

***in vivo*-jetPEI® Delivery Reagent**

Safety Data Sheet dated 16-01-2015, version B.

In compliance with the requirement of the Regulation (EC) N°1907/2006.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product Identifier

Mixture identification:
Trade name: ***in vivo*-jetPEI®**
Catalog number: 201-10G, 201-50G

1.2. Relevant identified uses of the substance/mixture and uses advised against

Recommended use:
Reagent for the transfer of nucleic acids *in vivo*.
Uses advised against:
For research use only, not for use in human.

1.3. Details of the supplier of the safety data sheet

Company:
POLYPLUS-TRANSFECTION SA
BIOPARC
850, Boulevard Sébastien Brant
67400 ILLKIRCH
FRANCE
Tel: +33 (0)3 90 40 61 80
Fax: +33 (0)3 90 40 61 81

Competent person responsible for the safety data sheet:
support@polyplus-transfection.com

1.4. Emergency telephone number

National Poisons Information Service: + 44 (0)844 892 0111
On-line information database TOXBASE (www.toxbase.org).

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Directive criteria 67/548/CE, 99/45/EC and following amendments thereof:

Properties / Symbols: Xi Irritant.
R Phrases: R36 Irritating to eyes. R38 Irritating to skin.

EC regulation criteria 1272/2008 (CLP):

Eye Irrit. 2, Causes serious eye irritation. Skin Irrit. 2, Causes skin irritation.

Adverse physicochemical, human health and environmental effects: No hazard.

2.2. Label elements

Symbols:



Warning

Hazard statements:

H319 Causes serious eye irritation.
H315 Causes skin irritation.

Precautionary statements:

P264 Wash hands thoroughly after handling.

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P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P332+P313 If skin irritation occurs: Get medical advice/attention.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P362 Take off contaminated clothing and wash before reuse.

Special Provisions:

None.

2.3. Other hazards

vPvB Substances: None - PBT Substances: None.

Other Hazards:

No other hazards.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not Relevant.

3.2. Mixtures

Hazardous components within the meaning of EEC directive 67/548 and CLP regulation and related classification:

1% - 3% Polyethylenimine

CAS: 9002-98-6

Xn,N; R22-51/53

Oral Acute Tox. 4 H302

Aquatic Chronic 2 H411

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. Protect uninjured eye.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

None.

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment: None.

SECTION 5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media:

Water, water spray with additive, multipurpose dry chemicals, CO₂, foams.

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Combustion produces volatile vapours heavier than air (risk of spreading along the ground and distant ignition: backfire).

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5.3. Advice for fire-fighters

Use suitable breathing apparatus.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.
Remove persons to safety.
See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
Retain contaminated washing water and dispose it.
In case of entry into waterways, soil or drains, inform the responsible authorities.
Suitable material for taking up: absorbing material, sand

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13.

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.
Don't use empty container before they have been cleaned.
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
Contaminated clothing should be changed before entering eating areas.
Do not eat or drink while working.
See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: indicated on the packaging and on the product.
Keep away from food, drink and feed.
Incompatible materials:
None in particular.
Instructions as regards storage premises:
Cool and adequately ventilated.

7.3. Specific end use(s)

None in particular.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

None.

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

No special precaution must be adopted for normal use.

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

None.

Environmental exposure controls:

None.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Unless otherwise indicated, tests have been carried out at 20°C and at normal atmospheric pressure (760 mm Hg - 1 atm).

9.1. Information on basic physical and chemical properties

Appearance and colour:	Liquid
Odour:	N.A.
Odour threshold:	N.A.
pH:	2-3
Melting point / freezing point:	N.A.
Initial boiling point and boiling range:	N.A.
Solid/gas flammability:	N.A.
Upper/lower flammability or explosive limits:	N.A.
Vapour density:	N.A.
Flash point:	N.A.
Evaporation rate:	N.A.
Vapour pressure:	N.A.
Relative density:	N.A.
Solubility in water:	Soluble
Lipid solubility:	N.A.
Partition coefficient (n-octanol/water):	N.A.
Auto-ignition temperature:	N.A.
Decomposition temperature:	N.A.
Viscosity:	N.A.
Explosive properties:	N.A.
Oxidizing properties:	N.A.

9.2. Other information

Miscibility:	N.A.
Fat Solubility:	N.A.
Conductivity:	N.A.
Substance Groups relevant properties:	N.A.

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

None in particular.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

There is no toxicological data available on the mixture. Consider the individual concentration of each component to assess toxicological effects resulting from exposure to the mixture.

Since the mixture has not been generally tested to establish its effects on health, the information pertaining to substances set out in section 3 is provided below.

Polyethylenimine - CAS: 9002-98-6

Test: Mutagenesis Negative - Notes: AMES test

Test: LD50 - Route: Oral - Species: Rat 1350 mg/kg

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SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Since no ecotoxicological data about the mixture is available, the concentration of each substance must be considered to assess the ecotoxicological effects resulting from exposure to the mixture.

Polyethylenimine - CAS: 9002-98-6

Test: EC50 Daphnia - Duration h: 48 - mg/l: 4.4

Test: LC50 Fish - Duration h: 96 - mg/l: 3.5

12.2. Persistence and degradability

N.A.

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects

None.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Recover if possible. In so doing, comply with the local and national regulations currently in force.

SECTION 14. TRANSPORT INFORMATION

14.1. UN number

Not classified as dangerous in the meaning of transport regulations.

14.2. UN proper shipping name

N.A.

14.3. Transport hazard class(es)

N.A.

14.4. Packing Group

N.A.

14.5. Environmental hazards

Marine pollutant: No

14.6. Special Precautions for User

N.A.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No.

SECTION 15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Where applicable, refer to the following regulatory provisions:

Directive 98/24/EC (Risks related to chemical agents at work).

Directive 2000/39/EC (Occupational exposure limit values).

Directive 2003/105/CE ('Activities linked to risks of serious accidents') and subsequent amendments.

Regulation (EC) nr 648/2004 (detergents).

Directive 1999/13/EC (VOC directive).

15.2. Chemical Safety Assessment

No.

SECTION 16. OTHER INFORMATION

Full text of phrases referred to in Section 3:

R22 Harmful if swallowed.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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H302 Harmful if swallowed.
H411 Toxic to aquatic life with long lasting effects.

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECHA CHEM (European Chemicals Agency)
eCHEMPORTAL (OECD Global Portal of Information on Chemical Substances)
GESTIS International Limit Values (IFA)
TOXNET (Hazardous Substances Data Bank)
ESIS (European chemical Substances Information System) - European Commission/Joint Research Centre/Institute for Health and Consumer Protection
ACToR (Aggregated Computational Toxicology Resource - EPA's database on chemical toxicity)
CCR DATA (Ecological Categorization Results from the Canadian Domestic Substance List)

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This safety data sheet has been completely updated in compliance with Regulation 453/2010/EU.

This document supersedes any previous version.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS: Chemical Abstracts Service (division of the American Chemical Society).
CLP: Classification, Labeling, Packaging.
EC50: Median effective concentration.
IATA: International Air Transport Association.
IMDG: International Maritime Code for Dangerous Goods.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
LTE: Long-term exposure.
N.A.: Not available
OEL: Occupational exposure limit.
PBT: Persistent, Bioaccumulative and Toxic.
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
STE: Short-term exposure.
vPvB: very Persistent and very Bioaccumulative.

End of the safety data sheet.