

SAFETY DATA SHEET

SIEMENS

IMMULITE® 2000 Beta-2 Microglobulin

MSDS no. : L2KBM2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : IMMULITE® 2000 Beta-2 Microglobulin
Product code : L2KBM2, 10380992
Product description : Not available.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

1.3 Company/undertaking identification

Manufactured/supplied : Siemens Healthcare Diagnostics Limited
Sir William Siemens Square
Newton House
Camberley
Frimley
Surrey
GU16 8QD
UK

Phone: +44 (0) 1276 696000
Fax: +44 (0)1276 696133

e-mail address of person responsible for this SDS : dx.msds.healthcare@siemens.com

1.4 Emergency telephone number

: Poison Control:
In England and Wales:
NHS Direct – 0845 4647 or 111
In Scotland: NHS 24 – 08454 24 24 24
In the Republic of Ireland: 01 809 2166

CHEMTREC: 0870-8200418 (UK only)
00 + 1 + 703-527-3887 (UK & Ireland)
(International calls to the United Kingdom)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Beta-2 Microglobulin Reagent Wedge Mixture
Beta-2 Microglobulin Adjustors Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Beta-2 Microglobulin Adjustors Category 2
LONG-TERM AQUATIC HAZARD

Beta-2 Microglobulin Reagent Wedge The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.
Beta-2 Microglobulin Adjustors The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

Ingredients of unknown toxicity : Beta-2 Microglobulin Reagent Wedge
Beta-2 Microglobulin Adjustors Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 7.5%

Ingredients of unknown ecotoxicity : Beta-2 Microglobulin Reagent Wedge
Beta-2 Microglobulin Adjustors Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 7.5%

Classification according to Directive 1999/45/EC [DPD]

Beta-2 Microglobulin Reagent Wedge The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.
Beta-2 Microglobulin Adjustors The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : Beta-2 Microglobulin Reagent Wedge Not classified.
Beta-2 Microglobulin Adjustors Not classified.

Physical/chemical hazards : Beta-2 Microglobulin Reagent Wedge Not applicable.
Beta-2 Microglobulin Adjustors Not applicable.

Human health hazards : Beta-2 Microglobulin Reagent Wedge Not applicable.
Beta-2 Microglobulin Adjustors Not applicable.

Environmental hazards : Beta-2 Microglobulin Reagent Wedge Not applicable.
Beta-2 Microglobulin Adjustors Not applicable.

See Section 16 for the full text of the R phrases or H statements declared above.

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

2.2 Label elements

Hazard pictograms :



Signal word : Beta-2 Microglobulin Reagent Wedge No signal word.
Beta-2 Microglobulin Adjustors No signal word.

Hazard statements : Beta-2 Microglobulin Reagent Wedge No known significant effects or critical hazards.
Beta-2 Microglobulin Adjustors H411 - Toxic to aquatic life with long lasting effects.

SECTION 2: Hazards identification

Precautionary statements

Prevention	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not applicable. P273 - Avoid release to the environment.
Response	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not applicable. P391 - Collect spillage.
Storage	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not applicable. Not applicable.
Disposal	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not applicable. P501 - Dispose of contents and container in accordance with all local, regional, and national regulations.
:		
Supplemental label elements	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Safety data sheet available on request. Contains 2-methyl-2H-isothiazol-3-one. May produce an allergic reaction.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not applicable. Not applicable.

2.3 Other hazards

Other hazards which do not result in classification	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	None known. None known.
Additional information	: Not available.	
	Not available.	

SECTION 3: Composition/information on ingredients

Substance/mixture	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Mixture Mixture
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Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
Beta-2 Microglobulin Reagent Wedge aminocaproic acid	EC: 200-469-3 CAS: 60-32-2	>=1, <5	Not classified.	Eye Irrit. 2, H319	[1]
Beta-2 Microglobulin Adjustors 2-methyl-2H-isothiazol-3-one	EC: 220-239-6 CAS: 2682-20-4	>=0.1, <1	Xn; R20/22 C; R34 R43 N; R50	Acute Tox. 3, H301 Acute Tox. 3, H311 Skin Corr. 1B, H314 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[1]

IMMULITE® 2000 Beta-2 Microglobulin

SECTION 3: Composition/information on ingredients

			See Section 16 for the full text of the R-phrases declared above.	See Section 16 for the full text of the H statements declared above.	
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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, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

