

Technical Data

Product Specification



Product Code	FDC-B1G
Product Description	FD&C Blue #1 Granular
Common Name	Brilliant Blue FCF
Chemical Name	Principally the disodium salt of ethyl [4-[<i>p</i> -[ethyl (<i>m</i> -sulfobenzyl) amino]- α -(<i>o</i> -sulfophenyl) benzylidene]-2,5-cyclohexadien-1-ylidene] (<i>m</i> -sulfobenzyl) ammonium hydroxide inner salt.
Function	Food colorant
CI Number	42090
CI Name	Food Blue 2
CAS Number	3844-45-9
EINECS Number	223-339-8
EC Number	E133
Specifications	Every batch of this product is individually tested and certified by FDA to confirm compliance with the specifications outlined in the <i>Code of Federal Regulations, Title 21, Parts 70-82</i> . The FDA certification lot number shows on every product label. Additionally the product complies with EC Directive 95/45/EC and FAO52/1 or 52/2 of the WHO/FAO.
Pure Dye Content	89% minimum
Physical Appearance	Water-soluble dark blue-black granular with a characteristic sky blue hue when viewed in a 10 ppm aqueous solution.
Packaging	Standard packaging is 25-kg units packed in polyethylene-lined corrugated cartons. Custom packaging is available upon request with minimum order requirements.
Storage	Product is hygroscopic and should be stored in tightly sealed containers at temperatures below 120°F.
Shelf Life	Eight years from date of manufacture.
Kosher Status	Product is kosher certified.

20160817



SAFETY DATA SHEET

Revision Date 13-May-2016
Version 4

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name Viveri™ FD&C Blue 1 Granular
Product code FDC-B1G

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

Recommended Use Food additive
Restrictions on use No information available

1.3 Details of the supplier of the safety data sheet

Supplier Viveri™ Food Colors
4515 St. Clair Avenue
Cleveland, OH 44103
(216) 391-8050
+1 216-391-8050 (outside the US)
This telephone number is available during office hours only.

E-mail Address info@viverifoodcolors.com

1.4 Emergency telephone number

Emergency telephone number Chemtrec: +1 703-527-3887 ex-USA
Chemtrec: 1-800-424-9300 USA

2. Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910.1200

OSHA Regulatory Status

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122)

2.2 Label elements

This product is not classified.

2.3. Other Hazards Hazards not otherwise classified (HNOC)

Not Applicable

2.4 Other information

Not Applicable

3. Composition/Information on Ingredients

Substance

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Chemical Name	CAS-No	Weight %
FD&C BLUE #1	3844-45-9	90 - 100

4. First aid measures

4.1 Description of first-aid measures

General advice	No information available.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
Skin contact	Immediate medical attention is not required. Wash off with soap and water.
Inhalation	Immediate medical attention is not required. Move to fresh air.
Ingestion	Do NOT induce vomiting. Drink plenty of water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	See Section 2.2, Label Elements and/or Section 11, Toxicological effects.
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4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	Treat symptomatically.
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5. Fire-Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media	None.
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5.2 Special hazards arising from the substance or mixture

Special Hazard

None known based on information supplied

Hazardous Combustion Products	Carbon oxides. Nitrogen oxides (NOx).
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Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

5.3 Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation, especially in confined areas. Use personal protective equipment.

6.2 Environmental precautions

Dust deposits should not be allowed to accumulate on surfaces as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., cleaning dusty surfaces with compressed air). Nonsparking tools should be used. Prevent product from entering drains. See Section 12 for additional Ecological information.

6.3 Methods and materials for containment and cleaning up

Methods for Containment Prevent dust cloud. Cover powder spill with plastic sheet or tarp to minimize spreading.

Methods for cleaning up Avoid dust formation. Take precautionary measures against static discharges. Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust. Use personal protective equipment. Take up mechanically and collect in suitable container for disposal. Prevent product from entering drains. Keep in suitable and closed containers for disposal.

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling Avoid dust formation. Take precautionary measures against static discharges. Fine dust dispersed in air may ignite. Wear personal protective equipment.

Hygiene measures Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage Conditions Keep tightly closed in a dry and cool place.

Materials to Avoid No materials to be especially mentioned.

8. Exposure controls/personal protection

8.1 Exposure Guidelines

8.2 Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems.

