

Material Data Safety Sheet/ Safety Data Sheet (MSDS/SDS)

Catalogue Number(s): TR-605-ER2, LipoFluor-ER2™ Ready-to-Dilute™, Endoplasmic Reticulum-Blue Tracing Reagent

MANUFACTURER: EMERGENCY TELEPHONE

NUMBERS:

Biosensis Pty. Ltd. Telephone + 61 8 83527711; (800) 222-1222

51 West Thebarton Road, Thebarton, South Australia, 5031 Email sales@biosensis.com

www.biosensis.com Revision: January 2024

Hazardous Identification:

Dye solution: Mixture: 50 mM Bis[2-(4,6-difluorophenyl)pyridinato-C2,N](picolinato)iridium(III) in DMSO.

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Material Data Safety Sheet/ Safety Data Sheet (MSDS/SDS)

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

1.1 Product identifier; TR-605-ER2 Dye

Product Name Flrpc (F2Irpc)

Synonyms Ir(diFppy)2(pic)

Chemical Name Bis[2-(4,6-difluorophenyl)pyridinato-C2,N](picolato)iridium(III)

Chemical Formula C₂₈H₁₆F₄IrN₃O₂

CAS No. 376367-93-0

EC No.

Index No. Not available.

Not available.

REACH Registration No. Not applicable.

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

Identified Use(s) PC21 Laboratory chemicals, Research and development use only

1.3 Details of the supplier of the safety data sheet

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Emergency Phone # +44 (0) 20 3885 0382 (CHEMTREC)

Other Regions Emergency Phone Number (CHEMTREC)

Europe, Middle East, Africa +44 20 3885 0382

North America +1 703 527 3887

Central America +52 55 8526 4930

South America +55 11 4349 1359

Asia, India, and Oceania +65 3163 8374

SECTION 2: HAZARDS IDENTIFICATION

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2.1 Classification of the substance or mixture

Regulation (EC) No. 1272/2008 (CLP) Skin Irrit. 2: Causes skin irritation

Eye Irrit. 2: Causes serious eye irritation

STOT SE 3: May cause respiratory irritation

2.2 Label elements

According to Regulation (EC) No. 1272/2008 (CLP)

Product Name Flrpc (F2Irpic)

Hazard Pictogram(s) GHS07



Signal Word(s) Warning

Hazard Statement(s) H315: Causes skin irritation

H319: Causes serious eye irritation H335: May cause respiratory irritation

Precautionary Statement(s) P302 + P352: IF ON SKIN: Wash with plenty of 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.

P312: Call a POISON CENTER or doctor if you feel unwell.

P337 + P313: If eye irritation persists: Get medical advice/attention.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

2.4 Additional Information

Not applicable.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Hazardous ingredient(s)	CAS No.	EC No. %	Hazard Statement(s)
Bis[2-(4,6-difluorophenyl)pyridinato-C 2 N](picolinato)iridium(III)	376367-93-0		Not available. <= 3.4% Skin Irrit. 2 H315 Eye Irrit. 2 H319 STOT SE 3 H335

3.2 Mixtures 50 mM in DMSO

SECTION 4: FIRST AID MEASURES

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4.1 Description of first aid measures

General Advice First aiders should ensure they have taken adequate steps to protect themselves from exposure (see Section 8 for recommended personal protection equipment) Show this safety data sheet to the doctor in attendance.

Inhalation Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell.

Skin Contact Rinse skin with water. If skin irritation occurs, get medical advice/attention.

Eye Contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Ingestion Rinse out mouth with water. Get medical advice/attention if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Most important symptoms and effects, both acute and delayed, are included on labelling (Section 2.2) and in Section 11.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing media As appropriate for surrounding fire.

Unsuitable extinguishing media As appropriate for surrounding fire.

5.2 Special hazards arising from the substance or mixture

Carbon oxides Nitrogen oxides (NO_x) Hydrogen fluoride Iridium oxides

5.3 Advice for firefighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

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6.1 Personal precautions, protective equipment and emergency procedures

Follow safe handling advice and personal protective equipment recommendations (as per section 8).
Provide adequate ventilation.

6.2 Environmental precautions

Avoid release to the environment.

6.3 Methods and material for containment and cleaning up

Sweep up spilled substance - avoid making dust. Use vacuum equipment for collecting spilt materials, where practicable. Dispose of contents in accordance with local, state or national legislation.

6.4 Reference to other sections

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

See Also Section 8, 13.