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

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	: Beta-2 Microglobulin Reagent Wedge	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Beta-2 Microglobulin Adjustors	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.
Inhalation	: Beta-2 Microglobulin Reagent Wedge	Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.
	Beta-2 Microglobulin Adjustors	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	: Beta-2 Microglobulin Reagent Wedge	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Beta-2 Microglobulin Adjustors	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if

SECTION 4: First aid measures

		symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	: Beta-2 Microglobulin Reagent Wedge	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.
	Beta-2 Microglobulin Adjustors	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Protection of first-aiders	: Beta-2 Microglobulin Reagent Wedge	No action shall be taken involving any personal risk or without suitable training.
	Beta-2 Microglobulin Adjustors	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
4.2 Most important symptoms and effects, both acute and delayed		
<u>Potential acute health effects</u>		
Eye contact	: Beta-2 Microglobulin Reagent Wedge	No known significant effects or critical hazards.
	Beta-2 Microglobulin Adjustors	No known significant effects or critical hazards.
Inhalation	: Beta-2 Microglobulin Reagent Wedge	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
	Beta-2 Microglobulin Adjustors	No known significant effects or critical hazards.
Skin contact	: Beta-2 Microglobulin Reagent Wedge	No known significant effects or critical hazards.
	Beta-2 Microglobulin Adjustors	No known significant effects or critical hazards.

SECTION 4: First aid measures

Ingestion	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	No known significant effects or critical hazards. No known significant effects or critical hazards.
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Over-exposure signs/symptoms

Eye contact	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	No specific data. No specific data.
Inhalation	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	No specific data. No specific data.
Skin contact	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	No specific data. No specific data.
Ingestion	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	No specific data. No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	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. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	No specific treatment. No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	: Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides phosphorus oxides halogenated compounds metal oxide/oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters	: 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.
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SECTION 5: Firefighting measures

- 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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : 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. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and materials for containment and cleaning up

- 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.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

6.4 Reference to other sections

- : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : 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. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

SECTION 7: Handling and storage

7.2 Conditions for safe storage, including any incompatibilities

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.

Seveso II Directive - Reporting thresholds (in tonnes)

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
Beta-2 Microglobulin Adjustors E2: Hazardous to the aquatic environment - Chronic 2	200	500

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker or exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

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 monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

SECTION 8: Exposure controls/personal protection

- 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.
- Eye/face 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, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body 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.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- 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.
- 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Liquid. Solid.
Colour	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Colourless. Off-white.
Odour	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Odourless. Odourless.
pH	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	7.95 to 8.05 Not applicable.
Melting point/freezing point	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.
Initial boiling point and boiling range	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.
Flash point	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.
Evaporation rate	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.
Flammability (solid, gas)	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.

SECTION 9: Physical and chemical properties

Burning time	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not applicable. Not available.
Burning rate	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not applicable. Not available.
Upper/lower flammability or explosive limits	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.
Vapour pressure	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.
Solubility in water	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.
Partition coefficient: n-octanol/ water	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.
Auto-ignition temperature	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.
Decomposition temperature	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.
Viscosity	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.
Explosive properties	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge.
Oxidising properties	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.

9.2 Other information

SADT	: Not available.
Aerosol product	
Type of aerosol	: Not applicable.
Heat of combustion	: Not available.
Ignition distance	: Not applicable.
Enclosed space ignition - Time equivalent	: Not applicable.
Enclosed space ignition - Deflagration density	: Not applicable.
Flame height	: Not applicable.
Flame duration	: Not applicable.

SECTION 10: Stability and reactivity

10.1 Reactivity	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	The product is stable. The product is stable.

SECTION 10: Stability and reactivity

10.3 Possibility of hazardous reactions	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	No specific data. No specific data.
10.5 Incompatible materials	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	No specific data. No specific data.
10.6 Hazardous decomposition products	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Conclusion/Summary	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.
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Acute toxicity estimates

Route	ATE value
Beta-2 Microglobulin Adjustors Oral Dermal	17241.4 mg/kg 51724.1 mg/kg

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Beta-2 Microglobulin Reagent Wedge aminocaproic acid	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Conclusion/Summary

Skin	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.
Eyes	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.
Respiratory	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.

Sensitisation

Conclusion/Summary

Skin	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.
Respiratory	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.

Mutagenicity

Conclusion/Summary	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.
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Carcinogenicity

SECTION 11: Toxicological information

Conclusion/Summary : Beta-2 Microglobulin Reagent Wedge Not available.
Beta-2 Microglobulin Adjustors Not available.

