Material Safety Data Sheet

Language: English

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1. Identification of the material and supplier

Product Name: **LAVABlue™ Protein Gel Stain**

Catalogue number: **LB-011001**

Company Details

Manufacturer

gelcompany GmbH
Paul-Ehrlich-Straße 17
D-72076 Tübingen

Emergency telephone number :
+49 (0)7071 257030

Area of Application: Industrial applications.
Product Use: Analytical chemistry. Research use only.

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2. Hazard Identification

Hazard Symbol(s): F-Xn, Xi. Highly flammable. Harmful. Irritant.
Risk Phrases: R-11, 20-41 - Highly flammable. Harmful by inhalation, in contact with skin and if swallowed. Irritating to respiratory system, eyes and skin. Risk of serious damage to eyes.
Safety Phrases: S26-36/37/39 - Wear suitable protective clothing, gloves and eye/face protection. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Statement of hazardous/dangerous nature:
HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

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3. Composition / information on ingredients

Mixture. Yes. The hazards identified with this stain are those associated with the following parts A and B. Part C is classified as non-hazardous. For additional information, please refer to the individual material safety data sheet(s).
Stain Components:
LAVABlue™ Protein Gel Stain Part A
LAVABlue™ Protein Gel Stain Part B
LAVABlue™ Protein Gel Stain Part C

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4. Handling and Storage

Store at room temperature

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5. Transport information

International transport regulations
Not classified

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6. Regulatory information

Hazard Symbol(s): F-Xn. Xi. Highly flammable. Harmful. Irritant.
Risk Phrases: R-11, 20-41 - Highly flammable. Harmful by inhalation, in contact with skin and if swallowed. Irritating to respiratory system, eyes and skin. Risk of serious damage to eyes.
Safety Phrases: S26-36/37/39 - Wear suitable protective clothing, gloves and eye/face protection. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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7. Other Information

Date of previous issue: No previous validation

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. Enquiries regarding MSDS Content should be directed to: Gelcompany office.

Disclaimer
For research use only. Not for drug, household or any other use.

Material Safety Data Sheet

Language: English

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1 Identification of the material and supplier

Product Name: **LAVABlue™ Protein Gel Stain Part A**

Catalogue number: **LB-011001**

Company Details

Manufacturer

gelcompany GmbH
Paul-Ehrlich-Straße 17
D-72076 Tübingen

Emergency telephone number :
+49 (0)7071 257030

Area of Application: Industrial applications.
Product Use: Analytical chemistry. Research use only.

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2. Hazard Identification

Hazard Symbol(s): F-Xn Highly flammable. Harmful.
Risk Phrases: R-11, 20-38 - Highly flammable. Harmful by inhalation, in contact with skin and if swallowed. Irritating to respiratory system, eyes and skin.
Safety Phrases: S26-36/37 - Wear suitable protective clothing, gloves and eye/face protection. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Statement of hazardous/dangerous nature
HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

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3. Composition / information on ingredients

Part A: LAVABlue™ Protein Gel Stain Part A
Mixture : Yes

Chemical name	CAS no.	% by Volume
LAVABlue™	Proprietary Dye	N/A
Dimethyl sulfoxide	67-68-5	100
Sodium dodecyl sulfate	151-21-3	NA

Other components (see attached)
Part B : LAVABlue™ Protein Gel StainPart B
Part C : LAVABlue™ Protein Gel StainPart C

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4. First-aid measures

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

Skin contact: In case of contact, immediately flush skin copiously with water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothes before reuse. Clean shoes thoroughly before reuse. Obtain medical attention immediately.

Eye contact: Check for and remove any contact lenses. In case of contact, immediately flush the eyes with a copious amount of water for at least 15 minutes. Cold water may be used. Obtain medical attention.

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5. Fire-fighting measures

Nature of material / Extinguishing media:
Suitable: Water spray, fog or appropriate foam. Dry chemical powder, carbon dioxide.

Hazardous thermal (de)composition products : These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2…), sulfur oxides (SO2, SO3, etc.).

Special fire-fighting procedures: Fire fighters should wear self-contained positive pressure breathing apparatus (SCBA) and full turnout gear.

Protection of fire-fighters: Be sure to use an approved/certified respirator or equivalent.

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6. Accidental release measures

Personal precautions: Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Environmental precautions and cleanup methods: Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapours. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

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7. Handling and storage

Handling: Do not ingest. Avoid contact with eyes skin and clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing vapor or mist. Wash thoroughly after handling.

