

Conforms to 93/112/EC and ISO 11014-1

Responsible Name Fred Gartner

? **Section 1. Chemical Product and Company Identification**

Product name BS2G-d4; Bis(Sulfosuccinimidyl)2,2,4,4 glutarate-d4

Product No. 0021615 1901484

Supplier	In USA: Pierce P.O. Box 117 Rockford, IL 61105 USA 815.968.0747 or 1.800.874.3723	In Europe: Perbio Science Industriezone III Industrielaan 27 9320 Erembodegem-Aalst Belgium Tel:+32 53 83 44 04 Fax:+32 53 83 76 38	Manufacturer	Pierce Biotechnology P.O. Box 117 Rockford, IL 61105 USA 815.968.0747 or 1.800.874.3723
-----------------	--	---	---------------------	--

In Case of Emergency CHEMTREC:
800.424.9300
OUTSIDE US:
202.483.7616

Print Date 5/12/2005
Validation Date 5/4/2005
MSDS# 7273

Intended Use Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific applications.

 **Section 2. Composition, Information on Ingredients**

Substance/Preparation : Substance

Ingredient name	CAS number	%	EC number	Classification
BS2G-d4; Bis(Sulfosuccinimidyl)2,2,4,4 glutarate-d4		98 - 100		Xi; R36/37

 **Section 3. Hazards Identification**

United States Review the most current and approved institutional guideline, protocol, standard operating procedure(s) and MSDS(s) for the proper handling of institutional materials/equipment associated with the use of this product.

Emergency Overview Warning!
CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
MAY CAUSE DAMAGE TO THE FOLLOWING ORGANS: RESPIRATORY TRACT, EYES.
Avoid contact with skin and clothing. Avoid breathing dust. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

Target organs May cause damage to the following organs: upper respiratory tract, eyes.

Routes of Entry Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eyes Irritating to eyes.
Skin Irritating to skin.
Inhalation Irritating to respiratory system.
Ingestion No known significant effects or critical hazards.

Potential chronic health effects

Carcinogenic Effects Data **CARCINOGENIC EFFECTS:** Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.

Medical Conditions Aggravated by Overexposure: Repeated or prolonged exposure is not known to aggravate medical condition.

Overexposure /Signs/Symptoms Not available.

Continued on Next Page

Europe

Classification Xi; R36/37

Physical/chemical hazards Not applicable.

Human health hazards Irritating to eyes and respiratory system.

Environmental hazards Not applicable.

See Toxicological Information (section 11)

+ Section 4. First Aid Measures

Effects and symptoms

Inhalation Hazardous in case of inhalation (lung irritant).

Ingestion Not available.

Skin Contact Not available.

Eye Contact Hazardous in case of eye contact (irritant).

Aggravating conditions Repeated or prolonged exposure is not known to aggravate medical condition.

First-Aid Measures

Inhalation In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Ingestion Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.

Skin Contact In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Eye Contact In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Notes to Physician Not available.

Protection of first-aiders Not available.

Section 5. Fire Fighting Measures

Flammability of the Product Non-flammable.

Flash Points Not applicable.

Fire Hazards in Presence of Various Substances Not applicable.

Fire Fighting Media and Instructions Use an extinguishing agent suitable for surrounding fires.

Protective Clothing (Fire) Not applicable.

Hazardous thermal (de)composition products Not applicable.

Section 6. Accidental Release Measures

Personal precautions Safety glasses. Lab coat.

Environmental Precautions and Clean-up Methods Use a shovel to put the material into a convenient waste disposal container.

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

Continued on Next Page

◇ Section 7. Handling and Storage

Handling Avoid contact with eyes. Keep container closed. Use only with adequate ventilation. Avoid breathing dust. Wash thoroughly after handling.

Storage Keep container tightly closed. Keep container refrigerated and dry, in the presence of a desiccant

Intended Use Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific applications.

Packaging materials

Suitable / Not suitable Use original container.

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.

Exposure Limit Values

Ingredient Name

Occupational Exposure Limits

United States

Personal Protection

Eyes Splash goggles.

Body Lab coat.

Hands Gloves.

Respiratory Respirator is not needed under normal and intended conditions of use, if exposures are kept below established limits.

Protective Clothing
(Pictograms)



🧪 Section 9. Physical and Chemical Properties

Physical State and Appearance Solid.

Color Off-white.

Odor Odorless.

Molecular Weight 534.38 g/mole

Taste Not available.

