Useable for:

BA E-4100 Adrenaline Plasma ELISA High Sensitive
BA E-4200 Noradrenaline Plasma ELISA High Sensitive
BA E-4300 Dopamine Plasma ELISA High Sensitive
BA E-4500 2-CAT Plasma ELISA High Sensitive
BA E-4600 3-CAT Plasma ELISA High Sensitive
BA E-5100 Adrenaline Research ELISA™
BA E-5200 Noradrenaline Research ELISA™
BA E-5300 Dopamine Research ELISA™
BA E-5400 2-CAT (A-N) Research ELISA™
BA E-5500 2-CAT (N-D) Research ELISA™
BA E-5600 3-CAT Research ELISA™
BA E-6100 Adrenaline ELISA Fast Track
BA E-6200 Noradrenaline ELISA Fast Track
BA E-6300 Dopamine ELISA Fast Track
BA E-6500 2-CAT ELISA Fast Track
BA E-6600 3-CAT ELISA Fast Track

Single components with dangerous ingredients:

REF: BA R-6612 Acylation Reagent ACYL-REAG

Not listed single components contains no hazardous substances in concentrations to be declared, a labelling is not required.
1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name**: Acylation Reagent
- **Article number**: BA R-6612
- **Application of the substance / the preparation**: laboratory reagent / Immunoassay
  The product is intended for professional use.

2 Hazards identification

- **Classification of the substance or mixture**
  - GHS02 flame H225 Highly flammable liquid and vapour.
  - GHS08 health hazard H360 May damage fertility or the unborn child.
  - GHS07 H319 Causes serious eye irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
  - T; Toxic R61: May cause harm to the unborn child.
  - Xn; Harmful R20/21: Harmful by inhalation and in contact with skin.
  - Xi; Irritant R36: Irritating to eyes.
  - F; Highly flammable R11: Highly flammable.

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

- **Information concerning particular hazards for human and environment**: No special remarkable hazards. Please observe the informations given in this safety data sheet

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

- **Label elements**
- **GHS label elements** The product is classified and labelled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** GHS02, GHS07, GHS08
- **Signal word** Danger
- **Hazard-determining components of labelling**: N,N-dimethylformamide
- **Hazard statements** Highly flammable liquid and vapour. Causes serious eye irritation. May damage fertility or the unborn child.
Precautionary statements
Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use explosion-proof electrical/ventilating/lighting/equipment.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards
Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures Preparation
- Description: Mixture consisting of the following components.

<table>
<thead>
<tr>
<th>Component</th>
<th>Trade name: Acylation Reagent</th>
</tr>
</thead>
<tbody>
<tr>
<td>N,N-dimethylformamide</td>
<td>T Repr. Cat. 2 R61</td>
</tr>
<tr>
<td></td>
<td>Xn R20/21; Xi R36</td>
</tr>
<tr>
<td></td>
<td>H360; H312; H332; H319</td>
</tr>
<tr>
<td></td>
<td>68-12-2</td>
</tr>
</tbody>
</table>

Additional information
For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- Description of first aid measures
- General information
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident
- After inhalation
  Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
  In case of unconsciousness place patient stably in side position for transportation.
- After skin contact
  Generally the product does not irritate the skin.
- After eye contact
  Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing
  If symptoms persist consult doctor.
- Information for doctor
- Most important symptoms and effects, both acute and delayed
  No further relevant information available.
- Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

5 Firefighting measures

- Extinguishing media
- Suitable extinguishing agents CO2, sand, extinguishing powder. Do not use water.
- For safety reasons unsuitable extinguishing agents
  Water.
  Water with full jet.
- Special hazards arising from the substance or mixture
  No further relevant information available.
- Advice for firefighters
- Protective equipment: Mount respiratory protective device.

Trade name: Acylation Reagent
6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
  Prevent seepage into sewage system, workpits and cellars.
  Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
  Absorb with liquid-binding material.
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
  Do not flush with water or aqueous cleansing agents
- **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 disposal information.

7 Handling and storage

- **Handling**
  - **Precautions for safe handling**
    Ensure good ventilation/exhaustion at the workplace.
    Open and handle receptacle with care.
    Prevent formation of aerosols.
  - **Information about fire - and explosion protection:**
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.
    Keep respiratory protective device available.
  - **Conditions for safe storage, including any incompatibilities**
  - **Storage**
    - **Requirements to be met by storerooms and receptacles:**
      Store in a cool location.
    - **Information about storage in one common storage facility:** Not required.
    - **Further information about storage conditions:**
      Keep receptacle tightly sealed.
      Store in cool, dry conditions in well sealed receptacles.
    - **Specific end use(s)**
      No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**
  - **Ingredients 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 valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment**
  - **General protective and hygienic measures**
    Immediately remove all soiled and contaminated clothing
    Wash hands before breaks and at the end of work.
    Store protective clothing separately. Avoid contact with the eyes.
    Avoid contact with the eyes and skin..