Storage: Keep container in a well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Store stain at room temperature. ecial Requirements: Avoid exposure to light. Do not allow moisture inside container.

Packaging materials recommended use:

Use original container.

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8. Exposure controls / personal protection

Occupational Exposure Limits

Ingredient name	**Occupational Exposure limit**
Dimethyl sulfoxide:	**TRGS900 (Germany 8 / 2004). Skin** TWA:160 mg/m^3 8 hour/hours. Form: All forms

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 European Standard EN689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Engineering measures:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are close to the workstation location.

Hygiene measures:

Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of the

working period. Appropriate techniques should be used to remove potentially contaminated clothing. Ensure that eyewash stations and safety showers are close to the workstation locations.

Personal protection

Eyes: 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.

Hands: 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.

Respiratory: Use a properly fitted, air purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirators must be based on known or anticipated exposure levels, the hazard of the product and save working limits of the selected respirator.

Skin: 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.

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9. Physical and chemical properties

Physical state: Liquid
Colour: Flourescent blue
Boiling point: The lowest known value is 189°C
Melting point: May start to solidify at approx. 18.4°C.
Vapour pressure: The highest known value is 0.42 mmHg at 20°C
Specific gravity: 1.1 g/cm^3
Density: 1.1 g/cm^3
Flash point: Closed cup: 87°C (185°F)
Explosive properties: Not considered as a product presenting risks of explosion.
Flammable Limits: No data available
Vapour density: The highest known value is 2.71 (Air = 1) (dimethyl sulfoxide).
Viscosity: The highest known value is 0.002 Pas at 20°C..
Autoignition temperature: The lowest known value is 301°C (573.8°F).
Evaporation rate: N/A
Solubility: Easily soluble in cold water, hot water, diethyl ether, acetone.

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10. Stability and reactivity

Stability: The product is stable

Materials to avoid: Reactive with oxidizing agents, reducing agents, acids, alkalis. Slightly reactive to moisture.

Hazardous decomposition products:

These products are carbon oxides (CO, CO_2), nitrogen oxides (NO, NO_2, etc), sulfur oxides (SO_2, SO_3, etc.).

Hazardous Exothermic Reactions

Hazardous Exothermic Reactions: Dimethyl sulfoxide (DMSO) undergoes a violent exothermic reaction on mixing with copper wool and trichloroacetic

acid. On mixing with potassium permanganate it will flash instantaneously. It reacts violently with: acid halides, cyanuric chloride, silicon tetrachloride, phosphorous trichloride and trioxide, thionyl chloride, magnesium perchlorate, silver fluoride, methyl bromide, iodine pentafluoride, nitrogen periodate, diborane, sodium hydride and perchloric and periodic acids. When heated above its boiling point dimethyl sulfoxide degrades giving off formaldehyde, methyl mercaptan and sulfur dioxide.

Remarks: Incompatibilities : Strong ox, acyl halides, boron compounds, non-metal halides, metal halides. Acetyl chloride, Acyl halides, Benzenesulfonylchloride, Benzoyl chloride, p-Bromobenzoyl acetanilide, Cyanuric chloride, Iodine pentafluoride, Magnesium perchlorate, Methyl bromide, Perchloric acid, Periodic acid, Phenyl chloride, Phosphorus oxychloride, Phosphorus trichloride, Phosphorus trioxide, Potassium permanganate, Silver fluoride, Sodium hydride, Thionyl chloride, Tolyl chloride--NFPA 491M

Reactions with other materials:

Reactions with common materials: forms stable coordination complexes with metals.

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11. Toxicological information

Local effects

Skin irritation:	Hazardous in case of skin contact (irritant)
Skin absorption:	May be harmful if absorbed through the skin. Readily absorbed through the skin
Eye irritation:	Hazardous in case of eye contact (irritant)
Inhalation:	Hazardous in case of inhalation (irritant) May be harmful if inhaled.
Ingestion:	May be harmful if swallowed.

Toxicity data

Ingredient	Test	Result	Route	Species
Dimethy sulfoxide	LD50	14500 mg/kg	Oral	Rat
	LD50	100 mg/kg	Oral	Wild bird species
	LD50	7920 mg/kg	Oral	Mouse
	LD50	50000 mg/kg	Dermal	Mouse
	LD50	40000 mg/kg	Dermal	Rat
Sodium dodecyl sulfate	LD50	1,288 mg/kg	Oral	Rat
	LD50	3,900 mg/m^3	Inhalation	Rat
	LD50	580 mg/kg	Dermal	Rabbit

Potential chronic health effects

Carcinogenic effects: No known significant effects or critical hazards.

