

**SAFETY DATA SHEET** according to  
OSHA HazCom Standard 29 CFR 1910.2100(g), Rev. 2012 and GHS Rev 03

**1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY**

**1.1 Product identifier**

Trade name **K2<sup>®</sup> Transfection System**  
Product number T060-...  
Product description Laboratory chemicals

**1.2 Relevant identified uses of the substance or mixture and uses advised against**  
**General use**

For research use only

**Uses advised against**

Not intended for human or animal diagnostic or therapeutic uses

**1.3 Details of the supplier of the safety data sheet (Manufacturer/Supplier)**

Company name Biontexas Laboratories GmbH  
Street/POB-No. Landsberger Str. 234  
Postal Code/City 80687 München, GERMANY  
Dept. responsible for information  
Telefon 01149 89-32479950                      Telefax 01149 89-32479952  
E-mail contact@biontexas.com  
WWW www.biontexas.com

**1.4 Emergency telephone number**

Centre of detoxification  
USA or Canada +1 800-424-9300

**2. HAZARDS IDENTIFICATION**

**2.1 Classification of the substance or mixture**

Classification according to Globally Harmonized System (GHS)

Not classified as hazardous.

Skin corrosion/irritation

Not classified

Eye damage/irritation

Not classified

**2.2 Label elements**

Classification according to Globally Harmonized System (GHS)

None

**2.2.1 GHS US labeling**

**Signal word**

Not applicable

**Pictogram / Hazard symbol**

Not applicable

Health hazard not hazardous

Physical hazard not hazardous

Environmental hazards not hazardous

**Hazard statements**

None

**Hazard-determining components of labeling**

None

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**Precautionary statements**

→ Chapter 4, 6, 7, 13

**Classification system**

NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

**NFPA/HMIS ratings (scale 0 - 4)**



OSHA Hazard Overview (Criteria according to 29CFR1910.1200)  
 Not applicable

**2.3 Other hazards / Hazards not otherwise classified**

None

Based on present knowledge and when handled correctly, the product poses no danger for humans and the environment.

The usual minimum standards for protective measures in the chemical industry must be observed.

Results of PBT and vPVB assessment → Chapter 12

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

**3.1 Substances**

This product is a mixture.

**3.1.1 Chemical identity and characterisation:**

Name	CAS-No.	GHS classification
K2 Reagent	not applicable	not applicable
K2 Multiplier	not applicable	not applicable

**3.2 Mixtures**

Classification according to Globally Harmonized System (GHS)	not hazardous/no dangerous components
Chemical identity and characterisation	Reagent: synthetic lipids in water
Hazardous ingredients	Multiplier: nucleic acid receptor inhibitors
UN-No.	mixture with harmless/nonhazardous ingredients
	not applicable
	not applicable

**3.3 Additional information**

Ingredients are not hazardous or their concentrations do not exceed the limit specified according to 29 CFR 1910.1200 Hazard Communication Standard (USA) and Regulation 1907/2006/EC and Directive 2001/59/EC (EU).

**4. FIRST AID MEASURES**

**4.1 Description of first aid measures**

**General information**

Remove contaminated clothing immediately. Contaminated clothing should be laundered before reusing. Seek medical attention immediately if symptoms develop.

**Inhalation**

Remove victim to fresh air, if necessary seek medical advice. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

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**Skin contact**

Wash skin with plenty of water thoroughly. Remove contaminated clothing.  
In case of skin reactions, consult a physician.

**Eye contact**

Remove contact lenses. Immediately flush eyes with plenty of flowing water for at least 20 minutes, also under the eyelids. If necessary seek medical advice.

**Swallowing / Ingestion**

Never give anything by mouth to an unconscious person.  
Rinse mouth with water thoroughly. If malaise develops, call a physician.  
Do not induce vomiting without medical advice.

**4.2 Most important symptoms and effects, both acute and delayed**

No further relevant informations available.

**4.3 Indication of any immediate medical attention and special treatment needed**

No information available for special treatment. Treat symptomatically.  
After first aid, get appropriate in-plant, paramedic, or community medical support if exposure symptoms persist.

**4.4 Special precautions/procedures**

None

**4.5 Notes to physician**

Treat symptomatically

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**5. FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

Suitable	Carbon dioxide (CO <sub>2</sub> ), dry-chemical or foam fire extinguisher, water spray
Unsuitable	Water jet, otherwise there is a risk of spread of fire

**5.2 Special hazards arising from the substance or mixture**

Dangerous decomposition is not anticipated, do not breath fumes of fire.

**5.3 Advice for firefighters**

Wear self-contained breathing apparatus and protective suit.  
Use fine water spray to cool endangered containers (from a safe distance).  
Suppress gases/vapours/mists with water spray jet.  
Pay attention to backdraft.

