

Kit SDS Cover Sheet KGM BULLETKIT W/O CA++ CC-3104 & CC-4131

Version 2.0 Revision Date 13.12.2018 Print Date 10.03.2021

Product Information

Product name : KGM BULLETKIT W/O CA++ CC-3104 & CC-4131 Material number : CC-3112

Components

KBM w/o Calcium Basal Medium	SDS attached
KGM SingleQuot Kit Suppl&Growth Factors	SDS attached



according to Regulation (EC) No. 1907/2006

KBM w/o Calcium Basal Medium

Version 2.0	Revision Date 13.12.2018	Print Date 10.03.2021		
SECTION 1: Identification of the substance/mixture and of the company/undertaking				
1.1 Product identifier Product name	: KBM w/o Calcium Basal Medium			
1.2 Relevant identified uses of the subst Use of the Substance/Mixture	ance or mixture and uses advised against : For Research Use Only. Not for use in diag	gnostic procedures.		
1.3 Details of the supplier of the safety o Company	 Lonza Ltd Muenchensteinerstrasse 38 CH-4002 Basel, Switzerland Business Telephone: +41 61 316 81 11 Lonza Verviers Sprl Parc Industriel de Petit-Rechain BE-4800 Verviers, Belgium Business Telephone: +32 8732 1611 			
	Lonza Cologne GmbH Nattermannallee 1 DE-50829 Köln, Germany Business Telephone: + 49 221 99 1990 Lonza Copenhagen ApS Strandhaven 12 DK-2665 Vallensbaek Strand, Denmark Business Telephone: + 45 4356 7400			
E-mail address Responsible/issuing person	sds@lonza.com			
1.4 Emergency telephone number Emergency telephone number	: Lonza Ltd, CH-4002 Basel, Switzerland Telephone: +41 61 313 94 94 (24h)			

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.



according to Regulation (EC) No. 1907/2006

KBM w/o Calcium Basal Medium

Version 2.0	Revision Date 13.12.2018	Print Date 10.03.202
SECTION 3: Composition/information	tion on ingredients	
3.2 Mixtures		
Components		
Remarks	: No hazardous ingredients	
SECTION 4: First aid measures		
4.1 Description of first aid measures		
If inhaled	: No special precautions required.	
In case of skin contact	: Wash with water and soap as a p	recaution.
	If skin irritation persists, call a phy	
In case of eye contact	: Immediately flush eye(s) with pler If eye irritation persists, consult a	
If swallowed	: Immediately give large quantities	of water to drink.
	Do not induce vomiting without me	edical advice.
	Never give anything by mouth to a	an unconscious person.
4.2 Most important symptoms and eff	ects, both acute and delayed	
Symptoms	: No information available.	
4.3 Indication of any immediate medio	cal attention and special treatment ne	eded
Treatment	: No information available.	
SECTION 5: Firefighting measures	3	
5.1 Extinguishing media		
Suitable extinguishing media	: Water spray	
	Dry powder Foam	
5.2 Special hazards arising from the s	substance or mixture	
Specific hazards during firefighting	: Heating or fire can release toxic g	as.
5.3 Advice for firefighters		
Special protective equipment for firefighters	: In the event of fire, wear self-cont	ained breathing apparatus.
Further information	: Use water spray to cool unopened	d containers.



according to Regulation (EC) No. 1907/2006

KBM w/o Calcium Basal Medium

ip :	res ment and emergency procedures Use personal protective equipment.
:	
-	Use personal protective equipment.
:	
:	
	Prevent product from entering drains.
nt	and cleaning up
:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
	No. and the second discount of the later
:	No special precautions required.
:	Take precautionary measures against static discharges.
:	Handle in accordance with good industrial hygiene and safety practice.
g	any incompatibilities
:	No special storage conditions required.
:	No information available.
1	: g

8.1 Control parameters

Occupational Exposure Limits

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Engineering measures

Avoid splashes.



according to Regulation (EC) No. 1907/2006

KBM w/o Calcium Basal Medium

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Personal protective equipment		
Eye protection	: Tightly fitting safety goggles	
Hand protection	Nitella malala an	
Material	: Nitrile rubber	
Rate of permeability	: > 480 min	
Skin and body protection	: Choose body protection according to concentration of the dangerous subs No special protective equipment requ	tance at the work place.
Respiratory protection	: No personal respiratory protective ed required.	quipment normally

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	Aqueous solution
Colour	:	red
Odour	:	no data available
Odour Threshold	:	no data available
рН	:	7,4 - 7,6
Freezing point	:	no data available
Boiling point/boiling range	:	no data available
Flash point	:	does not flash
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Relative density	:	no data available
Density	:	no data available
Solubility(ies) Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	no data available



according to Regulation (EC) No. 1907/2006

KBM w/o Calcium Basal Medium

Version 2.0	Revision Date 13.12.2018	Print Date 10.03.202
Auto-ignition temperature	: no data available	
Decomposition temperature	: no data available	
Viscosity	: no data available	
Explosive properties	: no data available	
Oxidizing properties	: no data available	
9.2 Other information no data available		
SECTION 10: Stability and react	vity	
10.1 Reactivity Stable under recommended store	age conditions.	
10.2 Chemical stability Stable under normal conditions.		
10.3 Possibility of hazardous reacti		
Hazardous reactions	: Stable under normal conditions.	
10.4 Conditions to avoid		
Conditions to avoid	: no data available	
10.5 Incompatible materials		
Materials to avoid	: Strong oxidizing agents	
10.6 Hazardous decomposition pro No decomposition if stored norma		
SECTION 11: Toxicological info	mation	
11.1 Information on toxicological ef	fects	
Further information		
	Remarks: No data is available on	the product itself.
SECTION 12: Ecological informa	ition	
12.1 Toxicity		
Toxicity to fish	: Remarks: no data available	
12.2 Persistence and degradability		
Biodegradability	: Result: no data available	
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according to Regulation (EC) No. 1907/2006