Mutagenic effects: Laboratory experiments have shown mutagenic effects (sodium dodecyl sulfate)

Reproductive toxicity: No known significant effects or critical hazards
Sensitisation: Prologed or repeated exposure may cause allergic reactions in certain sensitive individuals

Over exposure signs/symptoms

Inhalation	No known significant effects or critical hazards
Ingestion	No known significant effects or critical hazards
Skin	No known significant effects or critical hazards
Target organs	Contains material which causes damage to the following organs: blood, kidney, liver, cardiovascular system, upper respiratory tract, skin, central nervous system, lens or cornea.

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12. Ecological information

Ecotoxicity Data

Ingredient	Species	Period	Result
Dimethyl sulfoxide	Pimephales promelas (LC50)	96 hour/hours	34000 mg/l
	Oncorhynchus mykiss (LC50)	96 hour/hours	35000 mg/l
	Lepomis macrochirus (LC50)	96 hour/hours	400000 mg /l
Sodium dodecyl sulfate	Oncorhynchus mykiss (mortality NOEC)	96h	19.5 mg/l
	Pimephales promelas	8d	4.6 mg/l
	Oncorhynchus mykiss (LC50)	96h	3.6 mg/l

Ingredient	Aquatic half-life	Photolysis	Biodegradability
Dimethyl sulfoxide	-	3.1%; 14 day/ days	Not readily

Bioaccumulative potential

Ingredient	LogPow	BCF	Potential
Dimethyl sulfoxide	-2.03	<4	Low
Sodium dodecyl sulfate	-	3.9-5.3	Low

Other adverse effects

No known significant effects or hazards.

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13. Disposal considerations

Methods of disposal:

The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilt material and runoff and contact with soil, water, drains and sewers. 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 authority requirements.

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14. Transport information

International transport regulations
Not classified

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15. Regulatory information

Hazard Symbol(s): F-Xn. Highly flammable. Harmful.
Risk Phrases: R-11, 20-38 - Highly flammable. Harmful by inhalation, in contact with skin and if swallowed. Irritating to respiratory system, eyes and skin.
Safety Phrases: S26-36/37 - Wear suitable protective clothing, gloves and eye/face protection. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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16. Other information

Date of previous issue: No previous Validation

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. Enquiries regarding MSDS Content should be directed to: Gelcompany office.

Material Safety Data Sheet

Language: English

1. Identification of the material and supplier

Product Name: **LAVABlue™ Protein Gel Stain Part B**

Catalogue number: **LB 011001**

Company Details

Manufacturer

gelcompany GmbH
Paul-Ehrlich-Straße 17
D-72076 Tübingen

Emergency telephone number :
+49 (0)7071 257030

Area of Application: Industrial applications.
Product Use: Analytical chemistry. Research use only.

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2. Hazard identification

Hazard Symbol(s): Xi. Irritant.
Risk Phrases: R37/38-41 - Irritating to respiratory system and skin. Risk of serious damage to eyes.
Safety Phrases: S26-37/39 - Wear suitable protective clothing, gloves and eye/face protection. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Statement of hazardous/dangerous nature
HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.
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3. Composition / information on ingredients

Part B : LAVABlue™ peptide Assay Kit Part B
Mixture : No

Chemical name	CAS no.	% (weight per volume)
Citric acid monohydrate	75-05-8	NA

Other components (see attached)

Part A : LAVABlue™ Protein Gel Stain Part A
Part C : LAVABlue™ Protein Gel Stain Part C

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4. First-aid measures

Swallowed: If person is conscious, rinse mouth with water. Seek medical advice.
Eye: Flush with copious volumes of water for at least 15 minutes. Seek medical advice.
Skin: Wash skin with copious volumes of water. Seek medical advice if irritation persists.
Inhaled: Remove victim to fresh air. If breathing stops, give artificial respiration by trained first aid person. Seek medical advice.
Eye contact: Check for and remove any contact lenses. In case of contact, immediately flush the eyes with a copious amount of water for at least 15 minutes. Cold water may be used. Seek medical advice.