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**6. ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment / personal protection measures.  
Keep unprotected persons away / evacuate personnel to safe areas.  
Ensure adequate ventilation.

**6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so.  
Prevent product from entering drains/surface water/groundwater.  
Additional special actions to limit damages are not necessary.

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**6.3 Methods and material for containment and cleaning up**

Dilute spilled liquids with plenty of water and adsorb. Sweep or vacuum (if powder) or soak up with inert absorbent material (if liquid), then replace into a suitable clean, dry, closed container and label for disposal.

Never return spills in original containers for reuse.

**6.4 Reference to other sections**

Information on safe handling	→ Chapter 7
Information on personal protection equipment	→ Chapter 8
Information for disposal	→ Chapter 13

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**7. HANDLING AND STORAGE**

**7.1 Precautions for safe handling**

Handling according to Guidelines for Laboratories.

**Advices on safe handling**

Usual precautions when handling chemicals → Chapter 8.

Handle with care and avoid unnecessary, prolonged or repeated exposure. Avoid inhalation. Avoid contact with eyes, skin and clothing. Use protective equipment to minimize exposure.

**Precautions against fire and explosion**

Autoignition does not occur. no special precautions are necessary

**Measures to prevent aerosol and dust generation**

No special precautions are necessary.

**Measures to protect the environment**

No special precautions are necessary.

**General Hygiene measures**

No special precautions are necessary.

**7.2 Conditions for safe storage, including any incompatibilities**

**Storage conditions**

This item is supplied uncooled and should be stored at **35,6°F and 46,4°F** (2°C - 8°C) immediately after receipt. Keep container tightly closed. Use original container.

**Requirements for storerooms and containers/hints on joint storage**

There is no restriction and/or requirements for storage with other materials.

**Storage class/storage in one common storage facility**

10-13 Other liquids and solids

**7.3 Specific end uses(s)**

Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific application.

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**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**8.1 Control parameter**

None

**8.1.1 Occupational exposure limit / biological limit**

The product does not contain any relevant quantities of materials with critical value that have to be monitored.

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**8.1.2 Control Banding (e.g. ILO, OSHA)**

None

**8.2 Exposure controls**

Exposure limitation and controlling are workplace related and must be regulated by the user.

**8.2.1 Appropriate technical safety devices**

Technical measures and appropriate working operations are just as important as the use of personal protective equipment. Provide good ventilation and/or an exhaust system in the work area. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

**8.2.2 Personal protective equipment**

Personal protective equipment should be selected specifically for the workplace.

**Eye / Face protection**

Tightly sealed goggles. Ensure that an eyewash station is proximal to the workstation.

**Skin / Body protection**

Wear protective clothes. Ensure that safety showers are proximal to the workstation.

**Hand protection**

Protective gloves - the material has to be impermeable and resistant to the product.

Break through time, permeation and degradation has to be found out by the manufacturer of the protective gloves and has to be observed.

**Breathing protection**

Not required

**General protection and hygiene measures**

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

Remove contaminated clothing immediately and wash it before re-use.

After contact clean skin with soap and water or use appropriate detergent.

Wash hands before breaks and after work.

Keep out of reach of children.

Keep away from food, drink and animal feed.

Do not eat, drink or smoke during work/in work areas.

**8.2.3 Environmental exposure controls**

Information on environmental exposure → Chapter 6, 7 und 12

**8.3 Engineering measures**

Always provide fresh air.

Ensure that eyewash stations and safety showers are close to the workstation location.

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**9. PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

Appearance/physical state	liquid
Colour/Odour	colorless/mild characteristic odour
pH value	no data available
Evaporation rate	no data available
Melting point/range	no data available
Boiling point/range	at ~ 212°F (100°C)
Flash point	no data available
Flammability (solid, gaseous)	no data available
Ignition temperature (solid/gaseous)	no data available
Autoignition temperature	no data available
Oxidising properties	no data available

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Vapour pressure	no data available
Vapour density	no data available
Relative density	no data available
Bulk density	no data available
Water solubility 68°F (20°C) in g/l	completely
Partition coefficient n-Octanol/Wasser	no data available
Viscosity, kinematic	no data available
Viscosity, dynamic	no data available
Dust explosion hazard	no data available
Explosion properties	no data available
Explosion limits (lower/upper)	no data available
Substance groups relevant properties	no data available
Surface tension	no data available
Solvent content (organic/water)	no data available
Solids content	none
Decomposition	no data available

**9.2 Other information**

No further relevant information available.

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**10. STABILITY AND REACTIVITY**

**10.1 Reactivity**

No data available

**10.2 Chemical stability**

Product is stable under normal storage conditions and if it used according to specifications.

**10.3 Possibility of hazardous reactions**

No dangerous reactions known under conditions of normal use, handling and storage.

