(2012 OSHA Hazard Communication Standard (29 CFR 1910.1200))

SAFETY DATA SHEET

IMMULITE® 1000 Growth Hormone (hGH)

SIEMENS

MSDS no. LKGRH1_5

Section 1. Identification

GHS product identifier : IMMULITE® 1000 Growth Hormone (hGH)

Product code : LKGRH1/5, 10381433, 10381432

Other means of identification : GH Adjustors LGHL, LGHH
GH Reagent Wedge LGRH2

Product type : Liquid.

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

Not applicable.

Manufactured/supplied : Siemens Healthcare Diagnostics Inc.
511 Benedict Avenue
Tarrytown, NY 10591-5097 USA
1-877-229-3711

(800) 424-9300 (CHEMTREC) (24/365)

Section 2. Hazards identification

OSHA/HCS status : GH Adjustors: This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
GH Reagent Wedge: This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : GH Adjustors: Not classified.
GH Reagent Wedge: Not classified.

Potentially biohazardous material.

Sodium azide may react with lead or copper plumbing to form highly explosive metal azides.

GHS label elements

Signal word : GH Adjustors: No signal word.
GH Reagent Wedge: No signal word.

Hazard statements : GH Adjustors: No known significant effects or critical hazards.
GH Reagent Wedge: No known significant effects or critical hazards.

Precautionary statements

Prevention : GH Adjustors: Not applicable.
GH Reagent Wedge: Not applicable.

Response : GH Adjustors: Not applicable.
GH Reagent Wedge: Not applicable.

Storage : GH Adjustors: Not applicable.
GH Reagent Wedge: Not applicable.

Disposal : GH Adjustors: Not applicable.
GH Reagent Wedge: Not applicable.

Supplemental label elements : GH Adjustors: None known.
GH Reagent Wedge: None known.

Section 2. Hazards identification

Hazards not otherwise classified	:	GH Adjustors	None known.
		GH Reagent Wedge	None known.

Section 3. Composition/information on ingredients

Substance/mixture	:	GH Adjustors	Mixture
		GH Reagent Wedge	Mixture

Ingredient name	%	CAS number
GH Reagent Wedge aminocaproic acid	2.4	60-32-2

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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.

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

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	:	GH Adjustors	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.
		GH 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.
Inhalation	:	GH Adjustors	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		GH 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.
Skin contact	:	GH Adjustors	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		GH Reagent Wedge	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	:	GH Adjustors	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.
		GH Reagent Wedge	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If

Section 4. First aid measures

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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

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

Over-exposure signs/symptoms

Eye contact	:	GH Adjustors	No specific data.
		GH Reagent Wedge	No specific data.
Inhalation	:	GH Adjustors	No specific data.
		GH Reagent Wedge	No specific data.
Skin contact	:	GH Adjustors	No specific data.
		GH Reagent Wedge	No specific data.
Ingestion	:	GH Adjustors	No specific data.
		GH Reagent Wedge	No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : 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.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : In case of fire, use water spray (fog), foam or dry chemical.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Section 5. Fire-fighting measures

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
halogenated compounds
metal oxide/oxides

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.

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.

Section 6. Accidental release measures

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 spilled material. 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".

Environmental precautions : Avoid dispersal of spilled 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).

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. 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 (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8).

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.

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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

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

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.

Individual protection measures

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.

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.

Section 9. Physical and chemical properties

Physical state	:	GH Adjustors	Solid.
		GH Reagent Wedge	Liquid.
Color	:	GH Adjustors	Off-white.
		GH Reagent Wedge	Colorless.
Odor	:	GH Adjustors	Odorless.
		GH Reagent Wedge	Odorless.
pH	:	GH Adjustors	Not applicable.
		GH Reagent Wedge	7.55 to 7.65
Flash point	:	GH Adjustors	Not available.
		GH Reagent Wedge	Not available.
Flammability (solid, gas)	:	GH Adjustors	Not available.
		GH Reagent Wedge	Not available.
Relative density	:	GH Adjustors	Not available.
		GH Reagent Wedge	1
Solubility in water	:	GH Adjustors	Not available.
		GH Reagent Wedge	Not available.
Partition coefficient: n-octanol/water	:	GH Adjustors	Not available.
		GH Reagent Wedge	Not available.

