



Material Safety Data Sheet

Effective Date: October 31st, 2011

Supersedes: September 8th, 2010

Smart GBS

1. Product and Company Identification

Product name: Smart GBS
Product number: SCGBS-100N-50

Manufacturer:
Cepheid
904 Caribbean Drive
Sunnyvale, CA 94089
USA

Telephone Numbers:
(888) 838-3222 (6 AM – 5 PM Pacific time US)
Outside of the US: 1 (408) 541-4191
24-Hour Emergency Telephone:
CHEMTREC (800) 424-9300
Outside of the US: 1 (703) 741-5500
E-mail: techsupport@cepheid.com

Relevant identified uses of the mixture and uses advised against:

The following SDS is for the final finished product only as used in the laboratory. It contains eight (8) components, some of which are in freeze-dried powders which are contained in tubes. Three components are reagents that are clear, colorless liquids. This product also contains one tube of small glass beads. Exemptions for disclosing some component information are pursuant to CLP Article 1(5)(d) and 29 CFR 1910.1200(g)(2)(i)(C)(1)&(2).

2. Hazards Identification

Note: All the below apply to the Treatment Reagent (Sodium Hydroxide + Triton X-100)

Classification of the substance or mixture: Irritant (eye) – Category 2.
Irritant (skin) - Category 2.

Regulation (EC) 1272/2008 [GHS]

Directive 67/548/EEC or 1999/45/EC Xn: R36/38

Label Elements (See section 15 of this SDS)

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H302 – Harmful if swallowed. H315 – Causes skin irritation. H319 – Causes serious eye irritation.

P264 - Wash hands thoroughly after handling. P280 - Wear protective gloves/eye protection/face protection. P273 - Avoid release to the environment. P302 + P352 – IF ON SKIN: Wash with plenty of soap and water. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P501 - Dispose of contents/container to location in accordance with local and regional/national/international regulations.

US Hazard Overview Treatment Reagent contains Sodium Hydroxide (corrosive) and Triton X-100.

Note The GHS classifications are based on Regulation EC 1272/2008 (EU CLP) and the calculation procedure of the ‘Globally Harmonized System of Classification and Labelling of Chemicals (GHS)’ in the latest version.

3. Composition Information on Ingredients

This product contains eight (8) components, some of which are in freeze-dried powders which are contained in tubes. Three components are reagents that are clear, colorless liquids. This product also contains one tube of small glass beads.

The following classifications (EU Risk phrases and CLP/GHS H-phrases) apply to the Treatment Reagent mixture.



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Treatment Reagent is a clear, colorless liquid with the following hazardous ingredients:

Ingredient	CAS#	EINECs / ELINCS #	% Composition	EU Risk Phrase	CLP/GHS Classification
Triton X-100	9002-93-1	N/A	< 2	R36/38	H303, H315
Sodium Hydroxide	1310-73-2	215-185-5	< 0.5	R36/38	H302, H315, H319

All other ingredients of Treatment Reagent are either non-hazardous under US and EU regulations or CLP/GHS guidelines and/or at concentrations less than 1% in the mixture.

Diluent Reagent, Sample Preparation Reagent, and freeze-dried powders each are not considered hazardous under US hazard communication regulations (29 CFR 1910.1200), EU directives for classification and labeling of substances or mixtures or the Global Harmonization System for classification and labeling of substances or mixtures.

4. First Aid Measures

- Eye:** May cause eye irritation. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult a physician.
- Skin:** May cause skin irritation. Wash with plenty of soap and water. Consult a physician.
- Ingestion:** Do NOT induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Consult a physician.
- Inhalation:** No symptoms expected. However, if breathing difficulty should occur, remove person to fresh air and consult a physician.

5. Fire Fighting Measures

Extinguishing Media: Use water spray (fog), foam, dry powder, or carbon dioxide, as appropriate for surrounding fire and materials.

Specific hazards arising from substance or mixture: May emit toxic fumes of carbon oxides, sodium oxides.