**10.4 Conditions to avoid**

No dangerous reactions known under conditions of normal use, handling and storage.

**10.5 Incompatible materials**

Unknown

**10.6 Thermal decomposition products**

No decomposition known if used according to specifications.

**10.7 Hazardous decomposition products**

No dangerous decomposition products known.

**10.8 Polymerisation**

Hazardous polymerisation does not occur.

**10.9 Incompatible materials**

No further relevant information available.

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**11. TOXICOLOGICAL INFORMATION**

**11.1 Information to toxicological effects**

Acute toxicity (LD <sub>50</sub> /LC <sub>50</sub> )	unknown
Eye irritation	may cause irritation/allergic sensitization
Skin irritation	may cause irritation/allergic sensitization
Aspiration	may cause irritation/allergic sensitization
Ingestion	may cause irritation/allergic sensitization
Germ cell mutagenicity	unknown
Mutagenic effects/Reproductive toxicity	unknown
Carcinogenicity	unknown
EPA	none of the ingredients are listed
TLV (established by ACGIH)	none of the ingredients are listed
NIOSH	none of the ingredients are listed
NTP	none of the ingredients are listed
OSHA	none of the ingredients are listed
IARC	not classified
Sensitisation	unknown
Target organ effects (single or repeated exposure)	no known effects under normal use conditions
Chronic effects from short/long-term exposure	no information available
Numerical measures of toxicity	no information available
Assessment of other acute effects	no information available

**12. ECOLOGICAL INFORMATION**

**12.1 Toxicity / Ecotoxicity**

No effects or hazards known.

**12.2 Aquatic toxicity**

No further relevant information available.

**12.3 Persistence and degradability**

No effects or hazards known.

**12.4 Bioaccumulative potential**

No effects or hazards known.

**12.5 Mobility in soil**

No effects or hazards known.

**12.6 Results of PBT and vPvB assessment**

The substance does not meet the criteria for a classification.

PBT	not applicable
vPvB	not applicable

**12.7 Other adverse effects**

No data available.





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**U.S. State Regulations**

Compliance with applicable agreements, regulations and laws of the respective country.

California Propostion 65 does not contain chemicals listed under  
Proposition 65

**Other relevant regulations, restrictions and prohibition regulations**

None

**Inventory status**

WHMIS hazard class (Canada)	not listed
NDSL/DSL (Canada)	not listed
AICS (Australia)	not listed
ENCS/PACS (Japan)	not listed
IECSC (China)	not listed
KECI (Korea)	not listed
NECI/TCSCA (Taiwan)	not listed
NZIoC (New Zealand)	not listed
PICCS (Phillippines)	not listed

**15.2 Chemical safety assessment**

Not been carried out.

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**16. OTHER INFORMATION****16.1 Issuing institution****Department issuing SDS**

Department of Health, Safety and Environmental Protection

**Contact**

Dr. Roland Klösel

**16.2 Abbreviations and acronyms**

AICS	Australian Inventory of Chemical Substances
ADR	Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service (Division of the American Chemical Society)
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOT	Department of Transportation
(N)DSL	Canadian (Non-)Domestic Substance List
EmS	Emergency Schedule
EPA	Environmental Protection Agency
ENCS	Japanese Existing and New Chemical Substances
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	Intermediate Bulk Container
ICAO	International Civil Aviation Organization
IECSC	Existing Chemical Substances Produced or Imported in China
ILO	International Labour Organization
IMDG	International Maritime Code for Dangerous Goods
IMO	International Maritime Organization
KECI	Korean Existing Chemicals Inventory

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LC <sub>50</sub> / LD <sub>50</sub>	Lethal concentration, 50 percent / Lethal dose, 50 percent
MARPOL	International Convention for the Prevention of Marine Pollution from Ships
MERCOSUR	Mercado Común del Sur
NECI	Taiwan 's National Existing Chemical Inventory
NIOSH	National Institute for Occupational Safety and Health
NZIoC	New Zealand Inventory of Chemicals
NFPA	National Fire Protection Association
NTP	National Toxicology Programm
OSHA	Occupational Safety & Health Adminstration
PACS	Japanese Priority Assessment Chemical Substances
PBT	Persistent, Bioaccumulative, Toxic
PICCS	Philippine Inventory of Chemicals and Chemical Substances
RID	Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations concerning the International Transport of dangerous goods by rail)
SARA	The Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
TCSCA	Toxic Chemical Substances Control Act in Taiwan
UN No.	United Nation Numer
vPvB	Very persistent, very bioaccumulative
WHMIS	Workplace Hazardous Materials Information System

### 16.3 Further information

The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. However, Biontexas does not warrant the accuracy of this information.

All materials and mixtures may present unknown hazards and should be used with caution. When necessary or appropriate, independent opinions regarding the risk of handling or exposure should be obtained from trained professionals.

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