

# SAFETY DATA SHEET

New Zealand

## Section 1. Identification

Product name

**Cy™ 5.5 mono-Reactive Dye Pack**

Catalogue Number

PA25501



9 0 P A 2 5 5 0 1

Component Number

Q15408

Chemical name

Cy5.5 (NHS ester)

Other means of identification

1H-Benz[e]indolium, 2-[5-[3-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-1,1-dimethyl-6,8-disulfo-2H-benz[e]indol-2-ylidene]-1,3-pentadien-1-yl]-3-ethyl-1,1-dimethyl-6,8-disulfo-, inner salt, tripotassium salt

Product type

Solid.

Identified uses

Use in laboratories

### Supplier

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

Cytiva New Zealand  
Buddle Findlay, Level 18, Pricewaterhousecooper Tower,  
188 Quay Street,  
Auckland, Auckland, 1010  
New Zealand

Person who prepared the MSDS :

sds\_author@cytiva.com

Emergency telephone number (with hours of operation)

0800 733 893  
(10am - 7pm)

## Section 2. Hazards identification

HSNO Classification

6.1 - ACUTE TOXICITY: ORAL - Category D  
6.1 - ACUTE TOXICITY: SKIN - Category D  
6.1 - ACUTE TOXICITY: INHALATION - Category D  
6.5 - SENSITIZATION - Category A (Respiratory)  
6.5 - SENSITIZATION - Category B (Skin)

This material is classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001 and has been classified according to the Hazardous Substances (Classifications) Regulations 2001.

### GHS label elements

Signal word

Danger

Hazard statements

Harmful if swallowed.  
Harmful in contact with skin.  
Harmful if inhaled.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.

Precautionary statements

Prevention

Wear protective gloves. Wear protective clothing. In case of inadequate ventilation wear respiratory protection. Use only outdoors or in a well-ventilated area. 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 SWALLOWED: Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Storage

Not applicable.



9 5 2 5 0 0 5 4 0 0

**Disposal**

Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Symbol****Other hazards which do not result in classification**

None known.

### Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	Substance
<b>Chemical name</b>	Cy5.5 (NHS ester)
<b>Other means of identification</b>	1H-Benz[e]indolium, 2-[5-[3-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-1,1-dimethyl-6,8-disulfo-2H-benz[e]indol-2-ylidene]-1,3-pentadien-1-yl]-3-ethyl-1,1-dimethyl-6,8-disulfo-, inner salt, tripotassium salt
<b>CAS number/other identifiers</b>	
<b>CAS number</b>	910482-46-1
<b>EC number</b>	Not available.
<b>Product code</b>	PA25501

Ingredient name	%	CAS number
Cy5.5 (NHS ester)	100	910482-46-1

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**

<b>Inhalation</b>	Get medical attention immediately. 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. 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.
<b>Ingestion</b>	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. Get medical attention. 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.
<b>Skin contact</b>	Flush contaminated skin with plenty of 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.
<b>Eye contact</b>	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.

**Most important symptoms/effects, acute and delayed****Potential acute health effects**

<b>Inhalation</b>	Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
<b>Ingestion</b>	Harmful if swallowed.
<b>Skin contact</b>	Harmful in contact with skin. May cause an allergic skin reaction.
<b>Eye contact</b>	No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

<b>Inhalation</b>	Adverse symptoms may include the following: wheezing and breathing difficulties asthma
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<b>Ingestion</b>	No specific data.
<b>Skin</b>	Adverse symptoms may include the following: irritation redness
<b>Eyes</b>	No specific data.

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

<b>Specific treatments</b>	Not available.
<b>Notes to physician</b>	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.
<b>Protection of first-aiders</b>	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. Firefighting measures****Extinguishing media**

<b>Suitable</b>	Use an extinguishing agent suitable for the surrounding fire.
<b>Not suitable</b>	None known.
<b>Specific hazards arising from the chemical</b>	No specific fire or explosion hazard.
<b>Hazardous thermal decomposition products</b>	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides metal oxide/oxides
<b>Hazchem code</b>	Not available.
<b>Special precautions for fire-fighters</b>	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.
<b>Special protective equipment for fire-fighters</b>	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**

<b>Personal precautions, protective equipment and emergency procedures</b>	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 spilt material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
<b>Environmental precautions</b>	Avoid dispersal of spilt 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 material for containment and cleaning up**

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

**Section 7. Handling and storage**

<b>Precautions for safe handling</b>	Put on appropriate personal protective equipment (see Section 8). 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. Persons with a history of skin sensitisation 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.
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**Conditions for safe storage, including any incompatibilities**

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. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

**Control parameters****Occupational exposure limits**

None.

