

Safety Data Sheet

Canada

Section 1. Identification

Product name

Cy™5 dye (maleimide); part of 'CyDye™ DIGE Fluor Labelling Kit for Scarce Samples and Preparative Gel Labelling'

Catalogue Number

25-8009-84



Component Number

Q15230

Chemical name

Cy5 (maleimide), inner salt

Synonym

3H-Indolium, 2-[(1E,3E,5E)-5-[1-[6-[[2-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)ethyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]-1,3-pentadien-1-yl]-1,3,3-trimethyl-5-sulfo-, inner salt

Product type

Solid.

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

Identified uses

Use in laboratories

Supplier Cytiva
Amersham Place
Little Chalfont
Buckinghamshire
HP7 9NA United Kingdom
+44 0800 515 313

Importer Cytiva Canada
250 Howe Street, Suite 1400-C
Vancouver, British Columbia, Canada, V6C 3S7
1 800 463 5800

In case of emergency

Canada

ChemTrec (US)

1-703-527-3887

Section 2. Hazard identification

Classification of the substance or mixture

ACUTE TOXICITY (oral) - Category 3
RESPIRATORY SENSITIZATION - Category 1
SKIN SENSITIZATION - Category 1

GHS label elements

Hazard pictograms



Signal word

Danger

Hazard statements

Toxic if swallowed.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.

Precautionary statements

Prevention

Wear protective gloves. Wear respiratory protection. Avoid breathing dust. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.



| | |
|-----------------|--|
| Response | IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical attention. |
| Storage | Store locked up. |
| Disposal | Dispose of contents and container in accordance with all local, regional, national and international regulations. |

Section 3. Composition/information on ingredients

| | |
|--------------------------------------|---|
| Substance/mixture | Substance |
| Chemical name | Cy5 (maleimide), inner salt |
| Other means of identification | 3H-Indolium, 2-[(1E,3E,5E)-5-[1-[6-[[2-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)ethyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]-1,3-pentadien-1-yl]-1,3,3-trimethyl-5-sulfo-, inner salt |

CAS number/other identifiers

| | | | |
|-----------------------------|----------------|-------------------|--|
| CAS number | Not available. | | |
| Ingredient name | % (w/w) | CAS number | |
| Cy5 (maleimide), inner salt | 100 | - | |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

| | |
|---------------------|---|
| Eye contact | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs. |
| Inhalation | Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In the event of any complaints or symptoms, avoid further exposure. |
| Skin contact | Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| Ingestion | Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |

Most important symptoms/effects, acute and delayed

Potential acute health effects

| | |
|---------------------|--|
| Eye contact | No known significant effects or critical hazards. |
| Inhalation | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Skin contact | May cause an allergic skin reaction. |
| Ingestion | Toxic if swallowed. |

Over-exposure signs/symptoms

| | |
|--------------------|-------------------|
| Eye contact | No specific data. |
|--------------------|-------------------|



| | |
|---------------------|--|
| Inhalation | Adverse symptoms may include the following: wheezing and breathing difficulties asthma |
| Skin contact | Adverse symptoms may include the following: irritation redness |
| Ingestion | No specific data. |

Indication of immediate medical attention and special treatment needed, if necessary

| | |
|-----------------------------------|---|
| Notes to physician | In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
| Specific treatments | No specific treatment. |
| Protection of first-aiders | No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. |

See toxicological information (Section 11)

Section 5. Fire-fighting measures**Extinguishing media**

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|---|---|
| Suitable extinguishing media | Use an extinguishing agent suitable for the surrounding fire. |
| Unsuitable extinguishing media | None known. |
| Specific hazards arising from the chemical | No specific fire or explosion hazard. |
| Hazardous thermal decomposition products | Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides |
| Special protective actions for fire-fighters | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| Special protective equipment for fire-fighters | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |

Section 6. Accidental release measures**Personal precautions, protective equipment and emergency procedures**

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|------------------------------------|---|
| For non-emergency personnel | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. |
| For emergency responders | If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |
| Environmental precautions | Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |

Methods and materials for containment and cleaning up

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| Small spill | Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. |
| Large spill | Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. |



Section 7. Handling and storage

Precautions for safe handling

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|---|---|
| Protective measures | Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. |
| Advice on general occupational hygiene | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |
| Conditions for safe storage, including any incompatibilities | Do not store above the following temperature: -20°C (-4°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. |

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

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| Appropriate engineering controls | Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. |
| Environmental exposure controls | Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. |

Individual protection measures

| | |
|-------------------------------|--|
| Hygiene measures | Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. |
| Eye/face protection | Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. |
| Skin protection | |
| Hand protection | Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. |
| Body protection | Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| Other skin protection | Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| Respiratory protection | Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. |