Advice on safe handling Avoid inhalation, ingestion, and contact with skin and eyes. Use only in a well-ventilated area. Wear protective clothing as per section 8.

Hygiene measures Keep away from food and drink. Wash hands after handling, before breaks, and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed.

Storage temperature Ambient.

Storage life Stable under normal conditions.

Incompatible materials None known.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits

No Occupational Exposure Limit assigned.

8.2 Exposure controls

8.2.1. Appropriate engineering controls Ensure adequate ventilation and/or exhaust. A washing facility/water for eye and skin cleaning purposes should be present.

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8.2.2. Personal protection equipment

Eye Protection Wear eye protection with side protection tested and approved under appropriate government standards such as EN166 (EU).

Hand protection Handle with gloves. Gloves must be inspected prior to use and proper glove removal techniques should be used. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Body protection Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Respiratory protection Where risk assessment shows air-purifying respirators are appropriate use a fullface particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls.

Thermal hazards None known.

8.2.3. Environmental Exposure Controls Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical State Solid: Powder.

Colour Yellow.

Odour Not known.

Odour threshold Not known.

Melting point/freezing point 330-335 °C (lit.)

Initial boiling point and boiling range Not known.

Flammability Not known.

Lower and upper explosion limit Not known.

Flash Point Not known.

Auto-ignition temperature (°C) Not known.

Decomposition temperature (°C) Not known.

pH Not known.

Kinematic viscosity Not known.

Solubility(ies) Solubility (Water): Not known. Solubility (Other): Not known.

Partition coefficient: n-octanol/water (log value) Not known.

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Vapour pressure Not known.

Density Not known.

Relative density Not known.

Relative vapour density Not known.

Particle characteristics Not known.

9.2 Other information

None.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity None anticipated.

10.2 Chemical Stability Stable under recommended storage conditions. Not known.

10.3 Possibility of hazardous reactions Not known.

10.4 Conditions to avoid Not known.

10.5 Incompatible materials Not known

10.6 Hazardous decomposition products

In the event of fire: see Section 5

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity - Ingestion No data available.

Acute toxicity - Skin Contact No data available.

Acute toxicity - Inhalation No data available.

Skin corrosion/irritation No data available.

Serious eye damage/irritation No data available.

Skin sensitization data No data available.

Respiratory sensitization data No data available.

Germ cell mutagenicity No data available.

Carcinogenicity No data available.

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Reproductive toxicity No data available.

Lactation No data available.

STOT - single exposure No data available.

STOT - repeated exposure No data available.

Aspiration hazard No data available.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties None known.

11.2.2. Information on other hazards None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity No data available.

Toxicity - Aquatic invertebrates No data available.

Toxicity - Fish No data available.

Toxicity - Algae No data available.

Toxicity - Sediment Compartment Not classified.

Toxicity - Terrestrial Compartment Not classified.

12.2 Persistence and Degradation Not known

12.3 Bioaccumulative potential Not known

12.4 Mobility in soil Not known

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties Not known. Not known

12.7 Other adverse effects Not known. Not known

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods :see below

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13.2 Additional Information

Dispose of contents in accordance with local, state or national legislation. Recycle only completely emptied packaging. Normal disposal is via incineration operated by an accredited disposal contractor. Send to a licensed recycler, reclaimer or incinerator.

Disposal should be in accordance with local, state or national legislation.

SECTION 14: TRANSPORT INFORMATION

IATA/IMO/RID/ADR Not classified as hazardous for transport.

SECTION 15: REGULATORY INFORMATION

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

European Regulations - Authorisations and/or Restrictions On Use

Candidate List of Substances of Very

High Concern for Authorisation Not listed

REACH: ANNEX XIV list of substances subject to authorization Not listed

REACH: Annex XVII Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles Not listed

Community Rolling Action Plan (CoRAP) Not listed

Regulation (EC) N° 850/2004 of the

European Parliament and of the Council on persistent organic pollutants Not listed

Regulation (EC) N° 1005/2009 on

substances that deplete the ozone layer Not listed

Regulation (EU) N° 649/2012 of the European Parliament and of the Council Not listed

concerning the export and import of hazardous chemicals not listed

15.2 Chemical Safety Assessment A REACH chemical safety assessment has not been carried out.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements:

LEGEND

Acronyms ADN : European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road

CAS : Chemical Abstracts Service

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CLP : Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