Molecular Formula C13 O14 S2 H8 D4 N2 Na2

Dispersion Properties See solubility in water.

Solubility Partially soluble in cold water, hot water.

🧪 Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.

Conditions to avoid moisture

Materials to avoid not available

Hazardous Polymerization Will not occur.

Hazardous Decomposition Products Not available.

Continued on Next Page

 **Section 11. Toxicological Information**

Toxicity to Animals **BS2G-d4; Bis(Sulfosuccinimidyl)2,2,4,4 glutarate-d4**
LD50: Not available.
LC50: Not available.

Chronic Effects on Humans May cause damage to the following organs: upper respiratory tract, eyes.

Other Toxic Effects on Humans Hazardous in case of eye contact (irritant), of inhalation (lung irritant).

Special Remarks on Toxicity to Animals Not available.

Special Remarks on Chronic Effects on Humans Not available.

Special Remarks on Other Toxic Effects on Humans Not available.

Carcinogenicity No known significant effects or critical hazards.

Mutagenicity No known significant effects or critical hazards.

Reproductive toxicity No known significant effects or critical hazards.

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 May cause damage to the following organs: upper respiratory tract, eyes.

 **Section 12. Ecological Information**

Mobility Not available.

Persistence/degradability Not available.

Bioaccumulative potential Not available.

Ecotoxicity Not available.

Germany water class VCI WGK: No products were found.

Ecotoxicity data

Ingredient name

Species

Period

Other ecological information

Persistence/degradability

Ingredient name

BOD₅

COD

Ingredient name

Aquatic half-life

Photolysis

Bioaccumulative potential

Ingredient name

LogP_{ow}

BCF

Mobility : Not available.

Other adverse effects : No known significant effects or critical hazards.

Continued on Next Page



Section 13. Disposal Considerations

Waste Stream Not available.

Methods of disposal The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, 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 local authority requirements.

European waste catalogue (EWC) Not available.

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

Denmark – Carcinogenic waste Not available.

Denmark - Waste card number Not available.

Denmark - Waste group Not available.

Sweden - thermoset plastic waste Not available.

Sweden - Waste group Not available.

Austria - Waste catalogue Not available.

Norway - Waste number Not available.

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

Switzerland - Waste code Not available.

Section 14. Transport Information

Contact the supplier for all information regarding the proper transportation method for this material.



Section 15. Regulatory Information

Label Requirements (Europe)

R36/37- Irritating to eyes and respiratory system.
S24/25- Avoid contact with skin and eyes. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36- Wear suitable protective clothing.



Irritant

HCS Classification Irritating material
Target organ effects

U.S. Federal Regulations TSCA: No products were found.

Continued on Next Page

**BS2G-d4; Bis(Sulfosuccinimidyl)
2,2,4,4 glutarate-d4**

SARA 302/304/311/312 extremely hazardous substances: No products were found.
 SARA 302/304 emergency planning and notification: No products were found.
 SARA 302/304/311/312 hazardous chemicals: No products were found.
 SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.
 Clean Water Act (CWA) 307: No products were found.
 Clean Water Act (CWA) 311: No products were found.
 Clean air act (CAA) 112 accidental release prevention: No products were found.
 Clean air act (CAA) 112 regulated flammable substances: No products were found.
 Clean air act (CAA) 112 regulated toxic substances: No products were found.

State regulations No products were found.

WHMIS (Canada) Not controlled under WHMIS (Canada).

No products were found.

International Regulations

EINECS Not available.

DSCCL (EEC) R36/37- Irritating to eyes and respiratory system.

International Lists No products were found.

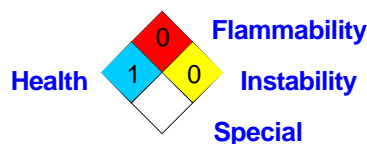
State Regulations No products were found.

Section 16. Other Information

**Hazardous Material
Information System
(U.S.A.)**

Health	*	1
Fire hazard		0
Reactivity		0
Personal protection		A

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



References Not available.

History of Document Changes Any information changes since last document version are marked with a triangle symbol.

Full text of R phrases referred to in sections 2 and 3 - Europe R36/37- Irritating to eyes and respiratory system.

Full text of classifications referred to in sections 2 and 3 - Europe Xi - Irritant

Intended Use Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific applications.

Validated by Fred Gartner on 5/4/2005.

Verified by Fred Gartner.

Date of Previous Issue No Previous Validation

Printed 5/12/2005.

Version 1.01

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.