8.3 Individual protection measures, such as personal protective equipment

Eye/Face Protection Safety glasses with side-shields.

Skin and body protection Wear chemical resistant footwear and clothing such as gloves, an apron or a whole body suit as appropriate.

Respiratory protection . NIOSH/MSHA approved respiratory protection should be worn if exposure is anticipated.

Hygiene measures See section 7 for more information

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Solid
Appearance	Powder
Color	Red-violet
Odor	Mild
Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Methods</u>
pH		No information available
Melting/freezing point	283 °C	
Boiling point/boiling range		No information available
Flash Point		No information available
Evaporation rate		No information available
Flammability (solid, gas)		No information available
Flammability Limits in Air		
upper flammability limit		No information available
lower flammability limit		No information available
Vapor pressure		No information available
Vapor density		No information available
Specific Gravity		No information available
Water solubility	30000 mg/l	
Solubility in other solvents		No information available
Partition coefficient	-4.94 log POW	
Autoignition temperature		No information available
Decomposition temperature		No information available
Viscosity, kinematic		No information available
Viscosity, dynamic		No information available
Explosive properties		No information available
Oxidizing Properties		No information available

9.2 Other information

Volatile organic compounds (VOC) None
content

10. Stability and Reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to Avoid

Dust formation. Take precautionary measures against static discharges.

10.5 Incompatible Materials

None known based on information supplied.

10.6 Hazardous Decomposition Products

None known based on information supplied.

11. Toxicological information

11.1 Acute toxicity

Numerical measures of toxicity: Product Information

LD50 Oral:
> 2,000 mg/kg (rat)

Numerical measures of toxicity: Component Information

11.2 Information on toxicological effects

Skin corrosion/irritation

Product Information

- May cause irritation

Component Information

- No information available

Serious eye damage/eye irritation

Product Information

- May cause eye irritation

Component Information

- No information available

Respiratory or skin sensitization

Product Information

- No known significant effects or critical hazards.

Component Information

- No information available

Germ cell mutagenicity

Product Information

- No information available

Component Information

- No information available

Carcinogenicity

Product Information

- Contains no ingredient listed as a carcinogen

Component Information

- No information available

Reproductive toxicity

Product Information

- No information available

Component Information

- No information available

STOT - single exposure

No information available

STOT - repeated exposure

- No known effect

Other adverse effects

Product Information

- No information available
- Component Information
- No information available

Aspiration hazardProduct Information

- No information available
- Component Information
- No information available

12. Ecological information

12.1 Toxicity**Ecotoxicity**

No information available

100 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Ecotoxicity effects**12.2 Persistence and degradability**

No information available.

12.3 Bioaccumulative potential

Discharge into the environment must be avoided

12.4 Mobility in soil

No information available.

12.5 Other adverse effects

No information available

13. Disposal Considerations

13.1 Waste treatment methods

Dispose of in accordance with federal, state, and local regulations.

14. Transport Information

DOT

Not regulated

MEX

Not regulated

IMDG

Not regulated

IATA

Not regulated

15. Regulatory information

15.1 International Inventories**TSCA**

Complies

DSL

Complies

EINECS/ELINCS

Complies

ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies
NZIoC	Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL - Canadian Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

15.2 U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

15.3 Pesticide Information

Not applicable

15.4 U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

16. Other information

<u>NFPA</u>	Health Hazard -	Flammability -	Instability -	Physical and chemical hazards -
<u>HMIS</u>	Health Hazard 1	Flammability 1	Physical Hazard 0	Personal protection X

Legend:

ACGIH (American Conference of Governmental Industrial Hygienists)

Ceiling (C)

DOT (Department of Transportation)

EPA (Environmental Protection Agency)

IARC (International Agency for Research on Cancer)

International Air Transport Association (IATA)

International Maritime Dangerous Goods (IMDG)

NIOSH (National Institute for Occupational Safety and Health)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

PEL (Permissible Exposure Limit)

Reportable Quantity (RQ)

Skin designation (S)*

STEL (Short Term Exposure Limit)

TLV® (Threshold Limit Value)

TWA (time-weighted average)