Section 9. Physical and chemical properties

Auto-ignition temperature : GH Adjustors — Not available.
GH Reagent Wedge — Not available.

Viscosity : GH Adjustors — Not available.
GH Reagent Wedge — Not available.

Section 10. Stability and reactivity

Reactivity : GH Adjustors — No specific test data related to reactivity available for this product or its ingredients.
GH Reagent Wedge — No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : GH Adjustors — The product is stable.
GH Reagent Wedge — The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Conclusion/Summary : GH Adjustors — Not available.
GH Reagent Wedge — Not available.

Irritation/Corrosion

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

Conclusion/Summary

Skin : GH Adjustors — Not available.
GH Reagent Wedge — Not available.

Eyes : GH Adjustors — Not available.
GH Reagent Wedge — Not available.

Respiratory : GH Adjustors — Not available.
GH Reagent Wedge — Not available.

Sensitization

Not available.

Conclusion/Summary

Skin : GH Adjustors — Not available.
GH Reagent Wedge — Not available.

Respiratory : GH Adjustors — Not available.
GH Reagent Wedge — Not available.

Mutagenicity

Not available.

Section 11. Toxicological information

Conclusion/Summary	:	GH Adjustors	Not available.
		GH Reagent Wedge	Not available.

Carcinogenicity

Not available.

Conclusion/Summary	:	GH Adjustors	Not available.
		GH Reagent Wedge	Not available.

Reproductive toxicity

Not available.

Conclusion/Summary	:	GH Adjustors	Not available.
		GH Reagent Wedge	Not available.

Teratogenicity

Not available.

Conclusion/Summary	:	GH Adjustors	Not available.
		GH Reagent Wedge	Not available.

Specific target organ toxicity (single exposure)

Not available.

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	:	GH Adjustors	No known significant effects or critical hazards.
		GH Reagent Wedge	No known significant effects or critical hazards.
Inhalation	:	GH Adjustors	No known significant effects or critical hazards.
		GH Reagent Wedge	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin contact	:	GH Adjustors	No known significant effects or critical hazards.
		GH Reagent Wedge	No known significant effects or critical hazards.
Ingestion	:	GH Adjustors	No known significant effects or critical hazards.
		GH Reagent Wedge	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	:	GH Adjustors	No specific data.
		GH Reagent Wedge	No specific data.
Inhalation	:	GH Adjustors	No specific data.
		GH Reagent Wedge	No specific data.
Skin contact	:	GH Adjustors	No specific data.
		GH Reagent Wedge	No specific data.
Ingestion	:	GH Adjustors	No specific data.
		GH Reagent Wedge	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 : GH Adjustors — Not available.
GH Reagent Wedge — Not available.

Potential delayed effects : GH Adjustors — Not available.
GH Reagent Wedge — Not available.

Long term exposure

Potential immediate effects : GH Adjustors — Not available.
GH Reagent Wedge — Not available.

Potential delayed effects : GH Adjustors — Not available.
GH Reagent Wedge — Not available.

Potential chronic health effects

Not available.

Conclusion/Summary : Not available. — GH Adjustors
Not available. — GH Reagent Wedge

General : 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.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
GH Reagent Wedge Oral	85567.6 mg/kg

Interactive effects : GH Adjustors — Not available.
GH Reagent Wedge — Not available.

Other information : GH Adjustors — Not available.
GH Reagent Wedge — Not available.

Section 12. Ecological information

Toxicity

Not available.

Conclusion/Summary : GH Adjustors — Not available.
GH Reagent Wedge — Not available.

Persistence and degradability

Conclusion/Summary : GH Adjustors — Not available.
GH Reagent Wedge — Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
GH Reagent Wedge aminocaproic acid	-2.95	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : GH Adjustors — Not available.
GH Reagent Wedge — Not available.

Section 12. Ecological information

Mobility	:	GH Adjustors	Not available.
		GH Reagent Wedge	Not available.

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

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Sodium azide may react with lead or copper plumbing to form highly explosive metal azides.

