

Product Application: laboratory chemicals, research use only (RUO)

Material Safety Data Sheet

Prepared according to EC Directive 91/155 EC Date: 01/08/10

PRODUCT NAME	CATALOGUE NUMBERS	COMPONENTS
100 mM dNTP Set	NUS010S	1. 100 mM dATP Solution
	NUS0101	2. 100 mM dCTP Solution
	NUS0105	3. 100 mM dGTP Solution
	NUS01XX	4. 100 mM dTTP Solution
	X- bulk volumes	

I. COMPANY MANUFACTURER/SUPPLIER AND CONTACT IN CASE OF EMERGENCY

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 Nelkenstrasse 5
 76703 Kraichtal
 Germany
 T: +49 7250 33 13 401
 F: +49 7250 33 11 413
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Call 24 hours: Emergency 112 || Detoxification +49 (0)30 30686 700

II. HAZARDS IDENTIFICATION

Component: 1. 100 mM dATP Solution

Classification according to Regulation (EC) No 1272/2008: The product is not classified according to the CLP regulation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC: Void

Information concerning particular hazards for human and environment: The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system: The classification was made according to the latest editions of the EU lists, and expanded upon from company and literature data.

Labelling 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 (GefStoffV).

Safety phrases: Not applicable.

Other hazards: Results of PBT and vPvB assessment

PBT: Not applicable. **vPvB:** Not applicable.

III. COMPOSITION/INGREDIENT INFORMATION

Chemical characterization: Mixtures

Dangerous components:

- None

Additional information: Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29 CFR 1910.1200.

IV. FIRST AID MEASURES

General information: No special measures required.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Generally the product does not irritate the skin.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: Induce vomiting and call for medical help.

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.

Product Application: laboratory chemicals, research use only (RUO)**V. FIREFIGHTING MEASURES****Suitable extinguishing agents:** CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**Special hazards arising from the substance or mixture:** No further relevant information available.**Protective equipment:** No special measures required.**VI. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures:** Not required.**Environmental precautions:** Dilute with plenty of water. Do not allow to enter sewers/ surface or ground water.**Methods and material for containment and cleaning up:** Absorb with liquid - binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to Section XIII.**Reference to other sections:**

See Section VII for information on safe handling.

See Section VIII for information on personal protection equipment.

See Section XIII for disposal information.

VII. HANDLING/STORAGE**Precautions for safe handling:** No special measures required.**Information about protection against explosions and fires:** No special measures required.**Conditions for safe storage, including any incompatibilities:** No special conditions.**Storage 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.**Specific end use(s):** No further relevant information available**VIII. EXPOSURE CONTROLS AND PERSONAL PROTECTION****Additional information about design of technical systems:** No further data.**Control parameters:****Components with limit values that require monitoring at the workplace:** None**Additional information:** The lists that were valid during the creation were used as basis.**Exposure controls****Personal protective equipment****General protective and hygienic measures:** The usual precautionary measures should be adhered to when handling chemicals.**Breathing equipment:** Not required.**Protection of hands:** Protective gloves.

Material of gloves: Synthetic gloves.

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: Safety glasses

Product Application: laboratory chemicals, research use only (RUO)**IX. PHYSICAL AND CHEMICAL PROPERTIES**

Form: Solution
Colour: Colourless
Odour: Odourless. **Odour threshold:** Not determined.
pH-value: pH8,5 at 4°C.
Melting point/Melting range: undetermined
Boiling point/Boiling range: 100°C
Flash point: Not applicable.
Flammability (solid, gaseous): Not applicable.
Ignition temperature: Not determined.
Decomposition temperature: Not determined.
Self-igniting: Product is not self igniting.
Danger of explosion: Product does not present an explosion hazard.
Explosion limits: Not determined
Vapour pressure at 20°C: 23 hPa
Density: Not determined
Relative density: Not determined.
Vapour density: Not determined.
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: Water
Other information: No further relevant information available.

