

SAFETY DATA SHEET

Version 3.5 Revision Date 03/30/2016

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Pre-Reduced Indigo

Product Number : JAC1698, JAC2698, JAC3698

Brand : Jacquard Products

CAS-No. : 482-89-3

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

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Rupert, Gibbon, &Spider 1147 Healdsburg Avenue Healdsburg CA 95448 707-433-9577

service@jacquardproducts.com

Emergency telephone: In USA call CHEMTREC: 1 800 262-8200

Outside the USA, including ships at sea, call CHEMTREC's international and maritime telephone number (collect calls

accepted): +1 (703) 741-5500

In Canada call CANUTEC: 1 613 996 6666

General Information: +1 800 244 6169 (Worldwide)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

Specific target organ toxicity - repeated exposure (Category 2), H373

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

2.2 GHS Label elements, including precautionary statements

Signal word Warning

Hazard statement(s)

Pictogram

H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statement(s)

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P314 Get medical advice/ attention if you feel unwell.

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

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms : Indigo blue Indigotin

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Hazardous components

Component	Classification	Concentration
Indigo		
	STOT RE 2; H373	90 - 100 %

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

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

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

4.3 Indication of any immediate medical attention and special treatment needed

no data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides (NOx)

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

no data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

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7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Keep in a dry place.

7.3 Specific end use(s)

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method:

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance Form: flakes/powder

Colour: dark violet

b) Odour odourless

c) Odour Threshold no data availabled) pH no data available

e) Melting point/freezing Melting point/range: > 300 °C (> 572 °F) - lit.

point

f) Initial boiling point and no data available

boiling range

g) Flash point > 220 °C (> 428 °F)
h) Evapouration rate no data available
i) Flammability (solid, gas) no data available

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

k) Vapour pressure no data availablel) Vapour density no data available

m) Relative density 1.35 g/cm3 at 20 °C (68 °F)

n) Water solubility partially soluble

o) Partition coefficient: n- log Pow: 2.7 at 23 °C (73 °F)

octanol/water

p) Auto-ignition > 300 °C (> 572 °F) temperature

q) Decomposition temperature

) Decomposition no data available

r) Viscosity no data available
 s) Explosive properties no data available
 t) Oxidizing properties no data available

9.2 Other safety information

no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

no data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Other decomposition products - no data available

In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

1.1 Information on toxicological effects

Acute toxicity

Inhalation: no data available Dermal: no data available

no data available

Skin corrosion/irritation

Skin - rabbit

Result: No skin irritation

Serious eye damage/eye irritation

NA

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

Chromosome aberration test in vitro

fibroblast

Result: negative

mouse - male Result: negative

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as

probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a

carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a

known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a

carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

RTECS: DU2988400

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

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish static test LC50 - Leuciscus idus (Golden orfe) - > 10,000 mg/l - 96 h

Toxicity to daphnia and

inia and static test EC50 - Daphnia magna (Water flea) - > 500 mg/l - 48 h

other aquatic invertebrates

Toxicity to algae static test EC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

Result: 0 % - Not readily biodegradable.

(OECD Test Guideline 301C)

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

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

12.6 Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Dispose of in accordance with local regulations.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

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

SARA 311/312 Hazards

No SARA Hazards

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

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New Jersey Right To Know Components

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California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

H373 May cause damage to organs through prolonged or repeated exposure.

STOT RE Specific target organ toxicity - repeated exposure

HMIS Rating

Health hazard: 0
Chronic Health Hazard:
Flammability: 0
Physical Hazard 0

NFPA Rating

Health hazard: 0 Fire Hazard: 0 Reactivity Hazard: 0

Further information

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RUPERT, GIBBON & SPIDER PO BOX 425, HEALDSBURG CA, 95448 TEL: (80) 442-0455 FAX: (707) 433-4906

Name

SDS: Sodium Hydrosulfite Date: 06/6/2015

1. Chemical, Product and Company Identification

Product Name: Sodium hydrosulfite Catalog Codes: SLS3463, SLS1246

CAS#: 7775-14-6 RTECS: JP2100000

TSCA: TSCA 8(b) inventory: Sodium hydrosulfite

CI#: Not applicable

Synonym: Blankit; Burmol; Hydros; Hydrosulfite R Conc; V-Brite B; Vatrolite; Sodium Dithionite; Sodium Hyposulfite;

Disodium dithionite; Disodium hydrosulfite

Chemical Name: Dithionous acid, disodium salt

Chemical Formula: Na2S2O4

Contact Information: Rupert Gibbon & Spider

PO Box 425 Healdsburg, CA 95448 800-442-0455

Emergency assistance, call: Poison Control 800-222-1222

2. Composition and Information on Ingredients

Composition:

Name CAS # % by Weight

Name: Sodium hydrosulfite 7775-14-6 100

Toxicological Data on Ingredients: Sodium hydrosulfite: ORAL (LD50): Acute: >500 mg/kg [Rat]. DERMAL (LD50): Acute: >10000 mg/kg [Rabbit].

3. Hazards Identification

Potential Acute Health Effects: Hazardous in case of eye contact (irritant), of ingestion. Slightly hazardous in case of skin

contact (irritant), of inhalation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

4. First Aid Measures

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with

plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband. **Serious Ingestion:** Not available.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

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Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical

attention if

irritation develops. Cold water may be used.