Reproductive toxicity

Conclusion/Summary : Beta-2 Microglobulin Reagent Wedge Not available.
Beta-2 Microglobulin Adjustors Not available.

Teratogenicity

Conclusion/Summary : Beta-2 Microglobulin Reagent Wedge Not available.
Beta-2 Microglobulin Adjustors Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Beta-2 Microglobulin Adjustors 2-methyl-2H-isothiazol-3-one	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Beta-2 Microglobulin Reagent Wedge No known significant effects or critical hazards.
Beta-2 Microglobulin Adjustors No known significant effects or critical hazards.

Inhalation : Beta-2 Microglobulin Reagent Wedge Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Beta-2 Microglobulin Adjustors No known significant effects or critical hazards.

Skin contact : Beta-2 Microglobulin Reagent Wedge No known significant effects or critical hazards.
Beta-2 Microglobulin Adjustors No known significant effects or critical hazards.

Ingestion : Beta-2 Microglobulin Reagent Wedge No known significant effects or critical hazards.
Beta-2 Microglobulin Adjustors No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Beta-2 Microglobulin Reagent Wedge No specific data.
Beta-2 Microglobulin Adjustors No specific data.

Inhalation : Beta-2 Microglobulin Reagent Wedge No specific data.
Beta-2 Microglobulin Adjustors No specific data.

Skin contact : Beta-2 Microglobulin Reagent Wedge No specific data.
Beta-2 Microglobulin Adjustors No specific data.

Ingestion : Beta-2 Microglobulin Reagent Wedge No specific data.
Beta-2 Microglobulin Adjustors No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

SECTION 11: Toxicological information

Short term exposure

Potential immediate effects	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.
Potential delayed effects	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.

Long term exposure

Potential immediate effects	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.
Potential delayed effects	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.

Potential chronic health effects

Not available.

Conclusion/Summary	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not available. Not available.
General	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	No known significant effects or critical hazards. No known significant effects or critical hazards.
Teratogenicity	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	No known significant effects or critical hazards. No known significant effects or critical hazards.
Developmental effects	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	No known significant effects or critical hazards. No known significant effects or critical hazards.
Fertility effects	: Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	No known significant effects or critical hazards. No known significant effects or critical hazards.

Interactive effects :

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Beta-2 Microglobulin Adjustors 2-methyl-2H-isothiazol-3-one	Acute EC50 0.18 ppm Fresh water Acute LC50 0.07 ppm Fresh water	Daphnia - Daphnia magna Fish - Oncorhynchus mykiss	48 hours 96 hours

Conclusion/Summary : Beta-2 Microglobulin Reagent Wedge
Beta-2 Microglobulin Adjustors
Not available.
Not available.

12.2 Persistence and degradability

SECTION 12: Ecological information

Conclusion/Summary : Beta-2 Microglobulin Reagent Wedge Not available.
Beta-2 Microglobulin Adjustors Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Beta-2 Microglobulin Reagent Wedge aminocaproic acid	-2.95	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Beta-2 Microglobulin Reagent Wedge Not available.
Beta-2 Microglobulin Adjustors Not available.

Mobility : Beta-2 Microglobulin Reagent Wedge Not available.
Beta-2 Microglobulin Adjustors Not available.

12.5 Results of PBT and vPvB assessment

PBT : Beta-2 Microglobulin Reagent Wedge Not applicable.
Beta-2 Microglobulin Adjustors Not applicable.

vPvB : Beta-2 Microglobulin Reagent Wedge Not applicable.
Beta-2 Microglobulin Adjustors Not applicable.

12.6 Other adverse effects : Beta-2 Microglobulin Reagent Wedge No known significant effects or critical hazards.
Beta-2 Microglobulin Adjustors No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Beta-2 Microglobulin Reagent Wedge Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.
Beta-2 Microglobulin Adjustors The classification of the product may meet the criteria for a hazardous waste.
Not available.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

ADR/RID

14.1 UN number	Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not regulated. Not regulated.
14.2 UN proper shipping name	Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	- -
14.3 Transport hazard class(es)	Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	- -
14.4 Packing group	Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	- -
14.5 Environmental hazards	Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	No. No.
Additional information	Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	- -

ADN

14.1 UN number	Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not regulated. Not regulated.
14.2 UN proper shipping name	Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	- -
14.3 Transport hazard class(es)	Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	- -
14.4 Packing group	Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	- -
14.5 Environmental hazards	Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	No. No.
Additional information	Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	- -

IMDG

14.1 UN number	Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	Not regulated. Not regulated.
14.2 UN proper shipping name	Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	- -
14.3 Transport hazard class(es)	Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	- -
14.4 Packing group	Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	- -
14.5 Environmental hazards	Beta-2 Microglobulin Reagent Wedge Beta-2 Microglobulin Adjustors	No. No.