KBM w/o Calcium Basal Medium

	2.0	Revision Date 13.12.2018	Print Date 10.03.202
12.3 Bio	paccumulative potential		
Bic	paccumulation	: Remarks: no data available	
12.4 Mc	obility in soil		
	stribution among environmental npartments	: Remarks: no data available	
12.5 Re	sults of PBT and vPvB assessi	ment	
As	sessment	: This substance/mixture container be either persistent, bioaccumu persistent and very bioaccumula higher.	lative and toxic (PBT), or very
12.6 Ot	her adverse effects		
Ad	ditional ecological information	: no data available	
SECTI	ON 13: Disposal consideration	ons	
13 1 W:	aste treatment methods		
	oduct	: Dispose of in accordance with I	
110			ocal regulations.
	ON 14: Transport informatio		
ΙΑΤΑ		n Not dangerous goods	
IATA 14.1	UN number	Not dangerous goods : Not applicable	
IATA 14.1 14.2	UN number Proper shipping name	Not dangerous goods : Not applicable : Not applicable	
IATA 14.1 14.2 14.3	UN number Proper shipping name Transport hazard class	Not dangerous goods : Not applicable : Not applicable : Not applicable	
IATA 14.1 14.2	UN number Proper shipping name	Not dangerous goods : Not applicable : Not applicable	
IATA 14.1 14.2 14.3 14.4	UN number Proper shipping name Transport hazard class Packing group	Not dangerous goods Not applicable Not applicable Not applicable Not applicable Not applicable 	
IATA 14.1 14.2 14.3 14.4 14.5 IMDG	UN number Proper shipping name Transport hazard class Packing group Environmental hazards	Not dangerous goods Not applicable Not applicable Not applicable Not applicable no Not dangerous goods	
IATA 14.1 14.2 14.3 14.4 14.5 IMDG 14.1	UN number Proper shipping name Transport hazard class Packing group Environmental hazards UN number	Not dangerous goods Not applicable Not applicable Not applicable Not applicable no Not dangerous goods Not applicable	
IATA 14.1 14.2 14.3 14.4 14.5 IMDG	UN number Proper shipping name Transport hazard class Packing group Environmental hazards UN number Proper shipping name	Not dangerous goods Not applicable Not applicable Not applicable Not applicable no Not dangerous goods Not applicable Not applicable Not applicable	
IATA 14.1 14.2 14.3 14.4 14.5 IMDG 14.1 14.2	UN number Proper shipping name Transport hazard class Packing group Environmental hazards UN number	Not dangerous goods Not applicable Not applicable Not applicable Not applicable no Not dangerous goods Not applicable	
IATA 14.1 14.2 14.3 14.4 14.5 IMDG 14.1 14.2 14.3	UN number Proper shipping name Transport hazard class Packing group Environmental hazards UN number Proper shipping name Transport hazard class	Not dangerous goods Not applicable Not applicable Not applicable Not applicable Not dangerous goods Not dangerous goods Not applicable Not applicable Not applicable Not applicable Not applicable	
IATA 14.1 14.2 14.3 14.4 14.5 IMDG 14.1 14.2 14.3 14.4	UN number Proper shipping name Transport hazard class Packing group Environmental hazards UN number Proper shipping name Transport hazard class Packing group	Not dangerous goods Not applicable Not applicable Not applicable Not applicable no Not dangerous goods Not applicable Not applicable	
IATA 14.1 14.2 14.3 14.4 14.5 IMDG 14.1 14.2 14.3 14.4 14.5	UN number Proper shipping name Transport hazard class Packing group Environmental hazards UN number Proper shipping name Transport hazard class Packing group	Not dangerous goods Not applicable Not applicable Not applicable Not applicable no Not dangerous goods Not applicable Not applicable Not applicable Not applicable Not applicable Marine pollutant: no	
IATA 14.1 14.2 14.3 14.4 14.5 IMDG 14.1 14.2 14.3 14.4 14.5 ADR	UN number Proper shipping name Transport hazard class Packing group Environmental hazards UN number Proper shipping name Transport hazard class Packing group Environmental hazards	Not dangerous goods Not applicable Not applicable Not applicable Not applicable Not dangerous goods Not dangerous goods Not applicable Not applicable Not applicable Not applicable Marine pollutant: no	
IATA 14.1 14.2 14.3 14.4 14.5 IMDG 14.1 14.2 14.3 14.4 14.5 ADR 14.1	UN number Proper shipping name Transport hazard class Packing group Environmental hazards UN number Proper shipping name Transport hazard class Packing group Environmental hazards	Not dangerous goods Not applicable Not applicable Not applicable Not applicable no Not dangerous goods Not applicable Not applicable	
IATA 14.1 14.2 14.3 14.4 14.5 IMDG 14.1 14.2 14.3 14.4 14.5 ADR 14.1 14.2	UN number Proper shipping name Transport hazard class Packing group Environmental hazards UN number Proper shipping name Transport hazard class Packing group Environmental hazards	Not dangerous goods Not applicable Not applicable Not applicable Not applicable Not dangerous goods Not dangerous goods Not applicable Not applicable	



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Versior	n 2.0	Revision Date 13.12.2018	Print Date 10.03.2021
RID		: Not dangerous goods	
14.1	UN number		
14.1		: Not applicable	
14.2	Proper shipping name	: Not applicable	
14.3	Transport hazard class	: Not applicable	
14.4	Packing group Environmental hazards	: Not applicable	
14.5	Environmental nazards	: no	
DOT		: Not dangerous goods	
14.1	UN number	: Not applicable	
14.2	Proper shipping name	: Not applicable	
14.3	Transport hazard class	: Not applicable	
14.4	Packing group	: Not applicable	
14.5	Environmental hazards	: no	
TDG		: Not dangerous goods	
14.1	UN number	: Not applicable	
14.2	Proper shipping name	: Not applicable	
14.3	Transport hazard class	: Not applicable	
14.4	Packing group	: Not applicable	
14.5	Environmental hazards	: no	
14.6	Special precautions for user	: none	
14.7	Transport in bulk according to Annex II of Marpol and the IBC Co	: Not applicable de	

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	:	Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
Regulation (EC) No 850/2004 on persistent organic pollutants	:	Not applicable
Seveso III: Directive 2012/18/EU of the European Parliament and	nd d	of the Council on the cont