Section 14. Transport information

DOT Classification

UN number	GH Adjustors	Not regulated.
	GH Reagent Wedge	Not regulated.
UN proper shipping name	GH Adjustors	-
	GH Reagent Wedge	-
Transport hazard class(es)	GH Adjustors	-
	GH Reagent Wedge	-
Packing group	GH Adjustors	-
	GH Reagent Wedge	-
Environmental hazards	GH Adjustors	No.
	GH Reagent Wedge	No.
Additional information	GH Adjustors	-
	GH Reagent Wedge	-

TDG Classification

UN number	GH Adjustors	Not regulated.
	GH Reagent Wedge	Not regulated.
UN proper shipping name	GH Adjustors	-
	GH Reagent Wedge	-
Transport hazard class(es)	GH Adjustors	-
	GH Reagent Wedge	-
Packing group	GH Adjustors	-
	GH Reagent Wedge	-
Environmental hazards	GH Adjustors	No.
	GH Reagent Wedge	No.
Additional information	GH Adjustors	-
	GH Reagent Wedge	-

Section 14. Transport information

Mexico Classification

UN number	GH Adjustors	Not regulated.
	GH Reagent Wedge	Not regulated.
UN proper shipping name	GH Adjustors	-
	GH Reagent Wedge	-
Transport hazard class(es)	GH Adjustors	-
	GH Reagent Wedge	-
Packing group	GH Adjustors	-
	GH Reagent Wedge	-
Environmental hazards	GH Adjustors	No.
	GH Reagent Wedge	No.
Additional information	GH Adjustors	-
	GH Reagent Wedge	-

ADR/RID

UN number	GH Adjustors	Not regulated.
	GH Reagent Wedge	Not regulated.
UN proper shipping name	GH Adjustors	-
	GH Reagent Wedge	-
Transport hazard class(es)	GH Adjustors	-
	GH Reagent Wedge	-
Packing group	GH Adjustors	-
	GH Reagent Wedge	-
Environmental hazards	GH Adjustors	No.
	GH Reagent Wedge	No.
Additional information	GH Adjustors	-
	GH Reagent Wedge	-

IMDG

UN number	GH Adjustors	Not regulated.
	GH Reagent Wedge	Not regulated.
UN proper shipping name	GH Adjustors	-
	GH Reagent Wedge	-
Transport hazard class(es)	GH Adjustors	-
	GH Reagent Wedge	-
Packing group	GH Adjustors	-
	GH Reagent Wedge	-
Environmental hazards	GH Adjustors	No.
	GH Reagent Wedge	No.
	GH Adjustors	-
	GH Reagent Wedge	-

Section 14. Transport information

Additional information

		IATA
UN number	GH Adjustors	Not regulated.
	GH Reagent Wedge	Not regulated.
UN proper shipping name	GH Adjustors	-
	GH Reagent Wedge	-
Transport hazard class(es)	GH Adjustors	-
	GH Reagent Wedge	-
Packing group	GH Adjustors	-
	GH Reagent Wedge	-
Environmental hazards	GH Adjustors	No.
	GH Reagent Wedge	No.
Additional information	GH Adjustors	-
	GH Reagent Wedge	-

Special precautions for user : GH 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.

GH 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.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations :

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): Not determined.

Clean Water Act (CWA) 307: zinc chloride

Clean Water Act (CWA) 311: zinc chloride

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

Section 15. Regulatory information

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ (lbs)	SARA 302 TPQ (gallons)	SARA 304 RQ (lbs)	SARA 304 RQ (gallons)
GH Adjustors sodium azide	0.33	Yes.	500	-	1000	-
GH Reagent Wedge sodium azide	0.09	Yes.	500	-	1000	-

SARA 304 RQ : 476190.5 lbs / 216190.5 kg

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
GH Reagent Wedge aminocaproic acid	2.4	No.	No.	No.	Yes.	No.

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

California Prop. 65

WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
GH Adjustors gentamicin, sulfate (salt)	No.	Yes.	No.	No.

International regulations

Chemical Weapons Convention List Schedule I Chemicals	:	GH Adjustors GH Reagent Wedge	Not listed Not listed
Chemical Weapons Convention List Schedule II Chemicals	:	GH Adjustors GH Reagent Wedge	Not listed Not listed
Chemical Weapons Convention List Schedule III Chemicals	:	GH Adjustors GH Reagent Wedge	Not listed Not listed

Section 16. Other information

History

Date of issue/Date of revision : 1/22/2016.

Version : 1.04

Section 16. Other information

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

Allergen : **Not available.**