Flammability/Explosivity: None expected.

Advice for Firefighters: Wear full protective clothing and a self-contained breathing apparatus if necessary.

Hazardous



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Decomposition Products: See Section 10.

6. Accidental Release Measures

If product/material is released or spilled, take proper precautions to minimize exposure by using appropriate personal protective equipment. For small spills, wear gloves and absorb spill with paper towel. For small spills of Treatment Reagent containing sodium hydroxide, avoid skin and eye contact by using rubber or nitrile gloves and wearing eye protection. Dispose of material according to local, State and Federal waste disposal regulations (see Section 13).

7. Handling and Storage

Handling Precautions: Avoid skin and eye contact; avoid inhalation.

Storage Requirements: Store according to product labeling.

8. Exposure Controls/Personal Protection

Occupational Exposure Limits:

NOTE: Triton X-100 (*t*-octylphenoxyethoxyethanol) has no known occupational exposure limit values.

<u>Compound</u>	<u>Issuer</u>	<u>Type</u>	<u>OEL</u>
Sodium Hydroxide	ACGIH & NIOSH REL	Ceiling limit not to be exceeded for any 15-minute period	2 mg/m ³
	US OSHA	8-HR Time Weighted Average	2 mg/m ³
	NIOSH	IDLH (Immediately Dangerous to Life and Health)	10.0 mg/m ³



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Engineering Controls:	None normally required. When practicable, handle material in enclosed or contained processes or in processes with effective local exhaust ventilation.
Eye Protection:	Wear safety glasses with side shields or chemical splash goggles. Base the choice of protection on the job activity and potential for contact with eyes or face.
Respiratory Protection:	When possible, handle material in enclosed processes or containment. If it is properly handled with effective ventilation or containment, respiratory protection should not be needed.
Skin Protection:	Gloves are recommended to minimize potential for skin contact. In laboratory setting, wear lab coat or other protective overgarment at a minimum to minimize skin contact. Base the choice of protection on the job activity and potential for skin contact.
Other:	Facilities storing or using this product should be equipped with a sink and eyewash station. Wash hands and other potentially exposed areas immediately after handling material (especially before eating, drinking, or smoking). Decontaminate all protective equipment after use.

9. Physical and Chemical Properties

Appearance: Beads are solid white components in tubes; reagents are clear liquids which are primarily buffered in aqueous solutions.

Odor: Components are odorless

Odor threshold: No information identified.

pH: >12.5 (Treatment Reagent), 7 – 9 (solids and other liquid reagents)

Melting point/freezing point: Liquid reagents near 0 °C.

Initial boiling point and boiling range: Liquid reagents near 100 °C.

Flash point: No information identified.

Evaporation rate: Minimal

Flammability (solid, gas): No information identified.

Upper/lower flammability or explosive limits: No information identified.

Vapor pressure: Minimal

Vapor density: No information identified.

Relative density: No information identified.

Water solubility: Reagents are already aqueous; beads are soluble in aqueous solutions.

Partition coefficient: n-octanol/water: No information identified.

Auto-ignition temperature: None

Decomposition temperature: No information identified.

Viscosity: No information identified.

10. Stability and Reactivity

Reactivity: No information identified.

Chemical Stability: Stable under ordinary conditions of use and storage.

Possibility of Hazardous reactions: Exothermic with acids (applies to Treatment Reagent only). For all other ingredients, no potential for hazardous reactions identified.

Conditions to Avoid: Heat, incompatibles, (Treatment Reagent).

Incompatible Materials: Acids, organic halogen compounds (Treatment Reagent).

Hazardous Decomposition Products: Carbon oxides, sodium oxides.

Hazardous Polymerization: Will not occur.

11. Toxicological Information

Acute Toxicity: Sodium hydroxide is acutely toxic orally due to its corrosivity.

Irritation/Sensitization: No data identified on ingredients.

Repeated dose toxicity – No data identified on ingredients.