Trade name: Acylation Reagent
Material Safety Data Sheet


Version 02
Revision 18.10.2012
Printing date 18.10.2012

- **Respiratory protection:**
  In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

- **Protection of hands:** Protective gloves.
  The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

- **Material of gloves**
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.
The quality of the protective gloves must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**
  Tightly sealed goggles.

- **Body protection:** lab coat

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:** Liquid
    - **Form:** According to product specification
    - **Colour:** characteristic
    - **Odour:** Not determined
    - **Odour threshold:**
    - **pH-value at 20°C:** Not determined
    - **Change in condition**
    - **Melting point/Melting range:** undetermined
    - **Boiling point/Boiling range:** 78°C
    - **Flash point:** 13°C
    - **Flammability (solid, gaseous)** Not applicable
    - **Ignition temperature:** 425°C
    - **Decomposition temperature:** Not determined
    - **Self-igniting:** Product is not self-igniting.
    - **Danger of explosion:** Not determined
    - **Explosion limits (lower, upper):** 2,2 Vol %, 16,0 Vol %
    - **Vapour pressure:** 59 hPa
    - **Density at 20°C:** 0,87 g/cm³
    - **Relative density** Not determined
    - **Vapour density** Not determined

**Trade name: Acylation Reagent**
Material Safety Data Sheet
Version 02
Revision 18.10.2012
Printing date 18.10.2012

· Evaporation rate: Not determined
· Solubility in / Miscibility with Water: Fully miscible
· Segregation coefficient (n-octanol/water): Not determined
· Viscosity:
  - dynamic: Not determined
  - kinematic: Not determined
· Solvent content:
  - Organic solvents: 100%
· Other information: No further relevant information available.

10 Stability and reactivity

· Reactivity
· Chemical stability
  - Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
  - Possibility of hazardous reactions: No dangerous reactions known
· Conditions to avoid: No further relevant information available.
· Incompatible materials: No further relevant information available.
· Hazardous decomposition products: No dangerous decomposition products known

11 Toxicological information

Information on toxicological effects
· Acute toxicity:
· LD/LC50 values relevant for classification:
  68-12-2 N,N-dimethylformamide
  - Oral: LD50 7600 mg/kg (rat)
  - Dermal: LD50 5000 mg/kg (rbt)
  - Inhalative: LC50/4 h 9400 mg/l (mus)
· Primary irritant effect:
  - on the skin: No irritant effect known.
  - on the eye: Irritating effect.
· Sensitization: No sensitizing effects known.
· Additional toxicological information:
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.
  - Harmful
  - Irritant

Trade name: Acylation Reagent


12 Ecological information

- Toxicity
- Acquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- Behaviour in environmental systems:
- Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional 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.
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- Waste treatment methods
- Recommendation
  Must be specially treated adhering to official regulations.
- Uncleaned packaging:
  - Recommendation:
    Dispose of packaging according to applicable local, state, and federal regulations. Packagings that may not be cleansed are to be disposed of in the same manner as the product.

14 Transport information

- UN-Number -
- UN proper shipping name -
- Transport hazard class(es) -
- Packing group -
- IMDG II
- Environmental hazards:
  - Marine pollutant: No
- Special precautions for user
  - Not applicable.
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
  - Not dangerous according to the above specifications. This product is part of a kit. Information in this section refers to the kit as a whole.
- Transport/Additional information
  - ADR 
  - Remarks: No dangerous good in sense of this transport regulation.
  - ADN
  - Remarks: No dangerous good in sense of this transport regulation.
  - IMDG
  - Remarks: No dangerous good in sense of this transport regulation.
  - IATA
  - Remarks: No dangerous good in sense of this transport regulation.

Trade name: Acylation Reagent
15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **GHS label elements** The product is classified and labelled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** GHS02, GHS07, GHS08
- **Signal word** Danger
- **Hazard-determining components of labelling:** N,N-dimethylformamide

**Hazard statements**
- Highly flammable liquid and vapour.
- Causes serious eye irritation.
- May damage fertility or the unborn child.

**Precautionary statements**
- Keep away from heat/sparks/open flames/hot surfaces. No smoking. Use explosion-proof electrical/ventilating/lighting/equipment.
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Store locked up.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

**National regulations**

<table>
<thead>
<tr>
<th>Class</th>
<th>Share in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>NK</td>
<td>50-100</td>
</tr>
</tbody>
</table>

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

- **Relevant phrases**
  - H312 Harmful in contact with skin.
  - H319 Causes serious eye irritation.
  - H332 Harmful if inhaled.
  - H360 May damage fertility or the unborn child.
  - R20/21 Harmful by inhalation and in contact with skin.
  - R36 Irritating to eyes.
  - R61 May cause harm to the unborn child.

- **Department issuing MSDS:** Safety Representative
- **Contact:** LDN
- **Abbreviations and acronyms:**
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent

*Trade name: Acylation Reagent*