1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
   – Trade name: *Tth DNA Ligase*
   – Article number: EN13
   – Components: 10x Tth Ligation Buffer, Tth DNA Ligase (5U/ul)

1.2 Relevant identified uses of the substance or mixture and uses advised against: no data available
   – Application of the substance / the preparation: Biochemistry, molecular biology

1.3 Details of the supplier of the safety data sheet
   – Manufacturer/supplier:
     *BLIRT S.A.*
     Trzy Lipy 3/1.38
     80-172 Gdansk
     Poland
     orders@blirt.eu
     Tel. +48 58 739 61 50

1.4 Emergency telephone number:
   +48 58 739 61 50 (Inside normal business hours)
   112
1. Identification of the substance/mixture and of the company/undertaking
   1.1 Product identifier
      – Trade name: **10xTth Ligation Buffer, Tth DNA Ligase (5U/ul)**
   1.2 Relevant identified uses of the substance or mixture and uses advised against: no data available
      – Application of the substance / the preparation: Biochemistry, molecular biology
   1.3 Details of the supplier of the safety data sheet
      – Manufacturer/supplier:
        **BLIRT S.A.**
        Trzy Lipy 3/1.38
        80-172 Gdansk
        Poland
        orders@blirt.eu
        Tel. +48 58 739 61 50
   1.4 Emergency telephone number:
      +48 58 739 61 50 (Inside normal business hours)
      112

2. Hazards identification
   2.1 Classification of the substance or mixture
      – Classification according to Regulation (EC) No 1272/2008
        Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
   2.2 Label elements
      – Labelling according to Regulation (EC) No 1272/2008
        The mixture is not classified and labelled according to the CLP regulation.
        – Hazard pictograms: Not applicable
        – Signal word: Not applicable
        – Hazard-determining components of labelling: Not applicable
        – Hazard statements: Not applicable
        – Precautionary statement(s): Not applicable
   2.3 Other hazards
      Not applicable.
3. Composition/information on ingredients

3.2 Chemical characterization: Mixture
   - Other information: Not significant

4. First aid measures

4.1 Description of first aid measures
   - General information: No special measures required.
   - After inhalation: Supply fresh air.
   - After skin contact: Wash with water. If skin irritation continues, consult a doctor.
   - After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
   - After swallowing: Rinse out mouth. If symptoms persist consult doctor.

4.2 Most important symptoms and effects, both acute and delayed:
   No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed:
   No further relevant information available.

5. Firefighting measures

5.1 Extinguishing media
   - Suitable extinguishing agents: water, CO₂, foam, powder. Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards arising from the substance or mixture
   - In case of fire, the following can be released: No further relevant information available

5.3 Advise for firefighters
   - Protective equipment: Wear self-contained respiratory protective device.
   Additional information
   Dispose of fire debris and contaminated firefighting water in accordance with official regulations.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: Avoid mixture contact.

6.2 Environmental precautions: Do not allow to enter sewers/surface or ground water.

6.3 Methods and material for containment and cleaning up: Pick up mechanically. Clean up affected area. Dispose of the material collected according to regulations.

6.4 Reference to other sections
   See section 7 for information on safe handling.
   See section 8 for information on personal equipment.
   See section 13 for disposal information.
7. Handling and storage

7.1 Precautions for safe handing: No special precautions are necessary if used correctly.

7.2 Conditions for safe storage, including any incompatibilities
   – 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: Keep container sealed.
   – Recommended storage temperature: -20°C
   – Storage class: 10-13

7.3 Specific end use(s): No further relevant information available.

8. Exposure controls/personal protection

8.1 Control parameters
   – Ingredients with limit values that require monitoring at the workplace: Not required.
   – Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls
   – Personal protective equipment:
     • *General protective and hygienic measures*: Keep away from foodstuffs, beverages and feed. Wash hands before breaks and at the end of work.
     • *Respiratory protection*: No further relevant information available.
     • *Protection of hands*:
       Protective gloves – the glove material has to be impermeable and resistant to the product/the substance/the preparation.
       – Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation:
       • *Material of gloves*: the selection of suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
       • *Penetration time of glove material*: The exact break through time has to be observed.
       • *For the permanent contact gloves made of the following materials are suitable*: Nitrile rubber, NBR. Recommended thickness of the material ≥0,11 mm. Value for the permeation: Level ≥480 min.
     • *Eye protection*: Safety glasses.
     • *Body protection*: Protective work clothing. Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.
9. Physical and chemical properties
   9.1 Information on basic physical and chemical properties
      – Appearance:
        Form: Liquid

   9.2 Other information: No further relevant information available.

10. Stability and reactivity
   10.1 Reactivity: No data available.
   10.2 Chemical stability: No data available.
      – Thermal decomposition/conditions to be avoided: No decomposition if used according to specifications.
   10.3 Possibility of hazardous reaction: No dangerous reactions known.
   10.4 Conditions to avoid: No further relevant information available.
   10.5 Incompatible materials: No further relevant information available.
   10.6 Hazardous decomposition product: See chapter 5.

11. Toxicological information
   11.1 Information on toxicological effects
      – Primary irritant effect:
        • On the skin: No data available.
        • On the eye: No data available.
      – Sensitization: No sensitizing effects known.

12. Ecological information
   12.1 Toxicity: No data available.
   12.2 Persistence and degradability: No further relevant information available.
   12.3 Bioaccumulative potential: No further relevant information available.
   12.4 Mobility in soil: No further relevant information available.
   12.5 Results of PBT and vPvB: Not applicable.
   12.6 Other adverse effects: No further relevant information available.

13. Disposal considerations
   13.1 Waste treatment methods
      – Recommendation: Chemicals must be disposed of in compliance with the respective national regulations. Must not be disposed together with household garbage. Do not allow product to reach sewage system.
      – Uncleaned packaging (Recommendation): Disposal must be made according to official regulations.
      – Recommended cleansing agents: Water, if necessary together with cleansing agents.
14. **Transport information**

14.1 UN-Number:
- ADR, ADN, IMDG, IATA: *not dangerous goods/ not applicable*

14.2 UN proper shipping name:
- ADR, ADN, IMDG, IATA: *not dangerous goods/ not applicable*

14.3 Transport hazard class(es):
- ADR, ADN, IMDG, IATA
- Clasa: *not dangerous goods/ not applicable*

14.4 Packing group:
- ADR, IMDG, IATA: *not dangerous goods/ not applicable*

14.5 Environmental hazards:
- Marine pollutant: *No*

14.6 Special precautions for users: *not applicable*

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: *not applicable*
- Transport/additional information: *not dangerous according to the above specifications."
- UN „Model Regulation“: *not applicable*

15. **Regulatory information**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture: *not applicable*

15.2 Chemical safety assessment: *A Chemical Safety Assessment has not been carried out.*

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.*