Section 9. Physical and chemical properties

Appearance

| | |
|---|---|
| Physical state | Solid. |
| Color | Blue. |
| Odor | Odorless. |
| Odor threshold | Not available. |
| pH | Not available. |
| Melting point | Not available. |
| Boiling point | Not available. |
| Flash point | [Product does not sustain combustion.] |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Non-flammable but will burn on prolonged exposure to flame or high temperature. |
| Lower and upper explosive (flammable) limits | Not available. |
| Vapor pressure | Not available. |
| Vapor density | Not available. |
| Relative density | Not available. |
| Solubility | Soluble in the following materials: cold water and hot water. |
| Partition coefficient: n-octanol/ water | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | Not available. |
| Flow time (ISO 2431) | Not available. |
| Molecular weight | 672.85 |

Section 10. Stability and reactivity

| | |
|---|--|
| Reactivity | No specific test data related to reactivity available for this product or its ingredients. |
| Chemical stability | The product is stable. |
| Possibility of hazardous reactions | Under normal conditions of storage and use, hazardous reactions will not occur. |
| Conditions to avoid | No specific data. |
| Incompatible materials | No specific data. |
| Hazardous decomposition products | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.



Conclusion/Summary

To the best of our knowledge, the toxicological properties of this substance have not been thoroughly investigated.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

| | |
|---------------------|--|
| Eye contact | No known significant effects or critical hazards. |
| Inhalation | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Skin contact | May cause an allergic skin reaction. |
| Ingestion | Toxic if swallowed. |

Symptoms related to the physical, chemical and toxicological characteristics

| | |
|---------------------|--|
| Eye contact | No specific data. |
| Inhalation | Adverse symptoms may include the following: wheezing and breathing difficulties asthma |
| Skin contact | Adverse symptoms may include the following: irritation redness |
| Ingestion | No specific data. |

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

| | |
|------------------------------------|----------------|
| Potential immediate effects | Not available. |
| Potential delayed effects | Not available. |

Long term exposure

| | |
|------------------------------------|----------------|
| Potential immediate effects | Not available. |
| Potential delayed effects | Not available. |

Potential chronic health effects

Not available.

| | |
|------------------------------|---|
| General | Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels. |
| Carcinogenicity | No known significant effects or critical hazards. |
| Mutagenicity | No known significant effects or critical hazards. |
| Teratogenicity | No known significant effects or critical hazards. |
| Developmental effects | No known significant effects or critical hazards. |
| Fertility effects | No known significant effects or critical hazards. |

Numerical measures of toxicity

Acute toxicity estimates



| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|-----------------------------|--------------|----------------|--------------------------|----------------------------|-------------------------------------|
| Cy5 (maleimide), inner salt | 100 | N/A | N/A | N/A | N/A |

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{oc}) Not available.






Other adverse effects No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

| | TDG Classification | DOT Classification | ADR/RID | IMDG | IATA |
|-----------------------------------|--|--|--|--|--|
| UN number | UN2811 | UN2811 | UN2811 | UN2811 | UN2811 |
| UN proper shipping name | Toxic solid, organic, n. o.s. (Cy5 (maleimide), inner salt) | Toxic solid, organic, n. o.s. (Cy5 (maleimide), inner salt) | Toxic solid, organic, n. o.s. (Cy5 (maleimide), inner salt) | Toxic solid, organic, n. o.s. (Cy5 (maleimide), inner salt) | Toxic solid, organic, n. o.s. (Cy5 (maleimide), inner salt) |
| Transport hazard class(es) | 6.1  | 6.1  | 6.1  | 6.1  | 6.1  |
| Packing group | III | III | III | III | III |
| Environmental hazards | No. | No. | No. | No. | No. |
| Additional information | - | - | <u>Tunnel code</u> E | - | - |

Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI This material is not listed.
CEPA Toxic substances This material is not listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Canada Not determined.
Europe Not determined.
United States Not determined.

Section 16. Other information

History

Date of printing 4/29/2020
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Date of previous issue 1/11/2017
Version 8
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Key to abbreviations

ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HPR = Hazardous Products Regulations
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
UN = United Nations

Procedure used to derive the classification

| Classification | Justification |
|--|-----------------|
| ACUTE TOXICITY (oral) - Category 3 | Expert judgment |
| RESPIRATORY SENSITIZATION - Category 1 | Expert judgment |
| SKIN SENSITIZATION - Category 1 | Expert judgment |

References

Not available.



Indicates information that has changed from previously issued version.

Notice to reader

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