DNEL : Derived No Effect Level EC : European Community

EINECS : European Inventory of Existing Commercial Chemical Substances IATA : International Air Transport Association

IBC : Intermediate Bulk Container

ICAO : International Civil Aviation Organization IMDG : International Maritime Dangerous Goods LTEL : Long term exposure limit

PBT : Persistent, Bioaccumulative and Toxic PNEC : Predicted No Effect Concentration

REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals

RID : Regulations concerning the International Carriage of Dangerous Goods by Rail STEL : Short term exposure limit

STOT : Specific Target Organ Toxicity UN : United Nations

vPvB : very Persistent and very Bioaccumulative

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SECTION 16: OTHER INFORMATION:

The above information is believed to be correct but does not purport to be all inclusive and should be used only as a guide for experienced personnel. Biosensis shall not be held liable for any damage resulting from the handling or from contact with the above product.

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DMSO

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers: TR-605-ER2 buffer

Product name : Dimethyl sulfoxide

Product Number : D2438

Brand : Sigma

CAS-No. : 67-68-5

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

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc. 3050 SPRUCE ST

ST. LOUIS MO 63103 UNITED STATES

Telephone : +1 314 771-5765

Fax: +1 800 325-5052

1.4 Emergency telephone

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24

Hours/day; 7 Days/week

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 4), H227

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram none

Signal Word Warning Hazard statement(s)

H227 Combustible liquid.

Precautionary statement(s)

P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.

P280 Wear protective gloves/ eye protection/ face protection.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

P403 + P235 Store in a well-ventilated place. Keep cool.

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P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Rapidly absorbed through skin.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : DMSO

Methyl sulfoxide

Formula : C₂H₆OS

Molecular weight : 78.13 g/mol

CAS-No. : 67-68-5

EC-No. : 200-664-3

Component	Classification	Concentration
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dimethyl sulphoxide		
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Flam. Liq. 4; H227	<= 100 %
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For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures If inhaled

After inhalation: fresh air.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media Suitable extinguishing media

Water Foam Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

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5.2 Special hazards arising from the substance or mixture

Carbon oxides Sulfur oxides Combustible.

Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

5.4 Further information

Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Change contaminated clothing. Wash hands after working with substance. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities Storage conditions

Tightly closed.

Hygroscopic. Store under inert gas.

Storage class

Storage class (TRGS 510): 10: Combustible liquids

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7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
dimethyl sulphoxide Exposure Levels (WEEL)	67-68-5	TWA	250 ppm	USA. Workplace Environmental

8.2 Exposure controls

Appropriate engineering controls

Change contaminated clothing. Wash hands after working with substance.

Personal protective equipment Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: Chloroprene

Minimum layer thickness: 0.65 mm Break through time: 480 min Material tested:KCL 720 Camapren®

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please

contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact Material: Latex gloves

Minimum layer thickness: 0.6 mm Break through time: 240 min

Material tested:Lapren® (KCL 706 / Aldrich Z677558, Size M)

Respiratory protection

Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

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required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance Form: clear, liquid Color: clear

b) Odor odorless

c) Odor Threshold No data available

d) pH Not applicable

e) Melting

point/freezing point

f) Initial boiling point and boiling range

Melting point/range: 16 - 19 °C (61 - 66 °F) - lit.

189 °C 372 °F - lit.

g) Flash point 87 °C (189 °F) - closed cup - ASTM D 93

h) Evaporation rate No data available

i) Flammability (solid, gas)

j) Upper/lower flammability or explosive limits No data available

Upper explosion limit: 28.5 %(V) Lower explosion limit: 2.6 %(V)

k) Vapor pressure 0.55 hPa at 20 °C (68 °F)

l) Vapor density 2.70 - (Air = 1.0)

m) Density 1.1 g/cm³ - lit. Relative density No data available

n) Water solubility completely miscible

o) Partition coefficient: n-octanol/water

p) Autoignition temperature

q) Decomposition temperature

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log Pow: -1.35 at 20 °C (68 °F) - Bioaccumulation is not expected.

300 - 302 °C (572 - 576 °F) at 1,013 hPa > 190 °C (> 374 °F) –

r) Viscosity No data available

s) Explosive properties No data available

t) Oxidizing properties none

9.2 Other safety information

Surface tension 43.5 mN/m at 20 °C (68 °F)

Dissociation constant 35.1

Relative vapor density 2.70 - (Air = 1.0)

SECTION 10: Stability and reactivity

10.1 Reactivity

Forms explosive mixtures with air on intense heating.