**Appropriate engineering controls**

Use only with adequate ventilation. 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.

**Respiratory protection**

Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**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.

**Eye 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**

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.

## Section 9. Physical and chemical properties

**Appearance**

<b>Physical state</b>	Solid.
<b>Colour</b>	Blue.
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point</b>	Not available.
<b>Boiling point</b>	Not available.
<b>Flash point</b>	[Product does not sustain combustion.]
<b>Burning rate</b>	Not available.
<b>Burning time</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Non-flammable in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts, oxidizing materials, reducing materials, combustible materials, organic materials, metals, acids, alkalis and moisture.
<b>Lower and upper explosive (flammable) limits</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility</b>	Soluble in the following materials: cold water and hot water.
<b>Solubility in water</b>	Not available.



**Partition coefficient: n-octanol/ water** Not available.

**Auto-ignition temperature** Not available.

**Decomposition temperature** Not available.

**SADT** Not available.

**Viscosity** Not available.

**Flow time (ISO 2431)** Not available.

#### **Aerosol product**

**Type of aerosol** Not applicable.

**Heat of combustion** Not available.

**Ignition distance** Not applicable.

**Enclosed space ignition - Time equivalent** Not applicable.

**Enclosed space ignition - Deflagration density** Not applicable.

**Flame height** Not applicable.

**Flame duration** Not applicable.

## **Section 10. Stability and reactivity**

**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 likely routes of exposure**

**Inhalation** Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

**Ingestion** Harmful if swallowed.

**Skin contact** Harmful in contact with skin. May cause an allergic skin reaction.

**Eye contact** No known significant effects or critical hazards.

### **Symptoms related to the physical, chemical and toxicological characteristics**

**Inhalation** Adverse symptoms may include the following:  
wheezing and breathing difficulties  
asthma

**Ingestion** No specific data.

**Skin contact** Adverse symptoms may include the following:  
irritation  
redness

**Eye contact** No specific data.

### **Delayed and immediate effects as well as chronic effects from short and long-term exposure**

#### **Acute toxicity**

Not available.

#### **Irritation/Corrosion**

Not available.

#### **Sensitisation**

Not available.

### **Potential chronic health effects**

**General** No known significant effects or critical hazards.

**Inhalation** Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.



<b>Ingestion</b>	No known significant effects or critical hazards.
<b>Skin contact</b>	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
<b>Eye contact</b>	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	No known significant effects or critical hazards.
<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.

**Chronic toxicity**

Not available.

**Carcinogenicity**

Not available.

**Conclusion/Summary**

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

**Mutagenicity**

Not available.

**Teratogenicity**

Not available.

**Reproductive toxicity**

Not available.

**Specific target organ toxicity**

Not available.

**Aspiration hazard**

Not available.

**Numerical measures of toxicity****Acute toxicity estimates**

Route	ATE value
Oral	500 mg/kg
Dermal	1100 mg/kg
Inhalation (dusts and mists)	1.5 mg/l

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**Section 12. Ecological information****Ecotoxicity** No known significant effects or critical hazards.**Aquatic and terrestrial toxicity**

Not available.

**Persistence/degradability**

Not available.

**Bioaccumulative potential**

Not available.

**Mobility in soil****Soil/water partition coefficient (K<sub>oc</sub>)** 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 minimised 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*
New Zealand Class	Not regulated.	-	-	-
		No.		
IATA Class	Not regulated.	-	-	-
		-		
		No.		
IMDG Class	Not regulated.	-	-	-
		No.		

PG\* : Packing group

### 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

HSNO Approval Number	HSR002596
HSNO Group Standard	Laboratory Chemicals and Reagent Kits
HSNO Classification	6.1 - ACUTE TOXICITY: ORAL - Category D 6.1 - ACUTE TOXICITY: SKIN - Category D 6.1 - ACUTE TOXICITY: INHALATION - Category D 6.5 - SENSITIZATION - Category A (Respiratory) 6.5 - SENSITIZATION - Category B (Skin)

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol (Annexes A, B, C, E)

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

New Zealand	Not determined.
Australia	Not determined.
Europe	Not determined.
United States	Not determined.
Canada inventory	Not determined.
China	Not determined.
Japan	Not determined.
Malaysia	Not determined.



## Section 16. Other information

### History

Date of printing	18 February 2021
Date of issue/ Date of revision	17 February 2021
Date of previous issue	10/2/2019
Version	8

### Key to abbreviations

ADG = Australian Dangerous Goods  
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
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)  
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
UN = United Nations

### References

Not available.

▀ Indicates information that has changed from previously issued version.

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