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. Not applicable



according to Regulation (EC) No. 1907/2006

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Version 2.0	Revision Date 13.12.2018	Print Date 10.03.2021
National regulatory information		
Water contaminating class (Germany)	: WGK 1 slightly hazardous to water Classification according to AwSV, A	
15.2 Chemical safety assessment		

not required

SECTION 16: Other information

Further information

Full text of other abbreviations

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ATE -Acute Toxicity Estimate: AwSV - Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen / Ordinance on facilities for handling substances that are hazardous to water; BPR - Biocidal Product Regulation; bw - Body weight; CAS - Chemical Abstract Service; CLP - Classification Labelling Packaging Regulation, Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DNEL-Derived No Effect Level; DOT - Department of Transportation; EC – European Community; ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; EmS (Emergency Response Procedures for Ships Carrying Dangerous Goods); EN – European Standard; ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; EU OEL - European Occupational Exposure Limit; GHS -Globally Harmonized System of Classification and Labelling of Chemicals; GLP - Good Laboratory Practice; GV – Danish Exposure Limits for Substances and Materials: IARC - International Agency for Research on Cancer: IATA - International Air Transport Association: IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; IMDG - International Maritime Dangerous Goods; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); LOFT - Danish Threshold Limit Value; MAK - German Threshold Limit Value; MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NIOSH/Guide - National Institute of Safety and Health Guidebook; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NTP -National Toxicology Program; OECD - Organization for Economic Co-operation and Development; PBT -Persistent, Bioaccumulative and Toxic substance; PEL - Permissible Exposure Limit; PNEC - Predicted no Effect Concentration; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; REL -Recommended Exposure Limit; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; STEL - Short-Term Exposure Limit; TDG - Transportation of Dangerous Goods; TGG -Dutch Threshold Limit Value; TGV - Swedish OEL; TLV Threshold Limit Value; TLV-C - Threshold Limit Value Ceiling; TWA -Time Weighted Average; UDS - Unscheduled DNA Synthesis; UN - United Nations; VLE - Valeurs limites d'exposition professionnelle aux agents chimiques en France; VME - Valeur (Limite) Moyenne d'Exposition; VOC - Volatile Organic Compound[s]; WEEL - Workplace Environmental Exposure Level; % w/w Percent weight by weight; %(V) Percent Volume

Date format

dd.mm.yyyy



according to Regulation (EC) No. 1907/2006

KBM w/o Calcium Basal Medium

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Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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according to Regulation (EC) No. 1907/2006

KGM SingleQuot Kit Suppl&Growth Factors

Version 2.0	Revision Date 13.12.2018	Print Date 10.03.2021			
SECTION 1: Identification of the substance/mixture and of the company/undertaking					
1.1 Product identifier Product name	: KGM SingleQuot Kit Suppl&Growth Factor	ors			
1.2 Relevant identified uses of the sul	ostance or mixture and uses advised against	4			
Use of the Substance/Mixture	: For Research Use Only. Not for use in dia				
1.3 Details of the supplier of the safet	y data sheet				
Company	 Lonza Ltd Muenchensteinerstrasse 38 CH-4002 Basel, Switzerland Business Telephone: +41 61 316 81 11 				
	Lonza Verviers Sprl Parc Industriel de Petit-Rechain BE-4800 Verviers, Belgium Business Telephone: +32 8732 1611				
	Lonza Cologne GmbH Nattermannallee 1 DE-50829 Köln, Germany Business Telephone: + 49 221 99 1990				
	Lonza Copenhagen ApS Strandhaven 12 DK-2665 Vallensbaek Strand, Denmark Business Telephone: + 45 4356 7400				
E-mail address Responsible/issuing person	sds@lonza.com				
1.4 Emergency telephone number Emergency telephone number	: Lonza Ltd, CH-4002 Basel, Switzerland Telephone: +41 61 313 94 94 (24h)				

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

2.2 Label elements

2.3 Other hazards

None known.



according to Regulation (EC) No. 1907/2006

KGM SingleQuot Kit Suppl&Growth Factors

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

SECTION 4: First aid measures

- 4.1 Description of first aid measures
- 4.2 Most important symptoms and effects, both acute and delayed

None known.



according to Regulation (EC) No. 1907/2006

KGM SingleQuot Kit Suppl&Growth Factors

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4.3 Indication of any immediate medical attention and special treatment needed

SECTION 5: Firefighting measures

- 5.1 Extinguishing media
- 5.2 Special hazards arising from the substance or mixture
- 5.3 Advice for firefighters

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
- 6.2 Environmental precautions
- 6.3 Methods and material for containment and cleaning up
- 6.4 Reference to other sections

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling
- 7.2 Conditions for safe storage, including any incompatibilities
- 7.3 Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	: no data available
Odour	: no data available
Odour Threshold	: no data available
рН	: no data available
Melting point/freezing point	: no data available
Boiling point/boiling range	: no data available
Flash point	:



according to Regulation (EC) No. 1907/2006

KGM SingleQuot Kit Suppl&Growth Factors

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Evaporation rate	: no data available	
Flammability (solid, gas)	:	
Upper explosion limit	:	
Lower explosion limit	:	
Vapour pressure	: no data available	
Relative vapour density	: no data available	
Relative density	: no data available	
Solubility(ies)	: no data available	
Partition coefficient: n-octanol/water	: no data available	
Auto-ignition temperature	: no data available	
Decomposition temperature	: no data available	
Viscosity	:	
Explosive properties	: no data available	
Oxidizing properties	: no data available	

9.2 Other information

no data available

SECTION 10: Stability and reactivity

- 10.1 Reactivity
- 10.2 Chemical stability
- 10.3 Possibility of hazardous reactions
- 10.4 Conditions to avoid
- 10.5 Incompatible materials
- **10.6 Hazardous decomposition products**

SECTION 11: Toxicological information

11.1 Information on toxicological effects

SECTION 12: Ecological information

12.1 Toxicity

no data available



according to Regulation (EC) No. 1907/2006

KGM SingleQuot Kit Suppl&Growth Factors

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12.2 Persistence and degradability no data available		
 12.3 Bioaccumulative potential no data available 12.4 Mobility in soil no data available 		
12.5 Results of PBT and vPvB asse Not relevant	ssment	
12.6 Other adverse effects no data available		

SECTION 13: Disposal considerations

13.1 Waste treatment methods

SECTION 14: Transport information

14.5	Environmental hazards	:	no
14.5	Environmental hazards	:	Marine pollutant: no
14.5	Environmental hazards	:	no
14.5	Environmental hazards	:	no
14.5	Environmental hazards	:	no
14.5	Environmental hazards	:	no
14.6	Special precautions for user	:	none
14.7	Transport in bulk according to Annex II of Marpol and the IBC Code	:	Not applicable

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislati	ion specific for the substance or mixture	
REACH - Candidate List of Substances of Very High Cond for Authorisation (Article 59).	cern : Not applicable	
REACH - List of substances subject to authorisation (Anno XIV)	nex : Not applicable	
Regulation (EC) No 1005/2009 on substances that deplete ozone layer	te the : Not applicable	
Regulation (EC) No 850/2004 on persistent organic pollute	tants : Not applicable	

according to Regulation (EC) No. 1907/2006

KGM SingleQuot Kit Suppl&Growth Factors

Version 2.0

Revision Date 13.12.2018

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15.2 Chemical safety assessment

