

**Material Safety Data Sheet***Effective Date: March 13<sup>th</sup>, 2012**Supersedes: February 25<sup>th</sup>, 2011**Xpert MRSA/SA BC*

---

**1. Product and Company Identification**

<b>Product name:</b>	Xpert MRSA/SA BC
<b>Product catalog number:</b>	GXMRSA/SA-BC-CE-10
<b>Manufacturer:</b> Cepheid AB Röntgenvägen 5 SE-171 54 Solna Sweden	<b>Telephone Numbers:</b> +33.563.82.53.19 <b>E-mail:</b> techsupport@cepheideurope.fr
	<b>24-Hour Emergency Telephone:</b> <b>CHEMTREC</b> (800) 424-9300 Outside of the US: 1 (703) 741-5500

**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 six (6) components, some of which are in freeze-dried powders and reagents which are contained in the cartridge and in a Nalgene bottle. All reagents are clear, colorless liquids. 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: The below applies to Reagent #2 containing sodium hydroxide and Elution Reagent containing guanidinium thiocyanate.

<b>Classification of the substance or mixture:</b>	Acute toxicity, oral (Category 5) Chronic aquatic toxicity (Category 4)
<b>Regulation (EC) 1272/2008 [GHS]</b>	Irritant (eye) – Category 2 Irritant (skin) – Category 2

**Label Elements** (See section 15 of this SDS)

**CLP/GHS hazard pictogram**



**CLP/GHS signal word** **Warning**



## Material Safety Data Sheet

*Xpert MRSA/SA BC*

*Effective Date: March 13<sup>th</sup>, 2012*

*Supersedes: February 25<sup>th</sup>, 2011*

### CLP/GHS

H303 – May be harmful if swallowed. H413 – May cause long lasting harmful effects to aquatic life.

### Hazard and Precautionary statements

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. P312 – Call a POISON CENTER or physician if you feel unwell. P501 - Dispose of contents/container to location in accordance with local and regional/national/international regulations.

### US Hazard Overview

Reagent #2 containing sodium hydroxide and Elution Reagent containing guanidinium thiocyanate.

### 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 consists of a cartridge with six (6) parts – three (3) components are beads, and three (3) reagents are clear, colorless liquids.

The following classifications (EU Risk phrases and CLP/GHS H-phrases) apply to Reagent #2 and Elution Reagent.

**Reagent #2** contains the following hazardous ingredients:

Ingredient	CAS#	EINECs / ELINCS #	% Composition	EU Risk Phrase	CLP/GHS Classification
Sodium hydroxide	1310-73-2	215-185-5	0.5-2.0	R22, R36, R38	H303



## Material Safety Data Sheet

Xpert MRSA/SA BC

Effective Date: March 13<sup>th</sup>, 2012

Supersedes: February 25<sup>th</sup>, 2011

**Elution Reagent** contains the following hazardous ingredients:

Ingredient	CAS#	EINECs / ELINCS #	% Composition	EU Risk Phrase	CLP/GHS Classification
Guanidinium thiocyanate	593-84-0	209-812-1	20-30	R22, R32, R58	H303, H413
BES sodium salt	10191-18-1	233-465-5	0.1 – 2.0	R22, R36, R38	H303

Reagent #1 and beads each are at concentrations less than 1% in the mixture or 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:** Rinse mouth with water. Never give anything by mouth to an unconscious person. Consult a physician.
- Inhalation:** 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 vapors of carbon oxides, sulfur oxides, nitrogen oxides.

**Flammability/Explosivity:** None expected.

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

**Hazardous**

**Material Safety Data Sheet**

*Xpert MRSA/SA BC*

*Effective Date: March 13<sup>th</sup>, 2012*

*Supersedes: February 25<sup>th</sup>, 2011*

**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. Do not dispose spilled materials down drain. 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

**Storage Requirements:** Store according to product labeling.

---

## 8. Exposure Controls/Personal Protection

**Occupational Exposure Limits:** Sodium hydroxide 8-hour TWA = 2 mg/m<sup>3</sup>. Guanidinium thiocyanate has no known occupational exposure limit.