Reproductive (fertility) and Developmental (birth defects) toxicity – No data identified. None of the ingredients are considered reproductive or developmental toxicants.

Mutagenicity and Carcinogenicity – No data identified on mutagenicity. None of the ingredients are listed by NTP, IARC or OSHA as carcinogens.

12. Ecological Information

Ecotoxicity: Treatment reagent containing sodium hydroxide > 12.5 pH has the potential for harmful effects in the environment if not properly disposed.

Persistence and degradability: No data identified.

Bioaccumulative potential: No data identified.

Mobility in soil: No data identified.

Other adverse effects: No data identified.



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13. Disposal Considerations

Biological specimens, including used tubes, should be treated as capable of transmitting infectious agents. Consult your institution's environmental waste personnel on proper disposal of used tubes and unused reagents. This material may exhibit characteristics of federal EPA Resource Conservation and Recovery Act (RCRA) hazardous waste requiring specific disposal requirements. Check state and local regulations as they may differ from federal disposal regulations. Institutions outside the USA should check their country hazardous waste disposal requirements.

14. Transport Information

Transport in accordance with all federal, state, and local transportation regulations. With the exception of Treatment Reagent, all other components are not regulated by US DOT or IATA.

Transport Based on the available data, Treatment Reagent (which contains < 0.5% Sodium Hydroxide) is regulated as a hazardous material/dangerous good under EU ADR/RID, US DOT, Canada TDG, IATA, or IMDG.

UN number UN1824


UN proper shipping name Sodium Hydroxide Solution.

Transport hazard classes and packing group Hazard Class - 8; Packing Group III.

Environmental hazards Marine pollutant: No

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15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture	This SDS complies with the requirements under US, EU and GHS (EU CLP - Regulation EC No 1272/2008) guidelines. Labeling information under CLP, including pictogram, signal word, and hazard/precautionary statements are included in this SDS. Exemptions for including some of this information on product label are pursuant to CLP Article 1(5)(d) and 29 CFR 1910.1200(g)(2)(i)(C)(1)&(2).
OSHA Hazardous	Treatment Reagent contains < 0.5% Sodium Hydroxide (> 12.5 pH) which may cause skin and eye irritation.
National Fire Protection Agency (NFPA) Rating	Treatment Reagent: Health - 1 Flammability - 0 Reactivity - 0 Special - N/A
WHMIS classification	Treatment Reagent meets the criteria for Class 2, Division D2B based on its irritation potential. The pictogram for this determination is a stylized T as follows:  This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by those regulations.
TSCA status	For R&D consumers, products are to be used only for R&D purposes.
SARA section 313	Not listed.
California proposition 65	Not listed.

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Product label



Treatment Reagent (Contains Sodium Hydroxide and Triton X-100):

WARNING

Causes skin irritation. Causes serious eye irritation. Wash hands thoroughly after handling. Wear protective gloves/eye protection/face protection.

Avoid release to the environment.

IF ON SKIN: Wash with plenty of soap and water.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention

Dispose of contents/container in accordance with local and regional/national/international regulations.

16. Other Information

Disclaimer: The above information is based on data available to us and is believed to be correct. Since the information may be applied under conditions beyond our control and with which we may be unfamiliar, we do not assume any responsibility for the results of its use and all persons receiving it must make their own determination of the effects, properties, protections and disposal which pertain to their particular conditions. No representation, warranty, or guarantee, express or implied (including a warranty of fitness or merchantability for a particular purpose), is made with respect to the materials, the accuracy of this information, the results to be obtained from the use thereof, or the hazards connected with the use of the material. Caution should be used in the handling and use of the material. The above information is offered in good faith and with the belief that it is accurate. As of the date of issuance, we are providing all information relevant to the foreseeable handling of the material. However, in the event of an adverse incident associated with this product, this Safety Data Sheet is not, and is not intended to be, a substitute for consultation with appropriately trained personnel.