SECTION 16: Other information

Further information

Full text of other abbreviations

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ATE -Acute Toxicity Estimate; AwSV - Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen / Ordinance on facilities for handling substances that are hazardous to water; BPR - Biocidal Product Regulation; bw - Body weight; CAS - Chemical Abstract Service; CLP - Classification Labelling Packaging Regulation, Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DNEL-Derived No Effect Level; DOT - Department of Transportation; EC – European Community; ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; EmS (Emergency Response Procedures for Ships Carrying Dangerous Goods); EN – European Standard; ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; EU OEL - European Occupational Exposure Limit; GHS -Globally Harmonized System of Classification and Labelling of Chemicals; GLP - Good Laboratory Practice; GV – Danish Exposure Limits for Substances and Materials; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association: IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; IMDG - International Maritime Dangerous Goods; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); LOFT - Danish Threshold Limit Value; MAK - German Threshold Limit Value; MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NIOSH/Guide - National Institute of Safety and Health Guidebook; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NTP -National Toxicology Program; OECD - Organization for Economic Co-operation and Development; PBT -Persistent, Bioaccumulative and Toxic substance; PEL - Permissible Exposure Limit; PNEC - Predicted no Effect Concentration; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; REL -Recommended Exposure Limit; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; STEL - Short-Term Exposure Limit; TDG - Transportation of Dangerous Goods; TGG -Dutch Threshold Limit Value; TGV – Swedish OEL; TLV Threshold Limit Value; TLV-C - Threshold Limit Value Ceiling; TWA -Time Weighted Average; UDS - Unscheduled DNA Synthesis; UN - United Nations; VLE - Valeurs limites d'exposition professionnelle aux agents chimiques en France; VME - Valeur (Limite) Moyenne d'Exposition; VOC - Volatile Organic Compound[s]; WEEL - Workplace Environmental Exposure Level; % w/w Percent weight by weight; %(V) Percent Volume

Date format

: dd.mm.yyyy

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according to Regulation (EC) No. 1907/2006

KGM SingleQuot Kit Suppl&Growth Factors

Version 2.0

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according to Regulation (EC) No. 1907/2006

BPE Low Protein - non specific

Version 2.0	Revision Date 13.12.2018	Print Date 10.03.2021
SECTION 1: Identification of the subs	stance/mixture and of the company/und	ertaking
1.1 Product identifier		
Product name	: BPE Low Protein - non specific	
1.2 Relevant identified uses of the substa	ance or mixture and uses advised against	
Use of the Substance/Mixture	: Scientific research and development	
1.3 Details of the supplier of the safety d	ata sheet	
Company	: Lonza Ltd	
	Muenchensteinerstrasse 38	
	CH-4002 Basel, Switzerland Business Telephone: +41 61 316 81 11	
	Lonza Verviers Sprl	
	Parc Industriel de Petit-Rechain	
	BE-4800 Verviers, Belgium	
	Business Telephone: +32 8732 1611	
	Lonza Cologne GmbH	
	Nattermannallee 1 DE-50829 Köln, Germany	
	Business Telephone: + 49 221 99 1990	
	Lonza Copenhagen ApS	
	Strandhaven 12	
	DK-2665 Vallensbaek Strand, Denmark	
	Business Telephone: + 45 4356 7400	
E-mail address	sds@lonza.com	
Responsible/issuing person		
1.4 Emergency telephone number		
Emergency telephone number	: Lonza Ltd, CH-4002 Basel, Switzerland	
	Telephone: +41 61 313 94 94 (24h)	

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.



according to Regulation (EC) No. 1907/2006

BPE Low Protein - non specific

Version 2.0	Revision Date 13.12.2018	Print Date 10.03.202
SECTION 3: Composition/informati	on on ingredients	
3.2 Mixtures		
Components		
Remarks	: No hazardous ingredients	
SECTION 4: First aid measures		
4.1 Description of first aid measures		
If inhaled	: No special precautions required.	
In case of skin contact	: Wash with water and soap as a pre If skin irritation persists, call a physi	
In case of eye contact	: Immediately flush eye(s) with plenty If eye irritation persists, consult a sp	
If swallowed	: Immediately give large quantities of Do not induce vomiting without med Never give anything by mouth to an	lical advice.
4.2 Most important symptoms and effe	cts, both acute and delayed	
Symptoms	: No information available.	
4.3 Indication of any immediate medica	al attention and special treatment need	ded
Treatment	: No information available.	
SECTION 5: Firefighting measures		
5.1 Extinguishing media		
Suitable extinguishing media	: Water spray Dry powder Foam	
5.2 Special hazards arising from the su	bstance or mixture	
Specific hazards during firefighting	: Heating or fire can release toxic gas	5.
E 2 Advice for firefighters		
5.3 Advice for firefighters		a a d la sa atla in an a sa a sa tu sa
Special protective equipment for firefighters	: In the event of fire, wear self-contai	ned breatning apparatus.



according to Regulation (EC) No. 1907/2006

BPE Low Protein - non specific

Version 2.0		Revision Date 13.12.2018	Print Date 10.03.202
SECTION 6: Accidental release mea	su	res	
6.1 Personal precautions, protective eq	uip	ment and emergency procedures	
Personal precautions	:	Use personal protective equipment.	
6.2 Environmental precautions			
Environmental precautions	:	Prevent product from entering drains.	
6.3 Methods and material for containme	nt	and cleaning up	
Methods for cleaning up	:	Contain spillage, and then collect with absorbent material, (e.g. sand, earth, vermiculite) and place in container for local / national regulations (see sectio	diatomaceous earth, disposal according to
6.4 Reference to other sections			
For personal protection see section 8	•		
SECTION 7: Handling and storage			
7.1 Precautions for safe handling Advice on safe handling		No special precautions required.	
Advice on protection against fire and explosion	:	Take precautionary measures against	static discharges.
Hygiene measures	:	Handle in accordance with good indus practice.	strial hygiene and safety
7.2 Conditions for safe storage, includir	ng	any incompatibilities	
Requirements for storage areas and containers	:	No special storage conditions required	J.
7.3 Specific end use(s)			

Occupational Exposure Limits

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Engineering measures

Avoid splashes.



according to Regulation (EC) No. 1907/2006

BPE Low Protein - non specific

Version 2.0	Revision Date 13.12.2018	Print Date 10.03.2021
Personal protective equipment		
Eye protection	: Tightly fitting safety goggles	
Hand protection Material Rate of permeability	 Nitrile rubber > 480 min 	
Skin and body protection	: Choose body protection according to concentration of the dangerous subs No special protective equipment requ	tance at the work place.
Respiratory protection	: No personal respiratory protective ec required.	uipment normally