Prepared By

DayGlo Color Corp.
Regulatory Affairs/Product Safety

Revision Date

13-May-2016

Revision Note

No information available

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Technical Data

Product Specification



Product Code	FDC-B1P
Product Description	FD&C Blue #1
Common Name	Brilliant Blue FCF
Chemical Name	Principally the disodium salt of ethyl [4-[<i>p</i> -[ethyl (<i>m</i> -sulfobenzyl) amino]- α -(<i>o</i> -sulfophenyl) benzylidene]-2,5-cyclohexadien-1-ylidene] (<i>m</i> -sulfobenzyl) ammonium hydroxide inner salt.
Function	Food colorant
CI Number	42090
CI Name	Food Blue 2
CAS Number	3844-45-9
EINECS Number	223-339-8
EC Number	E133
Specifications	Every batch of this product is individually tested and certified by FDA to confirm compliance with the specifications outlined in the <i>Code of Federal Regulations, Title 21, Parts 70-82</i> . The FDA certification lot number shows on every product label. Additionally the product complies with EC Directive 95/45/EC and FAO52/1 or 52/2 of the WHO/FAO.
Pure Dye Content	89% minimum
Physical Appearance	Water-soluble dark blue-black powder with a characteristic sky blue hue when viewed in a 10 ppm aqueous solution.
Packaging	Standard packaging is 25-kg units packed in polyethylene-lined corrugated cartons. Custom packaging is available upon request with minimum order requirements.
Storage	Product is hygroscopic and should be stored in tightly sealed containers at temperatures below 120°F.
Shelf Life	Eight years from date of manufacture.
Kosher Status	Product is kosher certified.

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Revision Date 13-May-2016
Version 4

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name Viveri™ FD&C Blue 1 Powder
Product code FDC-B1P

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

Recommended Use Food additive
Restrictions on use No information available

1.3 Details of the supplier of the safety data sheet

Supplier Viveri™ Food Colors
4515 St. Clair Avenue
Cleveland, OH 44103
(216) 391-8050
+1 216-391-8050 (outside the US)
This telephone number is available during office hours only.

E-mail Address info@viverifoodcolors.com

1.4 Emergency telephone number

Emergency telephone number Chemtrec: +1 703-527-3887 ex-USA
Chemtrec: 1-800-424-9300 USA

2. Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910.1200

OSHA Regulatory Status

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122)

2.2 Label elements

This product is not classified.

2.3. Other Hazards Hazards not otherwise classified (HNOC)

Not Applicable

2.4 Other information

Not Applicable

3. Composition/Information on Ingredients

Substance

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Chemical Name	CAS-No	Weight %
FD&C BLUE #1	3844-45-9	90 - 100

4. First aid measures

4.1 Description of first-aid measures

General advice	No information available.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
Skin contact	Immediate medical attention is not required. Wash off with soap and water.
Inhalation	Immediate medical attention is not required. Move to fresh air.
Ingestion	Do NOT induce vomiting. Drink plenty of water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	See Section 2.2, Label Elements and/or Section 11, Toxicological effects.
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4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	Treat symptomatically.
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5. Fire-Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media None.

5.2 Special hazards arising from the substance or mixture

Special Hazard

None known based on information supplied

Hazardous Combustion Products Carbon oxides. Nitrogen oxides (NOx).

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

5.3 Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation, especially in confined areas. Use personal protective equipment.

6.2 Environmental precautions

Dust deposits should not be allowed to accumulate on surfaces as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., cleaning dusty surfaces with compressed air). Nonsparking tools should be used. Prevent product from entering drains. See Section 12 for additional Ecological information.

6.3 Methods and materials for containment and cleaning up

Methods for Containment Prevent dust cloud. Cover powder spill with plastic sheet or tarp to minimize spreading.

Methods for cleaning up Avoid dust formation. Take precautionary measures against static discharges. Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust. Use personal protective equipment. Take up mechanically and collect in suitable container for disposal. Prevent product from entering drains. Keep in suitable and closed containers for disposal.

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling Avoid dust formation. Take precautionary measures against static discharges. Fine dust dispersed in air may ignite. Wear personal protective equipment.

Hygiene measures Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage Conditions Keep tightly closed in a dry and cool place.

Materials to Avoid No materials to be especially mentioned.

8. Exposure controls/personal protection

8.1 Exposure Guidelines

8.2 Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems.