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5. Fire-fighting measures

Explosion data:
Dust Potential: This material is capable of creating a dust explosion.
Special Risk(s):
Specific Hazard(s): Emits toxic fumes under fire conditions.
Nature of material / Extinguishing media:
Suitable: Water spray, carbon dioxide, dry chemical powder, appropriate foam.
Special fire-fighting procedures: Fire fighters should wear self-contained positive pressure breathing apparatus (SCBA) and full turnout gear.
Protection of fire-fighters: Be sure to use an approved/certified respirator or equivalent.

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6. Accidental release measures

Personal precautions: Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Environmental precautions and cleanup methods: Stop leak if without risk. Place material in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

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7. Handling and storage

Handling: Do not ingest. Avoid contact with eyes skin and clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing vapor or mist. Wash thoroughly after handling.
Storage: Store in original container and sealed until ready for use. Keep way from incompatibles such as oxidizing and reducing agents, bases, nitrates.
Special Requirements:

Avoid exposure to light. Do not allow moisture inside container.

Packaging materials recommended use:

Use original container.

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8. Exposure controls / personal protection

Occupational Exposure Limits

No established exposure standards for this product

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 European Standard EN689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Engineering measures:

Provide exhaust ventilation and ensure that eyewash stations and safety showers are close to the workstation location.

Hygiene measures:

Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Ensure that eyewash stations and safety showers are close to the workstation locations.

Personal protection

Eyes: Safety eyewear complying with approved standards should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Hands: 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.

Respiratory: Use a properly fitted, air purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirators must be based on known or anticipated exposure levels, the hazard of the product and save working limits of the selected respirator.

Skin: 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.

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9. Physical and chemical properties

Physical state :	Solid
Colour :	White
Boiling point :	N/A
Melting point :	N/A
Vapour pressure :	N/A
Specific gravity :	N/A
Flash point :	173.9 ^{o}C

Explosive properties : Not considered as a product presenting risks of explosion.
Flammable Limits : N/A
Vapour density : 1.54 g/l at 20 °C.
Viscosity : N/A
Autoignition temperature : N/A.
Evaporation rate : N/A
pH : 1.8
Solubility : Easily soluble in dimethyl sulfoxide, water.

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10. Stability and reactivity

Stability: The product is stable
Materials to avoid: Reactive with oxidizing and reducing agents, bases, nitrates.
Hazardous decomposition: Carbon monoxide, carbon dioxide.

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11. Toxicological information

Local effects

Skin contact: Hazardous in case of skin contact (irritant, sensitiser)
Eye contact: Hazardous in case of eye contact (irritant)
Inhalation: Hazardous in case of inhalation (irritant)
May be harmful if inhaled.
Ingestion: May be harmful if swallowed. May cause stomach irritation, nausea, vomiting and diarrhea.

Toxicity data

Ingredient	Test	Result	Route	Species
Citric acid monohydrate	LD50	375 mg/kg	Intraperitoneal	Rat

Potential Chronic Health Effects

Carcinogenic effects : Not available
Mutagenic effects : Not available
Teratogenic effects: Not available
Reproductive toxicity: Not available
Sensitisation: Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

Over exposure signs/symptoms

Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion: May be harmful if swallowed.
Skin: May be harmful if adsorbed through skin.

Exposure can cause: vomiting, diarrhea. Damage to tooth enamel. Dermatitis.

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12. Ecological information

No data available.

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13. Disposal considerations

Methods of disposal:

The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilt material and runoff and contact with soil, water, drains and sewers. 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 authority requirements.

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14. Transport information

International transport regulations
Not classified

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15. Regulatory information

Hazard Symbol(s): Xi. Irritant.
Risk Phrases: R37/38-41 - Irritating to respiratory system, eyes and skin. Risk of serious damage to eyes.
Safety Phrases: S26-36/37/39 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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16. Other information

Date of previous issue : No previous Validation

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. Enquiries regarding MSDS Content should be directed to: Gelcompany office.

Material Safety Data Sheet

Language: English

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1 Identification of the material and supplier

Product Name: **LAVABlue™ Protein Gel Stain Part C**

Catalogue number: **LB-011001**

Company Details

Manufacturer

gelcompany GmbH
Paul-Ehrlich-Straße 17
D-72076 Tübingen

Emergency telephone number :
+49 (0)7071 257030

Area of Application: Industrial applications.
Product Use: Analytical chemistry. Research use only.