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Risk of explosion with:

acetylidene organic halides perchlorates Acid chlorides

nonmetallic halides iron(III) compounds nitrates

fluorides chlorates hydrides perchloric acid

Oxides of phosphorus Nitric acid

silver compounds silicon compounds silanes

acid halides

Exothermic reaction with:

boron compounds

oxyhalogenic compounds Potassium, sodium

Strong oxidizing agents phosphorus halides strong reducing agents Acid chlorides

Strong acids silver salt nitrogen dioxide

Risk of ignition or formation of inflammable gases or vapours with: potassium permanganate

10.4 Conditions to avoid Exposure to moisture. Strong heating.

10.5 Incompatible materials No data available

10.6 Hazardous decomposition products In the event of fire: see section 5

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SECTION 11: Toxicological information

11.1 Information on toxicological effects Acute toxicity

LD50 Oral - Rat - male and female - 28,300 mg/kg (OECD Test Guideline 401)

LC0 Inhalation - Rat - male and female - 4 h - > 5.33 mg/l - dust/mist
(OECD Test Guideline 403)

LD50 Dermal - Rat - male and female - 40,000 mg/kg Remarks: (ECHA)

Skin corrosion/irritation

Skin - Rabbit

Result: slight irritation - 4 h (OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: slight irritation - 24 h (OECD Test Guideline 405)

Respiratory or skin sensitization Maximization Test - Guinea pig Result: negative
(OECD Test Guideline 406)

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 429)

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471

Result: negative

Test Type: sister chromatid exchange assay Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 479

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration. Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473

Result: negative

Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)

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Species: Rat

Application Route: Intraperitoneal Method: OECD Test Guideline 474 Result: negative

Carcinogenicity

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

Repeated dose toxicity - Rat - male and female - Oral - 18 Months - NOAEL (No observed adverse effect level) - 3,300 mg/kg - LOAEL (Lowest observed adverse effect level) - 9,900 mg/kg

Repeated dose toxicity - Monkey - male and female - Dermal - 18 Months - NOAEL (No observed adverse effect level) - \geq 8,910 mg/kg - LOAEL (Lowest observed adverse effect level) - 990 mg/kg

RTECS: PV6210000

Exposure to large amounts can cause: redness of skin, Itching, burning, sedation, Headache, Nausea, Dizziness

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Eyes - Eye disease - Based on Human Evidence Eyes - Eye disease - Based on Human Evidence

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish static test LC50 - Danio rerio (zebra fish) - $>$ 25,000 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates

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static test EC50 - Daphnia magna (Water flea) - 24,600 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 17,000 mg/l - 72 h

(OECD Test Guideline 201)

Toxicity to bacteria EC50 - activated sludge - 10 - 100 mg/l - 30 min
(ISO 8192)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

Result: 31 % - Not readily biodegradable. (OECD Test Guideline 301D)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

Stability in water - 0.12 - 1.2 h at 30 °C pH 7

Remarks: Hydrolyzes readily.

SECTION 13: Disposal considerations

13.1 Waste treatment methods Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

SECTION 14: Transport information DOT (US)

NA-Number: 1993 Class: NONE Packing group: III

Proper shipping name: Combustible liquid, n.o.s. (dimethyl sulphoxide) Reportable Quantity (RQ):

Poison Inhalation Hazard: No

IMDG

Not dangerous goods

IATA

Not dangerous goods

SECTION 15: Regulatory information SARA 302 Components

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Material Data Safety Sheet/ Safety Data Sheet (MSDS/SDS)

This material does not contain any components with a section 302 EHS TPQ.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Fire Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act. A REACH chemical safety assessment has not been carried out

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements:

LEGEND

Acronyms ADN : European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road

CAS : Chemical Abstracts Service

CLP : Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

DNEL : Derived No Effect Level EC : European Community

EINECS : European Inventory of Existing Commercial Chemical Substances IATA : International Air Transport Association

IBC : Intermediate Bulk Container

ICAO : International Civil Aviation Organization IMDG : International Maritime Dangerous Goods

LTEL : Long term exposure limit

PBT : Persistent, Bioaccumulative and Toxic PNEC : Predicted No Effect Concentration

REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals

RID : Regulations concerning the International Carriage of Dangerous Goods by Rail STEL : Short term exposure limit

STOT : Specific Target Organ Toxicity UN : United Nations

vPvB : very Persistent and very Bioaccumulative

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