8.3 Individual protection measures, such as personal protective equipment

Eye/Face Protection Safety glasses with side-shields.

Skin and body protection Wear chemical resistant footwear and clothing such as gloves, an apron or a whole body suit as appropriate.

Respiratory protection . NIOSH/MSHA approved respiratory protection should be worn if exposure is anticipated.

Hygiene measures See section 7 for more information

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Solid
Appearance	Powder
Color	Red-violet
Odor	Mild
Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Methods</u>
pH		No information available
Melting/freezing point	283 °C	
Boiling point/boiling range		No information available
Flash Point		No information available
Evaporation rate		No information available
Flammability (solid, gas)		No information available
Flammability Limits in Air		
upper flammability limit		No information available
lower flammability limit		No information available
Vapor pressure		No information available
Vapor density		No information available
Specific Gravity		No information available
Water solubility	30000 mg/l	
Solubility in other solvents		No information available
Partition coefficient	-4.94 log POW	
Autoignition temperature		No information available
Decomposition temperature		No information available
Viscosity, kinematic		No information available
Viscosity, dynamic		No information available
Explosive properties		No information available
Oxidizing Properties		No information available

9.2 Other information

Volatile organic compounds (VOC) None
content

10. Stability and Reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to Avoid

Dust formation. Take precautionary measures against static discharges.

10.5 Incompatible Materials

None known based on information supplied.

10.6 Hazardous Decomposition Products

None known based on information supplied.

11. Toxicological information

11.1 Acute toxicity

Numerical measures of toxicity: Product Information

LD50 Oral: > 2,000 mg/kg (rat)
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Numerical measures of toxicity: Component Information

11.2 Information on toxicological effects

Skin corrosion/irritation

Product Information

- May cause irritation

Component Information

- No information available

Serious eye damage/eye irritation

Product Information

- No information available

Component Information

- No information available

Respiratory or skin sensitization

Product Information

- No known significant effects or critical hazards.

Component Information

- No information available

Germ cell mutagenicity

Product Information

- No information available

Component Information

- No information available

Carcinogenicity

Product Information

- Contains no ingredient listed as a carcinogen

Component Information

- No information available

Reproductive toxicity

Product Information

- No information available

Component Information

- No information available

STOT - single exposure

No information available

STOT - repeated exposure

- No known effect

Other adverse effects

Product Information

- No information available
- Component Information
- No information available

Aspiration hazardProduct Information

- No information available
- Component Information
- No information available

12. Ecological information**12.1 Toxicity****Ecotoxicity**

No information available

100 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Ecotoxicity effects**12.2 Persistence and degradability**

No information available.

12.3 Bioaccumulative potential

Discharge into the environment must be avoided

12.4 Mobility in soil

No information available.

12.5 Other adverse effects

No information available

13. Disposal Considerations**13.1 Waste treatment methods**

Dispose of in accordance with federal, state, and local regulations.

14. Transport Information**DOT**

Not regulated

MEX

Not regulated

IMDG

Not regulated

IATA

Not regulated

15. Regulatory information**15.1 International Inventories****TSCA**

Complies

DSL

Complies

EINECS/ELINCS

Complies

ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies
NZIoC	Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL - Canadian Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

15.2 U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

15.3 Pesticide Information

Not applicable

15.4 U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

16. Other information

<u>NFPA</u>	Health Hazard -	Flammability -	Instability -	Physical and chemical hazards -
<u>HMIS</u>	Health Hazard 1	Flammability 1	Physical Hazard 0	Personal protection X

Legend:

ACGIH (American Conference of Governmental Industrial Hygienists)

Ceiling (C)

DOT (Department of Transportation)

EPA (Environmental Protection Agency)

IARC (International Agency for Research on Cancer)

International Air Transport Association (IATA)

International Maritime Dangerous Goods (IMDG)

NIOSH (National Institute for Occupational Safety and Health)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

PEL (Permissible Exposure Limit)

Reportable Quantity (RQ)

Skin designation (S)*

STEL (Short Term Exposure Limit)

TLV® (Threshold Limit Value)

TWA (time-weighted average)

Prepared By

DayGlo Color Corp.
Regulatory Affairs/Product Safety

Revision Date

13-May-2016

Revision Note

No information available

Disclaimer

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End of Safety Data Sheet