X. STABILITY AND REACTIVITY

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

XI. TOXICOLOGICAL INFORMATION

Acute toxicity: LD/LC50 values that are relevant for classification: No special data available.
Primary irritant effect:
On the skin: No effects known.
On the eye: No effects known.
Sensitization: No effects known.
Potential health effects
Inhalation: No effects known.
Ingestion: No 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 according to our experience and the information provided to us.

Product Application: laboratory chemicals, research use only (RUO)**XII. ECOLOGICAL INFORMATION****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.**XIII. DISPOSAL CONSIDERATIONS****Waste treatment methods****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**XIV. TRANSPORT INFORMATION****Maritime transport IMDG****Marine pollutant:** No**Special precautions for user:** Not applicable.**Transport/Additional information:** Not dangerous according to the above specifications.**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.**XV. REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations:** ·**Technical instructions (air):** Class Share in % NK 10-20**Water hazard class:** No hazard.**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**XVI. OTHER INFORMATION**

MSDS has been prepared in accordance with EC Directive 91/155 EC Date: 01/08/10. We believe the information herein is correct as of the date hereof but we do not provide a warranty of any kind. The purchaser of highQu product is responsible himself for ensuring that, where applicable, existing laws and guidelines are observed.

highQu GmbH is not liable for any damage resulting from improper handling or from contact with the products. Special permission has been granted in accordance with EU Directive 88/379, Article 9, which permit small packages of up to 125 ml or containing materials that are harmful to health or irritant to be unlabeled with the hazard identification information given in the safety data sheet.

Product Application: laboratory chemicals, research use only (RUO)

Material Safety Data Sheet

Prepared according to EC Directive 91/155 EC Date: 01/08/10

PRODUCT NAME	CATALOGUE NUMBERS	COMPONENTS
100 mM dNTP Set	NUS010S	1. 100 mM dATP Solution
	NUS0101	2. 100 mM dCTP Solution
	NUS0105	3. 100 mM dGTP Solution
	NUS01XX	2. 100 mM dTTP Solution
	X- bulk volumes	

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II. HAZARDS IDENTIFICATION

Component: 2. 100 mM dCTP Solution

Classification according to Regulation (EC) No 1272/2008: The product is not classified according to the CLP regulation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC: Void

Information concerning particular hazards for human and environment: The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system: The classification was made according to the latest editions of the EU lists, and expanded upon from company and literature data.

Labelling 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 (GefStoffV).

Safety phrases: Not applicable.

Other hazards: Results of PBT and vPvB assessment

PBT: Not applicable. **vPvB:** Not applicable.

III. COMPOSITION/INGREDIENT INFORMATION

Chemical characterization: Mixtures

Dangerous components:

- None

Additional information: Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29 CFR 1910.1200.

IV. FIRST AID MEASURES

General information: No special measures required.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Generally the product does not irritate the skin.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: Induce vomiting and call for medical help.

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.

Product Application: laboratory chemicals, research use only (RUO)**V. FIREFIGHTING MEASURES****Suitable extinguishing agents:** CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**Special hazards arising from the substance or mixture:** No further relevant information available.**Protective equipment:** No special measures required.**VI. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures:** Not required.**Environmental precautions:** Dilute with plenty of water. Do not allow to enter sewers/ surface or ground water.**Methods and material for containment and cleaning up:** Absorb with liquid - binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to Section XIII.**Reference to other sections:**

See Section VII for information on safe handling.

See Section VIII for information on personal protection equipment.

See Section XIII for disposal information.

VII. HANDLING/STORAGE**Precautions for safe handling:** No special measures required.**Information about protection against explosions and fires:** No special measures required.**Conditions for safe storage, including any incompatibilities:** No special conditions.**Storage 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.**Specific end use(s):** No further relevant information available**VIII. EXPOSURE CONTROLS AND PERSONAL PROTECTION****Additional information about design of technical systems:** No further data.**Control parameters:****Components with limit values that require monitoring at the workplace:** None**Additional information:** The lists that were valid during the creation were used as basis.**Exposure controls****Personal protective equipment****General protective and hygienic measures:** The usual precautionary measures should be adhered to when handling chemicals.**Breathing equipment:** Not required.**Protection of hands:** Protective gloves.

