

Material Safety Data Sheet (MSDS) mi-RL050

1. Identification of substance

- Product details
- Product name : Flash Link DNA Ligation Kit (mi-RL050)
- Supplier : metabion international AG
- Supplier address: metabion international AG, Lena-Christ-Str. 44 ,
82152 Planegg-Martinsried, Germany
- **In case of emergency contact: +49 (6131) 19240**
Poison Information Center Mainz, Germany

2. Composition/Data on components

- Chemical characterization
 - Description: Mixture of the substances listed below with non-hazardous additions.
- Dangerous components: Void

Product Component	Components	Quantity
T4 DNA Ligase Recombinant	T4 DNA Ligase	100 µl
2x Flas Link Ligation Buffer	Tris-HCl, KCl, EDTA	1 ml

3. Hazards identification

- Hazard description: Not applicable.
- Information pertaining to particular dangers for man and environment: Not applicable.
- Classification system:
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- NFPA ratings (scale 0 - 4)
Health = 0
Fire = 0
Reactivity = 0
- WHMIS-ratings (scale 0 - 4)
Health = 0
Fire = 0
Reactivity = 0

4. First aid measures

- General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: Immediately call a doctor.

5. Fire fighting measures

- Suitable extinguishing agents:
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Protective equipment:
Do not inhale explosion gases or combustion gases.

6. Accidental release measures

- Person-related safety precautions: Not required.
- Measures for environmental protection: Do not allow to enter sewers/ surface or ground water.
- Measures for cleaning/collecting: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, and sawdust).
- Additional information: No dangerous substances are released.

7. Handling and storage

- Handling: No special requirements.
- Information for safe handling: Keep receptacles tightly sealed.
- Information about protection against explosions and fires: No special measures required.
- Storage: -20°C
- Requirements to be met by storerooms and receptacles: No special requirements.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: None.
- Class according to regulation on flammable liquids: Void

8. Exposure controls and personal protection

- Additional information about design of technical systems: No further data; see item 7.
- Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- Additional information:
The lists that were valid during the creation were used as basis.
- Personal protective equipment: Not required.
- General protective and hygienic measures: Not required.
The usual precautionary measures for handling chemicals should be followed.
- Breathing equipment: Not required.
- Protection of hands: Protective gloves
- Eye protection: Not required.

9. Physical and chemical properties

- Form: Fluid
- Color: According to product specification
- Odor: Characteristic
- Value/Range Unit Method
- Change in condition : Undetermined.
- Melting point/Melting range: Undetermined.
- Boiling point/Boiling range: Undetermined.
- Flash point: Not applicable.
- Auto igniting: Product is not self-igniting.
- Danger of explosion: None.
- Vapor pressure: at 20 ° C 23 hPa
- Density: at 20 ° C 0.99 g/cm
- Solubility in / Miscibility with Water: Fully miscible.
- pH-value: at 20 ° C 8.0

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
- Dangerous reactions: Reacts with acids, alkalis and oxidizing agents.
- Dangerous products of decomposition: No dangerous decomposition products known.

11 Toxicological information

- Acute toxicity: None
- Primary irritant effect: None
- On the skin: Irritant to skin and mucous membranes.
- On the eye: Irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information: The product is not subject to classification according to internally approved calculation methods for preparations

12. Ecological information

- General notes:

Water hazard class 1 (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.

13. Disposal considerations

- Product:

- Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packagings:

- Recommendation:

Disposal must be made according to official regulations.

- Recommended cleansing agent: Water, if necessary with cleansing agents.

14. Transport information

- DOT regulations:

- Hazard class: -

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

- ADR/RID class: -

- Maritime transport IMDG:

- IMDG Class: -

- Marine pollutant: No

- Air transport ICAO-TI and IATA-DGR:

- ICAO/IATA Class: Not Dangerous

15. Regulations

TSCA (Toxic Substances Control Act): All ingredients are listed.

- Proposition 65

Chemicals known to cause cancer: None of the ingredients is listed.

Chemicals known to cause reproductive toxicity: None of the ingredients is listed.

- Product related hazard information:

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

- National regulations:

- Classification according to VbF: Void

- Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

16. Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.