No decomposition if used according to specifications. Avoid strong heating.

Dangerous reactions:

- Avoid reactions with alkalis and oxidizing agents. Incompatible with peroxides.

Dangerous decomposition products:

- Carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen chloride gas

TOXICOLOGICAL INFORMATION

Acute toxicity:

- Skin irritant. Harmful if absorbed through skin. Toxic if swallowed.
- LD50 skin, rat – 537 mg/kg; LD50 oral, mouse – 80 mg/kg; LD50 oral, rat – 50 mg/kg; LD50 intraperitoneal, rat – 10 mg/kg; LD50 intraperitoneal, mouse – 10 mg/kg; LD50 subcutaneous, mouse – 40 mg/kg
- Drowsiness or spasms may occur after swallowing.

Primary irritant effect:

- **on the skin:** Irritant
- **on the eyes:** Irritant

Sensitization:

- No sensitizing effects known.

Additional toxicological information:

- The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version. When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

ECOLOGICAL INFORMATION

General notes:

- Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

DISPOSAL CONSIDERATIONS

Product:

- **Recommendation:** Smaller quantities can be disposed of with household waste.

Uncleaned packaging:

- **Recommendation:** Disposal must be made according to official regulations.

Recommended cleansing agents:

- Water, if necessary together with cleansing agents. Combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber.

TRANSPORT INFORMATION

- This product is Not Hazardous as defined by 49 CFR 172 by the US Department of Transportation.
- This product is not classified as hazardous goods, per the regulations of Transport Canada.
- This product is not classified as dangerous goods, per the rules of the International Air Transport Association (IATA).
- This product is not classified as dangerous goods, per the rules of the International Maritime Organization (IMO).
- This product is not classified by the United Nations Economic Commission for Europe to be dangerous goods (ADR).

REGULATORY INFORMATION

Labeling according to EU guidelines:

- Observe the general safety regulations when handling chemicals. The product is not subject to identification regulations under EU Directives and the *Ordinance on Hazardous Materials* (German GefStoffV).

Special labeling of certain preparations:

- Safety data sheet available for professional user on request.

OTHER INFORMATION

This information is based on our present knowledge and shall be used only as a guide. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. Kapa Biosystems is not held liable for any damage resulting from handling or from contact with the above mentioned products. MSDS has been prepared in accordance with EU directives 67/548/EEC, 91/155/EEC and other EU Community legislation in force.