Material of gloves: Synthetic gloves.

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: Safety glasses

Product Application: laboratory chemicals, research use only (RUO)**IX. PHYSICAL AND CHEMICAL PROPERTIES**

Form: Solution
Colour: Colourless
Odour: Odourless. **Odour threshold:** Not determined.
pH-value: pH8,5 at 4°C.
Melting point/Melting range: undetermined
Boiling point/Boiling range: 100°C
Flash point: Not applicable.
Flammability (solid, gaseous): Not applicable.
Ignition temperature: Not determined.
Decomposition temperature: Not determined.
Self-igniting: Product is not self igniting.
Danger of explosion: Product does not present an explosion hazard.
Explosion limits: Not determined
Vapour pressure at 20°C: 23 hPa
Density: Not determined
Relative density: Not determined.
Vapour density: Not determined.
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: Water
Other information: No further relevant information available.

X. STABILITY AND REACTIVITY

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

XI. TOXICOLOGICAL INFORMATION

Acute toxicity: LD/LC50 values that are relevant for classification: No special data available.
Primary irritant effect:
On the skin: No effects known.
On the eye: No effects known.
Sensitization: No effects known.
Potential health effects
Inhalation: No effects known.
Ingestion: No 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 according to our experience and the information provided to us.

Product Application: laboratory chemicals, research use only (RUO)**XII. ECOLOGICAL INFORMATION****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.**XIII. DISPOSAL CONSIDERATIONS****Waste treatment methods****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**XIV. TRANSPORT INFORMATION****Maritime transport IMDG****Marine pollutant:** No**Special precautions for user:** Not applicable.**Transport/Additional information:** Not dangerous according to the above specifications.**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.**XV. REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations:** ·**Technical instructions (air):** Class Share in % NK 10-20**Water hazard class:** No hazard.**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**XVI. OTHER INFORMATION**

MSDS has been prepared in accordance with EC Directive 91/155 EC Date: 01/08/10. We believe the information herein is correct as of the date hereof but we do not provide a warranty of any kind. The purchaser of highQu product is responsible himself for ensuring that, where applicable, existing laws and guidelines are observed.

highQu GmbH is not liable for any damage resulting from improper handling or from contact with the products. Special permission has been granted in accordance with EU Directive 88/379, Article 9, which permit small packages of up to 125 ml or containing materials that are harmful to health or irritant to be unlabeled with the hazard identification information given in the safety data sheet.

Product Application: laboratory chemicals, research use only (RUO)

Material Safety Data Sheet

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PRODUCT NAME	CATALOGUE NUMBERS	COMPONENTS
100 mM dNTP Set	NUS010S	1. 100 mM dATP Solution
	NUS0101	2. 100 mM dCTP Solution
	NUS0105	3. 100 mM dGTP Solution
	NUS01XX	4. 100 mM dTTP Solution
	X- bulk volumes	

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II. HAZARDS IDENTIFICATION

Component: 3. 100 mM dGTP Solution

Classification according to Regulation (EC) No 1272/2008: The product is not classified according to the CLP regulation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC: Void

Information concerning particular hazards for human and environment: The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system: The classification was made according to the latest editions of the EU lists, and expanded upon from company and literature data.

Labelling 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 (GefStoffV).

Safety phrases: Not applicable.

Other hazards: Results of PBT and vPvB assessment

PBT: Not applicable. **vPvB:** Not applicable.

III. COMPOSITION/INGREDIENT INFORMATION

Chemical characterization: Mixtures

Dangerous components:

- None

Additional information: Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29 CFR 1910.1200.

IV. FIRST AID MEASURES

General information: No special measures required.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Generally the product does not irritate the skin.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: Induce vomiting and call for medical help.

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.