**Engineering Controls:** None normally required.

**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:** None normally required.

**Skin Protection:** In laboratory setting, wear gloves and lab coat 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).

---

## 9. Physical and Chemical Properties

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

**Odor:** Components are odorless

**Odor threshold:** No information identified.

**pH:** cartridge reagents: 8.1 - > 12.5; Elution Reagent 6.7-7.1

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

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

**Material Safety Data Sheet**

*Effective Date: March 13<sup>th</sup>, 2012*

*Supersedes: February 25<sup>th</sup>, 2011*

**Flash point:** none

**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:** No information identified.

**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:** Elution Reagent contact with acids can liberate poisonous cyanide gas/vapors (applies to guanidinium thiocyanate). Reagent #2 is incompatible with acids.

**Conditions to Avoid:** Heat, contact with acids liberates very toxic gas

**Incompatible Materials:** Acids, oxidizing agents.

**Hazardous Decomposition Products:** Carbon oxides, sodium oxides, hydrogen cyanide

**Hazardous Polymerization:** Will not occur.

---

## 11. Toxicological Information

**Acute Toxicity:** Guanidinium thiocyanate has an acute oral LD50 of 593 mg/kg. 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.



## Material Safety Data Sheet

Effective Date: March 13<sup>th</sup>, 2012

Supersedes: February 25<sup>th</sup>, 2011

Xpert MRSA/SA BC

**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:** Guanidinium thiocyanate may cause long lasting harmful effects to aquatic life.

**Persistence and degradability:** No data identified.

**Bioaccumulative potential:** No data identified.

**Mobility in soil:** No data identified.

**Other adverse effects:** No data identified.

---

## 13. Disposal Considerations

Biological specimens, including used cartridges, should be treated as capable of transmitting infectious agents. Consult your institution's environmental waste personnel on proper disposal of used cartridges 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 Reagent #2, all other components are not regulated by US DOT or IATA.

<b>Transport</b>	Based on the available data, Reagent #2 contains between 0.5-2.0 % sodium hydroxide which is regulated as a hazardous material/dangerous good under EU ADR/RID, US DOT, Canada TDG, IATA, or IMDG.
<b>UN number</b>	UN1824
<b>UN proper shipping name</b>	Sodium hydroxide solution.
<b>Transport hazard classes and packing group</b>	Hazard Class - 8; Packing Group II.

**Material Safety Data Sheet***Effective Date: March 13<sup>th</sup>, 2012**Supersedes: February 25<sup>th</sup>, 2011***Environmental hazards** Marine pollutant: No*Xpert MRSA/SA BC*

---

**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 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**


Elution Reagent: Heating to decomposition or contact with acids can liberate poisonous cyanide gas/vapors. Reagent # 2 is corrosive.

**National Fire Protection Agency (NFPA) Rating:**

Reagent #2: (sodium hydroxide)  
Health – 3  
Flammability – 0  
Reactivity - 0  
Elution Reagent: (guanidinium thiocyanate)  
Health – 2  
Flammability – 0  
Reactivity – 0

**WHMIS classification:**

Reagent #2 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.

**Material Safety Data Sheet***Xpert MRSA/SA BC**Effective Date: March 13<sup>th</sup>, 2012**Supersedes: February 25<sup>th</sup>, 2011***Product label:*****Elution Reagent contains guanidinium thiocyanate. Reagent #2 contains sodium hydroxide.*****WARNING**

Elution Reagent contact with acids liberates very toxic gas. Reagent #2 causes skin and eye irritation.

Wash hands thoroughly after handling. Wear protective gloves and eye protection.

**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 or eye irritation occurs: Get medical advice/attention.

**IF SWALLOWED:** Rinse mouth. Call a POISON CENTER / physician if you feel unwell.

Avoid release to the environment; may cause long lasting harmful effects to aquatic life. Dispose of contents/container in accordance with local and regional / national/ international regulations.

Consult Safety Data Sheet for other precautionary statements.

---

**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.