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	Aqueous solution
Colour	:	no data available
Odour	:	no data available
Odour Threshold	:	no data available
рН	:	no data available
Freezing point	:	no data available
Boiling point/boiling range	:	no data available
Flash point	:	does not flash
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Relative density	:	no data available
Density	:	no data available
Solubility(ies) Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	no data available



according to Regulation (EC) No. 1907/2006

BPE Low Protein - non specific

Version 2.0	Revision Date 13.12.2018	Print Date 10.03.202
Auto-ignition temperature	: no data available	
Decomposition temperature	: no data available	
Viscosity	: no data available	
Explosive properties	: no data available	
Oxidizing properties	: no data available	
9.2 Other information no data available		
SECTION 10: Stability and reactivity Stable under recommended stora	-	
10.2 Chemical stability Stable under normal conditions.		
10.3 Possibility of hazardous reacti	ons	
Hazardous reactions	: Stable under normal cond	ditions.
10.4 Conditions to avoid		
Conditions to avoid	: no data available	
10.5 Incompatible materials Materials to avoid	: Strong oxidizing agents	
10.6 Hazardous decomposition pro No decomposition if stored norma		
SECTION 11: Toxicological infor	mation	
11.1 Information on toxicological ef	ects	
Further information	Remarks: No data is avai	lable on the product itself.
SECTION 12: Ecological informa		
12.1 Toxicity		
Toxicity to fish	: Remarks: no data availab	ble
12.2 Persistence and degradability		
Biodegradability	: Result: no data available	
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according to Regulation (EC) No. 1907/2006

BPE Low Protein - non specific

Version 2	.0	Revision Date 13.12.2018	Print Date 10.03.2021
12.3 Bioa	accumulative potential		
Bioad	ccumulation	: Remarks: no data available	
12.4 Mob	ility in soil		
	ibution among environmental partments	: Remarks: no data available	
12.5 Resı	ults of PBT and vPvB assessr	nent	
Asse	essment	: This substance/mixture contains be either persistent, bioaccumul persistent and very bioaccumula higher.	lative and toxic (PBT), or very
12.6 Othe	er adverse effects		
Addit	tional ecological information	: no data available	
SECTIO	N 13: Disposal consideration	ons	
13 1 Was	te treatment methods		
Prod	uci	Dispose of in accordance with it	ocal regulations.
Prod		: Dispose of in accordance with lo	ocal regulations.
SECTIO	N 14: Transport information	n	ocal regulations.
			ocal regulations.
SECTIOI IATA		n	ocal regulations.
SECTIOI IATA 14.1 U 14.2 F	N 14: Transport information JN number Proper shipping name	n Not dangerous goods : Not applicable : Not applicable	ocal regulations.
SECTIOI IATA 14.1 U 14.2 F 14.3 T	N 14: Transport information JN number Proper shipping name Fransport hazard class	n Not dangerous goods : Not applicable : Not applicable : Not applicable : Not applicable	ocal regulations.
SECTIOI IATA 14.1 U 14.2 F 14.3 T 14.4 F	N 14: Transport information JN number Proper shipping name	n Not dangerous goods : Not applicable : Not applicable	ocal regulations.
SECTIOI IATA 14.1 U 14.2 F 14.3 T 14.4 F	N 14: Transport information JN number Proper shipping name Fransport hazard class Packing group	n Not dangerous goods : Not applicable : Not applicable : Not applicable : Not applicable : Not applicable	ocal regulations.
SECTIOI IATA 14.1 L 14.2 F 14.3 T 14.4 F 14.5 E IMDG	N 14: Transport information JN number Proper shipping name Fransport hazard class Packing group Environmental hazards	n Not dangerous goods Not applicable Not applicable Not applicable Not applicable no Not dangerous goods	ocal regulations.
SECTIOI IATA 14.1 U 14.2 F 14.3 T 14.4 F 14.5 E IMDG 14.1 U	N 14: Transport information JN number Proper shipping name Fransport hazard class Packing group Environmental hazards JN number	n Not dangerous goods : Not applicable : Not applicable : Not applicable : Not applicable : no Not dangerous goods : Not applicable	ocal regulations.
SECTIOI IATA 14.1 U 14.2 F 14.3 T 14.4 F 14.5 E IMDG 14.1 U 14.2 F	N 14: Transport information JN number Proper shipping name Fransport hazard class Packing group Environmental hazards	n Not dangerous goods Not applicable Not applicable Not applicable Not applicable no Not dangerous goods	ocal regulations.
SECTION IATA 14.1 U 14.2 F 14.3 T 14.4 F 14.5 E IMDG 14.1 U 14.2 F 14.3 T 14.4 F	N 14: Transport information JN number Proper shipping name Fransport hazard class Packing group Environmental hazards JN number Proper shipping name Fransport hazard class Packing group	n Not dangerous goods Not applicable Not applicable Not applicable no Not dangerous goods Not dangerous goods Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable	ocal regulations.
SECTIOI IATA 14.1 U 14.2 F 14.3 T 14.4 F 14.5 E IMDG 14.1 U 14.2 F 14.3 T 14.4 F	N 14: Transport information JN number Proper shipping name Fransport hazard class Packing group Environmental hazards JN number Proper shipping name Fransport hazard class	n Not dangerous goods Not applicable Not applicable Not applicable no Not dangerous goods Not dangerous goods	ocal regulations.
SECTION IATA 14.1 U 14.2 F 14.3 T 14.4 F 14.5 E IMDG 14.1 U 14.2 F 14.3 T 14.4 F	N 14: Transport information JN number Proper shipping name Fransport hazard class Packing group Environmental hazards JN number Proper shipping name Fransport hazard class Packing group	n Not dangerous goods Not applicable Not applicable Not applicable no Not dangerous goods Not dangerous goods Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable	ocal regulations.
SECTIOI IATA 14.1 U 14.2 F 14.3 T 14.4 F 14.5 E IMDG 14.1 U 14.2 F 14.3 T 14.4 F 14.3 T 14.4 F 14.5 E ADR	N 14: Transport information JN number Proper shipping name Fransport hazard class Packing group Environmental hazards JN number Proper shipping name Fransport hazard class Packing group	n Not dangerous goods Not applicable Not applicable Not applicable Not applicable no Not dangerous goods Not applicable Not applicable Not applicable Not applicable Marine pollutant: no	ocal regulations.
SECTIOI IATA 14.1 U 14.2 F 14.3 T 14.4 F 14.5 E IMDG 14.1 U 14.2 F 14.3 T 14.4 F 14.3 T 14.4 F 14.5 E ADR 14.1 U	N 14: Transport information JN number Proper shipping name Transport hazard class Packing group Environmental hazards JN number Proper shipping name Transport hazard class Packing group Environmental hazards	n Not dangerous goods Not applicable Not applicable Not applicable Not applicable no Not dangerous goods Not dangerous goods Not applicable Not applicable Not applicable Not applicable Not applicable Marine pollutant: no	ocal regulations.
SECTIOI IATA 14.1 L 14.2 F 14.3 T 14.4 F 14.5 E IMDG 14.1 L 14.2 F 14.3 T 14.4 F 14.5 E ADR 14.1 L 14.2 F 14.3 T	N 14: Transport information JN number Proper shipping name Transport hazard class Packing group Environmental hazards JN number Proper shipping name Transport hazard class Packing group Environmental hazards	n Not dangerous goods Not applicable Not applicable Not applicable Not applicable Not applicable Not dangerous goods Not dangerous goods Not applicable Not applicable Not applicable Not applicable Not applicable Not dangerous goods Not dangerous goods Not dangerous goods	ocal regulations.
SECTION IATA 14.1 U 14.2 F 14.3 T 14.4 F 14.5 E IMDG 14.1 U 14.2 F 14.3 T 14.4 F 14.5 E ADR 14.1 U 14.2 F 14.3 T 14.4 F	N 14: Transport information JN number Proper shipping name Transport hazard class Packing group Environmental hazards JN number Proper shipping name Transport hazard class Packing group Environmental hazards	n Not dangerous goods Not applicable Not applicable Not applicable Not applicable no Not dangerous goods Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable Not dangerous goods Not dangerous goods	ocal regulations.



