

Safety Data Sheet

Precision® Blue Dye SDS

Date of Issue 04th June 2026

Product Components:

1. Blue Dye

ISSUED TO MEET THE REQUIREMENTS OF REGULATION (EC) 1907/2006:
ARTICLE 31

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

| | |
|---|---|
| Component Identifier: 1. Blue Dye | Name: Blue dye for Precision Mastermixes |
| Product Use: To be used in professional laboratories for Real-time PCR applications (Research Use Only) | |
| Manufacturer's Name: Primerdesign Limited | |
| Manufacturer's Address: Skelton House, Lloyd Street North, Manchester Science Park, Manchester, United Kingdom | |
| Postal Code: M15 6SH | Emergency Telephone: +44 (0)161 669 8122 |
| Hours of Operation: 09:00-17:30 UK time | Email: support@primerdesign.co.uk |

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture:

Product definition: Mono-constituent substance

Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]

Acute Tox 4 H302

Acute Tox 4 H312

Acute Tox 4 H332

Resp Sens 1 H334

Skin Sens 1 H317

This product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Labelling

Labelling according to Regulation (EC) No 1272/2008:

Hazard pictograms:



Signal word: Danger

Hazard statements: Harmful if swallowed, in contact with skin or 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. Avoid breathing dust. |
| Response | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician. |
| Storage | Not applicable. |
| Disposal | Dispose of contents and container in accordance with all local, regional, national and international regulation. |
| Supplemental label elements | Not applicable. |

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles
Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings
Not applicable.

Tactile warning of danger
Not applicable.

2.3 Other hazards:

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

| PBT | P | B | T | vPvB | vP | vB |
|-----|-----|-----|----|------|-----|-----|
| No | N/A | N/A | No | N/A | N/A | N/A |

Other hazards which do not result in classification: None known.

SECTION 3: Composition/Information on Ingredients

3.1 Substances Mono-constituent substance

| Components | CAS Number/EC Number | Weight | Classification Regulation (EC) No. 1272/2008 [CLP] | Type |
|---------------------|----------------------|------------|---|------|
| Cy5 (mono-reactive) | 146368-11-8 | 0.1% (w/v) | Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Resp. Sens. 1, H334 Skin Sens. 1, H317 See Section 16 for the full text of the H statements declared above. | [A] |

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

[A] Constituent

[B] Impurity

[C] Stabilising additive

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

SECTION 4: First aid measures

4.1 Description of 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. If necessary, call a poison center or physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| Ingestion | 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. If necessary, call a poison center or physician. 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. |

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.

4.2 Most important symptoms and effects, both acute and delayed

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. |

4.3 Indication of any immediate medical attention and special treatment needed

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.

See toxicological information (section 11)

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

| | |
|--------------------------------|---|
| Suitable extinguishing media | Use an extinguishing agent suitable for the surrounding fire. |
| Unsuitable extinguishing media | None known. |

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture
No specific fire or explosion hazard.

Hazardous combustion products
Decomposition products may include the following materials: carbon dioxide carbon monoxide, nitrogen oxides, sulfur oxides, metal oxide/oxides

5.3 Advice for firefighters

Special precautions 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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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 spilt material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

If specialised 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".

6.2. Environmental precautions:

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).

6.3. Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures Put on appropriate personal protective equipment (see Section 8). 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.

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.

7.2. Conditions for safe storage, including any incompatibilities

Store at temperatures outline on the kit label. Store in accordance with local regulations. Store in original container protected from direct sunlight and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

No exposure limit value known.

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

No DELs available.

PNECs

No PECs available.

8.2. Exposure Controls

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

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 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.

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.

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties:

Appearance:

| | |
|--|--|
| Physical state: | Liquid |
| Colour: | Blue |
| Odour: | Odourless. |
| Odour threshold: | Not available. |
| pH-value: | Not available. |
| Melting point/freezing point: | Not available. |
| Initial boiling point and boiling range: | Not available. |
| Flash point: | [Product does not sustain combustion] |
| Evaporation rate: | Not available. |
| Flammability (solid, gas): | 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. |
| Upper/lower flammability or explosive limits | Not available. |
| Vapour pressure: | Not available. |
| Vapour density: | Not available. |
| Relative density: | Not available. |
| Solubility: | Easily soluble in the following materials: cold water, hot water and methanol. |
| Partition coefficient: n-octanol/water: | Not available. |
| Auto-ignition temperature: | Not available. |
| Decomposition temperature: | Not available. |
| Viscosity: | Not available. |
| Explosive properties: | Not considered to be a product presenting a risk of explosion. |
| Oxidising properties: | Not available. |