Product Application: laboratory chemicals, research use only (RUO)**V. FIREFIGHTING MEASURES****Suitable extinguishing agents:** CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**Special hazards arising from the substance or mixture:** No further relevant information available.**Protective equipment:** No special measures required.**VI. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures:** Not required.**Environmental precautions:** Dilute with plenty of water. Do not allow to enter sewers/ surface or ground water.**Methods and material for containment and cleaning up:** Absorb with liquid - binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to Section XIII.**Reference to other sections:**

See Section VII for information on safe handling.

See Section VIII for information on personal protection equipment.

See Section XIII for disposal information.

VII. HANDLING/STORAGE**Precautions for safe handling:** No special measures required.**Information about protection against explosions and fires:** No special measures required.**Conditions for safe storage, including any incompatibilities:** No special conditions.**Storage 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.**Specific end use(s):** No further relevant information available**VIII. EXPOSURE CONTROLS AND PERSONAL PROTECTION****Additional information about design of technical systems:** No further data.**Control parameters:****Components with limit values that require monitoring at the workplace:** None**Additional information:** The lists that were valid during the creation were used as basis.**Exposure controls****Personal protective equipment****General protective and hygienic measures:** The usual precautionary measures should be adhered to when handling chemicals.**Breathing equipment:** Not required.**Protection of hands:** Protective gloves.

Material of gloves: Synthetic gloves.

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: Safety glasses

Product Application: laboratory chemicals, research use only (RUO)**IX. PHYSICAL AND CHEMICAL PROPERTIES****Form:** Solution**Colour:** Colourless**Odour:** Odourless. **Odour threshold:** Not determined.**pH-value:** pH8,5 at 4°C.**Melting point/Melting range:** undetermined**Boiling point/Boiling range:** 100°C**Flash point:** Not applicable.**Flammability (solid, gaseous):** Not applicable.**Ignition temperature:** Not determined.**Decomposition temperature:** Not determined.**Self-igniting:** Product is not self igniting.**Danger of explosion:** Product does not present an explosion hazard.**Explosion limits:** Not determined**Vapour pressure at 20°C:** 23 hPa**Density:** Not determined**Relative density:** Not determined.**Vapour density:** Not determined.**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:** Water**Other information:** No further relevant information available.**X. STABILITY AND REACTIVITY****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**XI. TOXICOLOGICAL INFORMATION****Acute toxicity: LD/LC50 values that are relevant for classification:** No special data available.**Primary irritant effect:****On the skin:** No effects known.**On the eye:** No effects known.**Sensitization:** No effects known.**Potential health effects****Inhalation:** No effects known.**Ingestion:** No 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 according to our experience and the information provided to us.

Product Application: laboratory chemicals, research use only (RUO)**XII. ECOLOGICAL INFORMATION****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.**XIII. DISPOSAL CONSIDERATIONS****Waste treatment methods****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**XIV. TRANSPORT INFORMATION****Maritime transport IMDG****Marine pollutant:** No**Special precautions for user:** Not applicable.**Transport/Additional information:** Not dangerous according to the above specifications.**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.**XV. REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations:** ·**Technical instructions (air):** Class Share in % NK 10-20**Water hazard class:** No hazard.**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**XVI. OTHER INFORMATION**

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PRODUCT NAME	CATALOGUE NUMBERS	COMPONENTS
100 mM dNTP Set	NUS010S	1. 100 mM dATP Solution
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	NUS0105	3. 100 mM dGTP Solution
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	X- bulk volumes	

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II. HAZARDS IDENTIFICATION

Component: 4. 100 mM dTTP Solution

Classification according to Regulation (EC) No 1272/2008: The product is not classified according to the CLP regulation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC: Void

Information concerning particular hazards for human and environment: The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system: The classification was made according to the latest editions of the EU lists, and expanded upon from company and literature data.

Labelling 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 (GefStoffV).

Safety phrases: Not applicable.

Other hazards: Results of PBT and vPvB assessment

PBT: Not applicable. **vPvB:** Not applicable.