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Versior	n 2.0	Revision Date 13.12.2018	Print Date 10.03.2021
RID		: Not dangerous goods	
14.1	UN number	: Not applicable	
14.2	Proper shipping name	: Not applicable	
14.3	Transport hazard class	: Not applicable	
14.4	Packing group	: Not applicable	
14.5	Environmental hazards	: no	
DOT		: Not dangerous goods	
14.1	UN number	: Not applicable	
14.2	Proper shipping name	: Not applicable	
14.3	Transport hazard class	: Not applicable	
14.4	Packing group	: Not applicable	
14.5	Environmental hazards	: no	
TDG		: Not dangerous goods	
14.1	UN number	: Not applicable	
14.2	Proper shipping name	: Not applicable	
14.3	Transport hazard class	: Not applicable	
14.4	Packing group	: Not applicable	
14.5	Environmental hazards	: no	
14.6	Special precautions for user	: none	
14.7	Transport in bulk according to Annex II of Marpol and the IBC Co	: Not applicable de	

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	:	Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
Regulation (EC) No 850/2004 on persistent organic pollutants	:	Not applicable
Seveso III: Directive 2012/18/EU of the European Parliament and	nd c	of the Council on the con

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. Not applicable



according to Regulation (EC) No. 1907/2006

BPE Low Protein - non specific

/ersion 2.0	Revision Date 13.12.2018	Print Date 10.03.2021
National regulatory information		
Water contaminating class (Germany)	: nwg not water endangering Classification according to AwSV, A	nnex 1 (2.2)

15.2 Chemical safety assessment

not required

SECTION 16: Other information

Further information

Full text of other abbreviations

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ATE -Acute Toxicity Estimate: AwSV - Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen / Ordinance on facilities for handling substances that are hazardous to water; BPR - Biocidal Product Regulation; bw - Body weight; CAS - Chemical Abstract Service; CLP - Classification Labelling Packaging Regulation, Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DNEL-Derived No Effect Level; DOT - Department of Transportation; EC – European Community; ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; EmS (Emergency Response Procedures for Ships Carrying Dangerous Goods); EN – European Standard; ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; EU OEL - European Occupational Exposure Limit; GHS -Globally Harmonized System of Classification and Labelling of Chemicals; GLP - Good Laboratory Practice; GV – Danish Exposure Limits for Substances and Materials: IARC - International Agency for Research on Cancer: IATA - International Air Transport Association: IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; IMDG - International Maritime Dangerous Goods; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); LOFT - Danish Threshold Limit Value; MAK - German Threshold Limit Value; MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NIOSH/Guide - National Institute of Safety and Health Guidebook; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NTP -National Toxicology Program; OECD - Organization for Economic Co-operation and Development; PBT -Persistent, Bioaccumulative and Toxic substance; PEL - Permissible Exposure Limit; PNEC - Predicted no Effect Concentration; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; REL -Recommended Exposure Limit; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; STEL - Short-Term Exposure Limit; TDG - Transportation of Dangerous Goods; TGG -Dutch Threshold Limit Value; TGV - Swedish OEL; TLV Threshold Limit Value; TLV-C - Threshold Limit Value Ceiling; TWA -Time Weighted Average; UDS - Unscheduled DNA Synthesis; UN - United Nations; VLE - Valeurs limites d'exposition professionnelle aux agents chimiques en France; VME - Valeur (Limite) Moyenne d'Exposition; VOC - Volatile Organic Compound[s]; WEEL - Workplace Environmental Exposure Level; % w/w Percent weight by weight; %(V) Percent Volume

Date format

: dd.mm.yyyy



according to Regulation (EC) No. 1907/2006

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Version 2.0

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Print Date 10.03.2021

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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Changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.



according to Regulation (EC) No. 1907/2006

HEGF FOR USE IN KGM KIT

Version 2.0	Revision Date 13.12.2018	Print Date 10.03.2021
SECTION 1: Identification of the s	ubstance/mixture and of the company/un	dertaking
1.1 Product identifier		
Product name	: HEGF FOR USE IN KGM KIT	
1.2 Relevant identified uses of the su	bstance or mixture and uses advised against	
Use of the Substance/Mixture	: Scientific research and development	
1.3 Details of the supplier of the safet	v data sheet	
Company	: Lonza Ltd Muenchensteinerstrasse 38 CH-4002 Basel, Switzerland Business Telephone: +41 61 316 81 11	
	Lonza Verviers Sprl Parc Industriel de Petit-Rechain BE-4800 Verviers, Belgium Business Telephone: +32 8732 1611	
	Lonza Cologne GmbH Nattermannallee 1 DE-50829 Köln, Germany Business Telephone: + 49 221 99 1990	
	Lonza Copenhagen ApS Strandhaven 12 DK-2665 Vallensbaek Strand, Denmark Business Telephone: + 45 4356 7400	
E-mail address Responsible/issuing person	sds@lonza.com	
1.4 Emergency telephone number Emergency telephone number	: Lonza Ltd, CH-4002 Basel, Switzerland Telephone: +41 61 313 94 94 (24h)	

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.



