

SAFETY DATA SHEET

SIEMENS

Immulite® 2000 and Immulite® 2500 Chemiluminescent Substrate Module

MSDS no.

L2SUBM

1. Identification of the substance/preparation and company/undertaking

Identification of the substance or mixture

Product name : Immulite® 2000 and Immulite® 2500 Chemiluminescent Substrate Module
Product code : L2SUBM, 10385232
Product type : Liquid.
Use of the substance/mixture : Diagnostic Agents

Company/undertaking identification

Manufactured/supplied : Siemens Healthcare Diagnostics Limited
 Sir William Siemens Square
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 GU16 8QD
 UK

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e-mail : dx.msds.healthcare@siemens.com

Emergency telephone number : +49 6131 - 19240; [24x7x365]
 (with hours of operation)

2. Hazards identification

The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : Not classified.
Physical/chemical hazards : Immulite® Chemiluminescent Substrate Not applicable.
Human health hazards : Immulite® Chemiluminescent Substrate Not applicable.
Environmental hazards : Immulite® Chemiluminescent Substrate Not applicable.

See section 11 for more detailed information on health effects and symptoms.

3. Composition/information on ingredients

Substance/preparation :

Ingredient name	CAS number	%	EC number	Classification
Immulite® Chemiluminescent Substrate 2-amino-2-methylpropanol	124-68-5	1.87	204-709-8	Xi; R36/38 [1] R52/53
See section 16 for the full text of the R-phrases declared above				

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3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in section 8.

4. First-aid measures

First-aid measures

- Inhalation** : Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Ingestion** : Wash out mouth with water. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

See section 11 for more detailed information on health effects and symptoms.

5. Fire-fighting measures

Extinguishing media

- Suitable** : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable** : None known.
- Special exposure hazards** : In a fire or if heated, a pressure increase will occur and the container may burst. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Hazardous combustion products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment (see section 8).
- Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6. Accidental release measures

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Packaging materials

Recommended : Use original container.

8. Exposure controls/personal protection

Exposure limit values

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
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No exposure limit value known.

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 EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Exposure controls

Occupational exposure controls : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

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

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

Hand protection : 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.

Eye protection : 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 or dusts.

8. Exposure controls/personal protection

- Skin protection** : 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.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

General information

Appearance

- Physical state** : Immulite® Chemiluminescent Substrate Liquid.
- Colour** : Immulite® Chemiluminescent Substrate Colourless.

Important health, safety and environmental information

- pH** : Immulite® Chemiluminescent Substrate 10 to 10.2
- Boiling point** : Immulite® Chemiluminescent Substrate Not available.
- Melting point** : Immulite® Chemiluminescent Substrate Not available.
- Flash point** : Immulite® Chemiluminescent Substrate Not available.
- Explosion limits** : Immulite® Chemiluminescent Substrate Not available.
- Vapour pressure** : Immulite® Chemiluminescent Substrate Not available.
- Relative density** : Immulite® Chemiluminescent Substrate 1
- Octanol/water partition coefficient** : Immulite® Chemiluminescent Substrate Not available.
- Viscosity** : Immulite® Chemiluminescent Substrate Not available.
- Evaporation rate (butyl acetate = 1)** : Immulite® Chemiluminescent Substrate Not available.

Other information

- Auto-ignition temperature** : Immulite® Chemiluminescent Substrate Not available.

10. Stability and reactivity

- Stability** : The product is stable.
- Conditions to avoid** : No specific data.
- Materials to avoid** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Potential acute health effects

- Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Ingestion** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Eye contact** : No known significant effects or critical hazards.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Immulin® Chemiluminescent Substrate 2-amino-2-methylpropanol	LD50 Oral	Rat	2900 mg/kg	-

Potential chronic health effects

Chronic toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Not available.				

Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Not available.				

Mutagenicity

Product/ingredient name	Test	Experiment	Result
Not available.			

Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Not available.				

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
Not available.						

- Chronic effects** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Inhalation** : No specific data.
- Ingestion** : No specific data.
- Skin** : No specific data.
- Eyes** : No specific data.

11. Toxicological information

Other adverse effects : Immulite® Chemiluminescent Substrate Not available.

12. Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Conclusion/Summary : Not available.

Biodegradability

Conclusion/Summary : Not available.

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

13. Disposal considerations

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Hazardous waste : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.

European waste catalogue (EWC) : Hazardous waste
18 01 06* chemicals consisting of or containing dangerous substances
Non-hazardous waste
18 01 07 chemicals other than those mentioned in 18 01 06

14. Transport information

International transport regulations

ADR/RID Class

UN number	Immulite® Chemiluminescent Substrate	Not regulated.
Proper shipping name	Immulite® Chemiluminescent Substrate	-
Classes	Immulite® Chemiluminescent Substrate	-
PG*	Immulite® Chemiluminescent Substrate	-
Label		
Additional information	Immulite® Chemiluminescent Substrate	-

ADN/ADNR Class

UN number	Immulite® Chemiluminescent Substrate	Not regulated.
Proper shipping name	Immulite® Chemiluminescent Substrate	-
Classes	Immulite® Chemiluminescent Substrate	-
PG*	Immulite® Chemiluminescent Substrate	-
Label		
Additional information	Immulite® Chemiluminescent Substrate	-

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14. Transport information

IMDG Class

UN number	Immulite® Chemiluminescent Substrate	Not regulated.
Proper shipping name	Immulite® Chemiluminescent Substrate	-
Classes	Immulite® Chemiluminescent Substrate	-
PG*	Immulite® Chemiluminescent Substrate	-
Label		
Additional information	Immulite® Chemiluminescent Substrate	-

IATA Class

UN number	Immulite® Chemiluminescent Substrate	Not regulated.
Proper shipping name	Immulite® Chemiluminescent Substrate	-
Classes	Immulite® Chemiluminescent Substrate	-
PG*	Immulite® Chemiluminescent Substrate	-
Label		
Additional information	Immulite® Chemiluminescent Substrate	-

PG* : Packing group

15. Regulatory information

EU regulations

Classification and labeling have been determined according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use.

Risk phrases	: This product is not classified as dangerous according to EU legislation.
Product use	: Industrial applications.
Europe inventory	: Not determined.

16. Other information

Full text of R-phrases referred to in sections 2 and 3 - United Kingdom (UK) : R36/38- Irritating to eyes and skin.
R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of classifications referred to in sections 2 and 3 - United Kingdom (UK) : Xi - Irritant

History

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Version	: 1.01
Prepared by	: Siemens Healthcare Diagnostics EHS Product Stewardship

Notice to reader

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16. Other information

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.