SECTION 14: Transport information

Additional information	Beta-2 Microglobulin Reagent Wedge	-	
	Beta-2 Microglobulin Adjustors	-	
IATA			
14.1 UN number	Beta-2 Microglobulin Reagent Wedge	Not regulated.	
	Beta-2 Microglobulin Adjustors	Not regulated.	
14.2 UN proper shipping name	Beta-2 Microglobulin Reagent Wedge	-	
	Beta-2 Microglobulin Adjustors	-	
14.3 Transport hazard class(es)	Beta-2 Microglobulin Reagent Wedge	-	
	Beta-2 Microglobulin Adjustors	-	
14.4 Packing group	Beta-2 Microglobulin Reagent Wedge	-	
	Beta-2 Microglobulin Adjustors	-	
14.5 Environmental hazards	Beta-2 Microglobulin Reagent Wedge	No.	
	Beta-2 Microglobulin Adjustors	No.	
Additional information	Beta-2 Microglobulin Reagent Wedge	-	
	Beta-2 Microglobulin Adjustors	-	
14.6 Special precautions for user	: Beta-2 Microglobulin Reagent Wedge		Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
	Beta-2 Microglobulin Adjustors		Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	: Not available.		

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: Beta-2 Microglobulin Reagent Wedge	Not applicable.
	Beta-2 Microglobulin Adjustors	Not applicable.

SECTION 15: Regulatory information

Other EU regulations

Europe inventory : Not determined.

Seveso II Directive

Beta-2 Microglobulin Reagent Wedge

This product is not controlled under the Seveso II Directive.

Beta-2 Microglobulin Adjustors

This product is controlled under the Seveso II Directive.

Danger criteria

Category

Beta-2 Microglobulin Adjustors

E2: Hazardous to the aquatic environment - Chronic 2

International regulations

Chemical Weapons Convention List Schedule I Chemicals : Beta-2 Microglobulin Reagent Wedge Not listed
Beta-2 Microglobulin Adjustors Not listed

Chemical Weapons Convention List Schedule II Chemicals : Beta-2 Microglobulin Reagent Wedge Not listed
Beta-2 Microglobulin Adjustors Not listed

Chemical Weapons Convention List Schedule III Chemicals : Beta-2 Microglobulin Reagent Wedge Not listed
Beta-2 Microglobulin Adjustors Not listed

15.2 Chemical Safety Assessment : Not applicable.

SECTION 16: Other information

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

Beta-2 Microglobulin Adjustors Aquatic Chronic 2, H411	Calculation method
Full text of abbreviated H statements : Beta-2 Microglobulin Reagent Wedge H319	Causes serious eye irritation.
Beta-2 Microglobulin Adjustors H301 H311 H314 H317 H335 H400 H410 H411	Toxic if swallowed. Toxic in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause respiratory irritation. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. Toxic to aquatic life with long lasting effects.

SECTION 16: Other information

Full text of classifications [CLP/GHS] : **Beta-2 Microglobulin Reagent Wedge**
Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2

Beta-2 Microglobulin Adjustors

Acute Tox. 3, H301	ACUTE TOXICITY: ORAL - Category 3
Acute Tox. 3, H311	ACUTE TOXICITY: SKIN - Category 3
Aquatic Acute 1, H400	ACUTE AQUATIC HAZARD - Category 1
Aquatic Chronic 1, H410	LONG-TERM AQUATIC HAZARD - Category 1
Aquatic Chronic 2, H411	LONG-TERM AQUATIC HAZARD - Category 2
Skin Corr. 1B, H314	SKIN CORROSION/IRRITATION - Category 1B
Skin Sens. 1, H317	SKIN SENSITIZATION - Category 1
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation] - Category 3

Full text of abbreviated R phrases : R20/22- Harmful by inhalation and if swallowed.
R34- Causes burns.
R43- May cause sensitisation by skin contact.
R50- Very toxic to aquatic organisms.

Full text of classifications [DSD/DPD] : C - Corrosive
Xn - Harmful
N - Dangerous for the environment

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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.