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HEGF FOR USE IN KGM KIT

Version 2.0	Revision Date 13.12.2018	Print Date 10.03.202
SECTION 3: Composition/informati	on on ingredients	
3.2 Mixtures		
Components		
Remarks	: No hazardous ingredients	
SECTION 4: First aid measures		
4.1 Description of first aid measures		
If inhaled	: No special precautions required.	
In case of skin contact	: Wash with water and soap as a precau	ition.
	If skin irritation persists, call a physicia	
In case of eye contact	: Immediately flush eye(s) with plenty of	water
	If eye irritation persists, consult a speci	
If swallowed	: Immediately give large quantities of wa	ater to drink
ii Swallowed	Do not induce vomiting without medica	
	Never give anything by mouth to an un	conscious person.
4.2 Most important symptoms and effe	cts, both acute and delayed	
Symptoms	: No information available.	
4.3 Indication of any immediate medica	I attention and special treatment needed	I
Treatment	: No information available.	
SECTION 5: Firefighting measures		
5.1 Extinguishing media		
Suitable extinguishing media	: Water spray	
	Dry powder Foam	
	1 Jan	
5.2 Special hazards arising from the su	bstance or mixture	
Specific hazards during firefighting	: Heating or fire can release toxic gas.	
5.3 Advice for firefighters		
Special protective equipment for firefighters	: In the event of fire, wear self-contained	breathing apparatus.
Further information	: Use water spray to cool unopened con	tainers.



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SECTION 6: Accidental release mea	su	res	
6.1 Personal precautions, protective equ	uip	ment and emergency procedures	
Personal precautions	:	Use personal protective equipment.	
6.2 Environmental precautions			
Environmental precautions	:	Prevent product from entering drains.	
6.3 Methods and material for containme	ent	and cleaning up	
Methods for cleaning up	:	Contain spillage, and then collect with ne absorbent material, (e.g. sand, earth, dia vermiculite) and place in container for di local / national regulations (see section of	atomaceous earth, sposal according to
6.4 Reference to other sections			
For personal protection see section 8.			
SECTION 7: Handling and storage			
SECTION 7: Handling and storage 7.1 Precautions for safe handling			
	:	No special precautions required.	
7.1 Precautions for safe handling	:	No special precautions required. Take precautionary measures against st	tatic discharges.
7.1 Precautions for safe handling Advice on safe handling Advice on protection against fire and	:		-
 7.1 Precautions for safe handling Advice on safe handling Advice on protection against fire and explosion Hygiene measures 	:	Take precautionary measures against st Handle in accordance with good industri practice.	-
 7.1 Precautions for safe handling Advice on safe handling Advice on protection against fire and explosion Hygiene measures 7.2 Conditions for safe storage, including 	: : :	Take precautionary measures against st Handle in accordance with good industri practice.	-
 7.1 Precautions for safe handling Advice on safe handling Advice on protection against fire and explosion Hygiene measures 7.2 Conditions for safe storage, includir Requirements for storage areas and 	: : :	Take precautionary measures against st Handle in accordance with good industri practice. any incompatibilities	-

Occupational Exposure Limits

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Engineering measures

Avoid splashes.



according to Regulation (EC) No. 1907/2006

HEGF FOR USE IN KGM KIT

Version 2.0	Revision Date 13.12.2018	Print Date 10.03.2021
Personal protective equipment		
Eye protection	: Tightly fitting safety goggles	
Hand protection	Nitella malala an	
Material	: Nitrile rubber	
Rate of permeability	: > 480 min	
Skin and body protection	: Choose body protection according to concentration of the dangerous subs No special protective equipment requ	tance at the work place.
Respiratory protection	: No personal respiratory protective ed required.	quipment normally

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	Aqueous solution
Colour	:	no data available
Odour	:	no data available
Odour Threshold	:	no data available
рН	:	no data available
Freezing point	:	no data available
Boiling point/boiling range	:	no data available
Flash point	:	does not flash
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Relative density	:	no data available
Density	:	no data available
Solubility(ies) Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	no data available



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HEGF FOR USE IN KGM KIT

Version 2.0		Revision Date 13.12.2018	Print Date 10.03.202
Auto-ignition temperature	:	no data available	
Decomposition temperature	:	no data available	
Viscosity	:	no data available	
Explosive properties	:	no data available	
Oxidizing properties	:	no data available	
9.2 Other information			
no data available			
SECTION 10: Stability and react	ivity		
10.1 Reactivity Stable under recommended stora		aditions	
10.2 Chemical stability	age co		
Stable under normal conditions.			
10.3 Possibility of hazardous reacti	ons		
Hazardous reactions	:	Stable under normal conditions.	
10.4 Conditions to avoid			
Conditions to avoid	:	no data available	
10.5 Incompatible materials			
Materials to avoid	:	Strong oxidizing agents	
10.6 Hazardous decomposition pro No decomposition if stored norma			
SECTION 11: Toxicological info	rmatio	n	
11.1 Information on toxicological ef	fects		
Further information			
		Remarks: No data is available on the pro-	duct itself.
SECTION 12: Ecological information	ation		
12.1 Toxicity			
Toxicity to fish	:	Remarks: no data available	
12.2 Persistence and degradability			
Biodegradability	:	Result: no data available	
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HEGF FOR USE IN KGM KIT