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2. Hazard Identification

Statement of hazardous/dangerous nature
NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

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3. Composition / information on ingredients

Part C: LAVABlue™ Protein Gel Stain Part C
Mixture : No

Chemical name	CAS no.	% by Volume
Potassium chloride	7447-40-7	NA

Other components (see attached)
Part A : LAVABlue™ Protein Gel StainPart A
Part B : LAVABlue™ Protein Gel StainPart B

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4. First-aid measures

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration.
If breathing is difficult, give oxygen. Obtain medical attention.
Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water.
Skin contact: In case of contact, wash off with soap and plenty of water
Eye contact: Flush eyes with water as a precaution.

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5. Fire-fighting measures

Product itself does not burn.

Nature of material / Extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Hazardous thermal (de)composition products : Hydrogen chloride gas, potassium oxides.
Special fire-fighting procedures: Fire fighters should wear self-contained positive pressure breathing apparatus (SCBA) and full turnout gear.
Protection of fire-fighters: Be sure to use an approved/certified respirator or equivalent.

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6. Accidental release measures

Personal precautions: Avoid dust formation.

Environmental precautions and cleanup methods: Prevent entry into drains. Sweep up and shovel. Retain in suitable, closed containers for waste disposal according to local directives.

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7. Handling and storage

This product is hygroscopic.

Handling: Provide appropriate exhaust ventilation where dust can form.
Storage: Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Do not allow moisture inside container.
Packaging materials recommended use:
Use original container.

---

8. Exposure controls/personal protection

Engineering measures:
Provide appropriate exhaust ventilation at places where dust can form.
Hygiene measures:
General industrial hygiene practice. Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of the working period.

Personal protection

Eyes: Safety eyewear complying with an approved standard should be used.
Hands: For prolonged or repeated contact use protective gloves.
Respiratory: Respiratory protection is not required. Where protection from nuisance levels of dust are desired, use a properly fitted, air purifying or air-fed respirator complying with an approved standard.
Skin: 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.

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9. Physical and chemical properties

Physical state: crystalline powder
Colour: white
Boiling point: 1 500 °C (2 732 °F)
Melting point: 770 °C (1 418 °F)
Density: 1.984 g/cm^3
Flash point: no data available
Explosive properties: Not considered as a product presenting risks of explosion.
Flammable Limits: no data available
Autoignition temperature: no data available
Evaporation rate: N/A
Solubility: soluble in water

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10. Stability and reactivity

Product is hygroscopic

Stability: The product is stable under recommended storage conditions
Conditions to avoid: Exposure to moisture
Materials to avoid: Strong acids, strong oxidising agents
Hazardous decomposition products:
Hydrogen chloride gas, potassium oxides

---

11. Toxicological information

Local effects

Skin irritation: May cause skin irritation
Skin absorption: May be harmful if absorbed through the skin
Eye irritation: May cause eye irritation
Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion: May be harmful if swallowed.

Toxicity data

Ingredient	Test	Result	Route	Species
Potassium chloride	LD50	2 600 mg/kg	Oral	Rat

Potential chronic health effects

Carcinogenic effects:	no data available
Mutagenic effects:	no data available
Reproductive toxicity:	no data available
Sensitisation:	no data available

Over exposure signs/symptoms

Hyperkalemia, nausea, vomiting, abdominal pain, diarrhea, constipation, paresthesia, thirst, dizziness, rash, pruritus, muscle cramps, minor psychiatric changes, minor visual changes.

Inhalation	Maybe harmful if inhaled
Ingestion	May be harmful if swallowed
Skin	May be harmful if absorbed. May cause irritation.
Eyes	May cause irritation
Target organs	Heart

---

12. Ecological information

Ecotoxicity Data

Ingredient	Species	Period	Result
Potassium chloride	Pimephales promelas (LC50)	96h	880 mg/l
	Pimephales promelas (mortality NOEC)	7d	500 mg/l
	Pimephales promelas (mortality LOEC)	7d	1 000 mg/l
	Daphnia magna	48h	83 mg/l

Bioaccumulative potential

No data available on persistence and degradability

Other adverse effects

No data available.

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13. Disposal considerations

Methods of disposal:

The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilt material and runoff and contact with soil, water, drains and sewers. 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 authority requirements.

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14. Transport information

International transport regulations

Not dangerous goods

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15. Regulatory information

This product is not classified as dangerous and is non-hazardous.

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16. Other information

Date of previous issue: No previous Validation

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. Enquiries regarding MSDS Content should be directed to: Gelcompany office.