III. COMPOSITION/INGREDIENT INFORMATION

Chemical characterization: Mixtures

Dangerous components:

- None

Additional information: Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29 CFR 1910.1200.

IV. FIRST AID MEASURES

General information: No special measures required.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Generally the product does not irritate the skin.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: Induce vomiting and call for medical help.

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.

Product Application: laboratory chemicals, research use only (RUO)**V. FIREFIGHTING MEASURES****Suitable extinguishing agents:** CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**Special hazards arising from the substance or mixture:** No further relevant information available.**Protective equipment:** No special measures required.**VI. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures:** Not required.**Environmental precautions:** Dilute with plenty of water. Do not allow to enter sewers/ surface or ground water.**Methods and material for containment and cleaning up:** Absorb with liquid - binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to Section XIII.**Reference to other sections:**

See Section VII for information on safe handling.

See Section VIII for information on personal protection equipment.

See Section XIII for disposal information.

VII. HANDLING/STORAGE**Precautions for safe handling:** No special measures required.**Information about protection against explosions and fires:** No special measures required.**Conditions for safe storage, including any incompatibilities:** No special conditions.**Storage 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.**Specific end use(s):** No further relevant information available**VIII. EXPOSURE CONTROLS AND PERSONAL PROTECTION****Additional information about design of technical systems:** No further data.**Control parameters:****Components with limit values that require monitoring at the workplace:** None**Additional information:** The lists that were valid during the creation were used as basis.**Exposure controls****Personal protective equipment****General protective and hygienic measures:** The usual precautionary measures should be adhered to when handling chemicals.**Breathing equipment:** Not required.**Protection of hands:** Protective gloves.

Material of gloves: Synthetic gloves.

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: Safety glasses

Product Application: laboratory chemicals, research use only (RUO)**IX. PHYSICAL AND CHEMICAL PROPERTIES**

Form: Solution
Colour: Colourless
Odour: Odourless. **Odour threshold:** Not determined.
pH-value: pH8,5 at 4°C.
Melting point/Melting range: undetermined
Boiling point/Boiling range: 100°C
Flash point: Not applicable.
Flammability (solid, gaseous): Not applicable.
Ignition temperature: Not determined.
Decomposition temperature: Not determined.
Self-igniting: Product is not self igniting.
Danger of explosion: Product does not present an explosion hazard.
Explosion limits: Not determined
Vapour pressure at 20°C: 23 hPa
Density: Not determined
Relative density: Not determined.
Vapour density: Not determined.
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: Water
Other information: No further relevant information available.

X. STABILITY AND REACTIVITY

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

XI. TOXICOLOGICAL INFORMATION

Acute toxicity: LD/LC50 values that are relevant for classification: No special data available.
Primary irritant effect:
On the skin: No effects known.
On the eye: No effects known.
Sensitization: No effects known.
Potential health effects
Inhalation: No effects known.
Ingestion: No 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 according to our experience and the information provided to us.

Product Application: laboratory chemicals, research use only (RUO)**XII. ECOLOGICAL INFORMATION****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.**XIII. DISPOSAL CONSIDERATIONS****Waste treatment methods****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**XIV. TRANSPORT INFORMATION****Maritime transport IMDG****Marine pollutant:** No**Special precautions for user:** Not applicable.**Transport/Additional information:** Not dangerous according to the above specifications.**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.**XV. REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations:** ·**Technical instructions (air):** Class Share in % NK 10-20**Water hazard class:** No hazard.**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**XVI. OTHER INFORMATION**

MSDS has been prepared in accordance with EC Directive 91/155 EC Date: 01/08/10. We believe the information herein is correct as of the date hereof but we do not provide a warranty of any kind. The purchaser of highQu product is responsible himself for ensuring that, where applicable, existing laws and guidelines are observed.

highQu GmbH is not liable for any damage resulting from improper handling or from contact with the products. Special permission has been granted in accordance with EU Directive 88/379, Article 9, which permit small packages of up to 125 ml or containing materials that are harmful to health or irritant to be unlabeled with the hazard identification information given in the safety data sheet.