Serious Skin Contact: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances:Highly flammable in presence of open flames and sparks, of heat. Slightly flammable to flammable in presence of moisture. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances: Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available

Fire Fighting Media and Instructions: Flammable solid. Spontaneously combustible material. Do not use water or foam. SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use DRY chemical powder. Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards: Burns slowly, about like sulfur. Heats spontaneously in contact with moisture and air. May ignite nearby combustible materials. Vigourously supports combustion. Sodium Dithionite + Sodium Chlorite causes ignition of the latter. Reacts on exposure to moist air form toxic and corrosive fumes with the generation of heat and risk of combustion.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill: Spontaneously combustible solid. Oxidizing material. Stop leak if without risk. Do not get water inside container. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Use water spray curtain to divert vapor drift. Cover with dry earth, sand or other non-combustible material. Prevent entry into sewers, basements or confined areas. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

Section 7: Handling and Storage

Precautions:Keep away from heat. Keep away from sources of ignition. Keep away from direct sunlight or strong incandescent light. Ground all equipment containing material. Do not ingest. Do not breathe dust. Avoid contact with eyes. Avoid shock and friction. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, acids, moisture.

Storage: Store in a segregated and approved area. Keep in a cool and ventilated area away from combustible materials. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Separate from acids, alkalies, reducing agents and combustibles. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

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Personal Protection: Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Solid powder.)

Odor: Characteristic. Sulfurous. (Slight.)

Taste: Not available.

Molecular Weight: 174.11 g/mole Color: White. Grayish white. pH (1% soln/water): Not available.

Boiling Point: Not available.

Melting Point: Decomposition temperature: 20°C (68°F)

Critical Temperature: Not available. Specific Gravity: 0.8 - 1.02(Water = 1) Vapor Pressure: Not applicable. Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available. Water/Oil Dist. Coeff.: Not available. Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water.

Solubility: Soluble in cold water. Slightly soluble in alcohol.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat (above 50 deg. C) moisture, air, moist air, incompatible

materials.

Incompatibility with various substances: Reactive with acids, moisture. The product may undergo hazardous decomposition, condensation or polymerization, it may react violently with water to emit toxic gases or it may become self-reactive under conditions of shock or increase in temperature or pressure.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Air sensitive. Oxidizes in air(more readily so in the presence of moisture or when in solution) to bisulfite and acquires an acid reaction. It is a strong reducing agent and reacts violently with oxidants. Reacts with acids to form sulfur oxides. Thermal decomposition occurs violently at 190 deg. C. Avoid contact with oxidizing agents such as peroxides, potassium chlorate, and

potassium permanganate.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): >500 mg/kg [Rat]. Acute dermal toxicity (LD50): >10000 mg/kg [Rabbit].

Chronic Effects on Humans: Not available.

Other Toxic Effects on Humans: Hazardous in case of ingestion. Slightly hazardous in case of

skin contact (irritant), of inhalation.

Special Remarks on Toxicity to Animals: Not available.

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Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Acute Potential Health Effects: Skin: Causes skin irritation. Contact dermatitis may develop in sensitive individuals. Causes eye irritation and possible eye damage. Inhalation: It can irritate the respiratory tract (nose, throat, lungs) and cause wheezing, and/or shortness of breath. Ingestion: May be harmful if ingested. It can cause gastrointestinal tract irritation with nausea, abdominal pain, vomiting, and diarrhea. It may also affect behavior/central nervous system and cause headache, irritability, restlessness, and convulsions. Ingestion of large amounts may also cause hypotension, and cardiovascular collapse. Hypersensitivity reactions, occurring more frequently in asthmatics, may produce bronchoconstriction, diaphoresis, flushing, tachypnea, dyspnea, rhinorrhea, urticaria, tachycardia, hypotension and anaphylaxis. Chronic Potential Health Effects: Skin: Prolonged contact may cause skin irritation.

Section 12: Ecological Information

Ecotoxicity: Not available. **BOD5 and COD:** Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely.

However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 4.2: Spontaneously combustible substance.

Identification: Sodium dithionate UNNA: 1384 PG: II Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations: Connecticut hazardous material survey: Sodium hydrosulfite. Rhode Island RTK hazardous substances: Sodium hydrosulfite. Pennsylvania RTK: Sodium hydrosulfite. Massachusetts RTK: Sodium hydrosulfite. New Jersey: Sodium hydrosulfite TSCA 8(b) inventory: Sodium hydrosulfite

Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances

Other Classifications:

WHMIS (Canada): CLASS B-6: Reactive and very flammable material. CLASS F: Dangerously reactive material.

DSCL (EEC): R7- May cause fire. R22- Harmful if swallowed. R31- Contact with acids liberates toxic gas. S7/8- Keep container tightly closed and dry. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28- After contact with skin, wash immediately with plenty of water. S43- In case of fire, never use water.

HMIS (U.S.A.): Health Hazard: 2 Fire Hazard: 3 Reactivity: 2

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2 Flammability: 1

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Reactivity: 2

Specific hazard:

Protective Equipment: Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

The information contained in this SDS is based on data from sources considered to be reliable but Rupert, Gibbon & Spider Inc. does not guarantee the accuracy or completeness thereof. Rupert, Gibbon & Spider Inc. urges each customer or recipient of this SDS to study it carefully to become aware of and understand the hazards associated with this product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology or fire and understand the data in this SDS.

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