9.2 Other information

| | |
|---------------|----------------|
| Burning time: | Not available. |
| Burning rate: | Not available. |

SECTION 10: Stability and Reactivity

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

SECTION 11: Toxicological Information

- 11.1 Information on toxicological effects:

Acute toxicity

Conclusion/Summary

Not available

| Product/Ingredient Name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapours) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|-------------------------|--------------|----------------|--------------------------|-----------------------------|-------------------------------------|
| Cy5 (mono-reactive) | 500 | 1100 | N/A | N/A | 1.5 |

Irritation/Corrosion

Conclusion/Summary

Not available

Sensitisation

Conclusion/Summary

Not available

Mutagenicity

Conclusion/Summary

Not available

Carcinogenicity

Conclusion/Summary

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

Reproductive toxicity

Conclusion/Summary

Not available

Teratogenicity

Conclusion/Summary

Not available

Specific target organ toxicity (single exposure)

Not available

Aspiration hazard

Not available

Information on likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation

Potential acute health effects

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

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.

Conclusion/Summary 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.

Other information

Not available.

SECTION 12: Ecological Information:

12.1 Toxicity:

Conclusion/Summary

Not available.

12.2 Persistence and degradability:

Conclusion/Summary

Not available.

12.3 Bioaccumulative potential:

Not available.

12.4 Mobility in soil:

Soil/water partition coefficient (KOC)

Not available.

Mobility

Not available.

12.5 Results of PBT and vPvB assessment:

| PBT | P | B | T | vPvB | vP | vB |
|-----|-----|-----|----|------|-----|-----|
| No | N/A | N/A | No | N/A | N/A | N/A |

12.6 Other adverse effects:

No known significant effects or critical hazards.

SECTION 13: Disposal Considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal: 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.

Hazardous waste The classification of the product may meet the criteria for a hazardous waste.

Packaging: Disposal must be made according to official regulations.

SECTION 14: Transport Information

| | ADR/RID | AND | IMDG | IATA |
|---------------------------------|----------------|----------------|----------------|----------------|
| 14.1 UN number | Not regulated. | Not regulated. | Not regulated. | Not regulated. |
| 14.2 UN proper shipping name | - | - | - | - |
| 14.3 Transport hazard class(es) | - | - | - | - |
| 14.4 Packing group | - | - | - | - |
| 14.5 Environmental hazards | No. | No. | No. | No. |
| Additional information | - | - | - | - |

14.6 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.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV None of the components are listed.

Substances of very high concern None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

Other EU regulations

Industrial emissions (integrated pollution prevention and control) – Air
Not listed.

Industrial emissions (integrated pollution prevention and control) Water
Not listed.

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals Not listed.

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

Not listed.

Part of the Novacyt Group

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

Europe Not determined.

United States Not determined.

Canada inventory Not determined.

China Not determined.

Japan Not determined.

15.2 Chemical safety assessment Not available.

SECTION 16: Other Information

Abbreviations and acronyms

ATE = Acute Toxicity Estimate

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement

N/A = Not available

PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration

RRN = REACH Registration Number

vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

| Classification | Justification |
|----------------------------|------------------|
| Acute Tox. 4, H302 | Expert judgement |
| Acute Tox. 4, H312 | Expert judgement |
| Acute Tox. 4, H332 | Expert judgement |
| Resp. Sens. 1, H334 | Expert judgement |
| Skin Sens. 1, H317 | Expert judgement |

Full text of abbreviation H statements

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Full text of classifications [CLP/ GHS]

Acute Tox. 4, H302 ACUTE TOXICITY: ORAL - Category 4

Acute Tox. 4, H312 ACUTE TOXICITY: SKIN - Category 4

Acute Tox. 4, H332 ACUTE TOXICITY: INHALATION - Category 4

Resp. Sens. 1, H334 RESPIRATORY SENSITISATION - Category 1

Skin Sens. 1, H317 SKIN SENSITISATION - Category 1

Changes from previous version

First 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