Version 2.0	0	Revision Date 13.12.2018	Print Date 10.03.202
12.3 Bioad	ccumulative potential		
Bioac	cumulation	: Remarks: no data available	
12.4 Mobi	lity in soil		
	bution among environmental artments	: Remarks: no data available	
12.5 Resu	Its of PBT and vPvB assessi	ment	
Asses	ssment	: This substance/mixture contains r be either persistent, bioaccumulat persistent and very bioaccumulativ higher.	ive and toxic (PBT), or very
12.6 Othe	r adverse effects		
Additi	onal ecological information	: no data available	
13 1 Wast	e treatment methods		
Produ		: Dispose of in accordance with loc	al regulations.
Produ		n	al regulations.
Produ SECTION	Ict I 14: Transport informatio	n Not dangerous goods	al regulations.
Produ SECTION IATA 14.1 U	ICT I 14: Transport informatio N number	n Not dangerous goods : Not applicable	al regulations.
Produ SECTION IATA 14.1 U 14.2 P	Ict I 14: Transport informatio	n Not dangerous goods	al regulations.
Produ SECTION IATA 14.1 U 14.2 P 14.3 Tr 14.4 P	N number roper shipping name ransport hazard class acking group	n Not dangerous goods : Not applicable : Not applicable	al regulations.
Produ SECTION IATA 14.1 U 14.2 P 14.3 Tr 14.4 P	N number roper shipping name ransport hazard class	n Not dangerous goods : Not applicable : Not applicable : Not applicable : Not applicable	al regulations.
Produ SECTION IATA 14.1 U 14.2 P 14.3 Tr 14.4 P	N number roper shipping name ransport hazard class acking group	n Not dangerous goods : Not applicable : Not applicable : Not applicable : Not applicable : Not applicable	al regulations.
Produ SECTION IATA 14.1 U 14.2 Pi 14.3 Ti 14.4 Pi 14.5 Ei IMDG	N number roper shipping name ransport hazard class acking group	n Not dangerous goods : Not applicable : Not applicable : Not applicable : Not applicable : no Not dangerous goods	al regulations.
Produ SECTION IATA 14.1 U 14.2 Pi 14.3 Ti 14.4 Pi 14.5 Ei IMDG 14.1 U	N number roper shipping name ransport hazard class acking group nvironmental hazards	n Not dangerous goods : Not applicable : Not applicable : Not applicable : Not applicable : no	al regulations.
Produ SECTION IATA 14.1 U 14.2 Pi 14.3 Ti 14.4 Pi 14.5 Ei IMDG 14.1 U 14.2 Pi 14.3 Ti	N number roper shipping name ransport hazard class acking group nvironmental hazards	n Not dangerous goods : Not applicable : Not applicable : Not applicable : Not applicable : no Not dangerous goods : Not applicable : Not applicable : Not applicable : Not applicable : Not applicable	al regulations.
Produ SECTION IATA 14.1 U 14.2 Pi 14.3 Ti 14.4 Pi 14.5 Ei IMDG 14.1 U 14.2 Pi 14.3 Ti 14.4 Pi	N number roper shipping name ransport hazard class acking group nvironmental hazards N number roper shipping name ransport hazard class acking group	n Not dangerous goods : Not applicable : Not applicable : Not applicable : Not applicable : no Not dangerous goods : Not applicable : Not applicable : Not applicable : Not applicable : Not applicable : Not applicable : Not applicable	al regulations.
Produ SECTION IATA 14.1 U 14.2 Pi 14.3 Ti 14.4 Pi 14.5 Ei IMDG 14.1 U 14.2 Pi 14.3 Ti 14.4 Pi	N number roper shipping name ransport hazard class acking group nvironmental hazards	n Not dangerous goods : Not applicable : Not applicable : Not applicable : Not applicable : no Not dangerous goods : Not applicable : Not applicable : Not applicable : Not applicable : Not applicable	al regulations.
Produ SECTION IATA 14.1 U 14.2 Pi 14.3 Ti 14.4 Pi 14.5 Ei IMDG 14.1 U 14.2 Pi 14.3 Ti 14.4 Pi	N number roper shipping name ransport hazard class acking group nvironmental hazards N number roper shipping name ransport hazard class acking group	n Not dangerous goods : Not applicable : Not applicable : Not applicable : Not applicable : no Not dangerous goods : Not applicable : Not applicable : Not applicable : Not applicable : Not applicable : Not applicable : Not applicable	al regulations.
Produ SECTION IATA 14.1 U 14.2 Pi 14.3 Ti 14.4 Pi 14.5 Ei IMDG 14.1 U 14.2 Pi 14.3 Ti 14.4 Pi 14.3 Ti 14.4 Pi 14.5 Ei ADR	N number roper shipping name ransport hazard class acking group nvironmental hazards N number roper shipping name ransport hazard class acking group	n Not dangerous goods : Not applicable : Not applicable : Not applicable : Not applicable : no Not dangerous goods : Not applicable : Not applicable	al regulations.
Produ SECTION IATA 14.1 U 14.2 P 14.3 Tr 14.4 Pa 14.5 E IMDG 14.1 U 14.2 P 14.3 Tr 14.4 Pa 14.5 E ADR 14.1 U 14.5 E	N number roper shipping name ransport hazard class acking group nvironmental hazards N number roper shipping name ransport hazard class acking group nvironmental hazards	n Not dangerous goods Not applicable Not applicable Not applicable Not applicable no Not dangerous goods Not dangerous goods Not applicable Not applicable Not applicable Not applicable Mot applicable Mot applicable Not applicable Mot applicable	al regulations.
Produ SECTION IATA 14.1 U 14.2 P 14.3 Tr 14.4 P 14.5 E IMDG 14.1 U 14.2 P 14.3 Tr 14.4 P 14.3 Tr 14.3 Tr 14.3 Tr 14.3 Tr 14.3 Tr 14.3 Tr 14.3 Tr 14.3 Tr 14.3 Tr 14.3 Tr	N number roper shipping name ransport hazard class acking group nvironmental hazards N number roper shipping name ransport hazard class acking group nvironmental hazards	n Not dangerous goods Not applicable Not applicable Not applicable Not applicable Not applicable Not dangerous goods Not applicable Not applicable	al regulations.
Produ SECTION IATA 14.1 U 14.2 P 14.3 Tr 14.4 P 14.5 E IMDG 14.1 U 14.2 P 14.3 Tr 14.4 P 14.3 Tr 14.4 P 14.5 E ADR 14.1 U 14.2 P 14.3 Tr 14.4 P 14.3 Tr 14.4 P 14.3 Tr 14.4 P	N number roper shipping name ransport hazard class acking group nvironmental hazards N number roper shipping name ransport hazard class acking group nvironmental hazards	n Not dangerous goods Not applicable Not applicable Not applicable Not applicable no Not dangerous goods Not applicable Not applicable	al regulations.



according to Regulation (EC) No. 1907/2006

HEGF FOR USE IN KGM KIT

Versior	n 2.0	Revision Date 13.12.2018	Print Date 10.03.202
RID		: Not dangerous goods	
		Not dangerous goods	
14.1	UN number	: Not applicable	
14.2	Proper shipping name	: Not applicable	
14.3	Transport hazard class	: Not applicable	
14.4	Packing group	: Not applicable	
14.5	Environmental hazards	: no	
DOT		: Not dangerous goods	
14.1	UN number	: Not applicable	
14.2	Proper shipping name	: Not applicable	
14.3	Transport hazard class	: Not applicable	
14.4	Packing group	: Not applicable	
14.5	Environmental hazards	: no	
TDG		: Not dangerous goods	
14.1	UN number	: Not applicable	
14.2	Proper shipping name	: Not applicable	
14.3	Transport hazard class	: Not applicable	
14.4	Packing group	: Not applicable	
14.5	Environmental hazards	: no	
14.6	Special precautions for user	: none	
14.7	Transport in bulk according to Annex II of Marpol and the IBC Co	: Not applicable	

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	:	Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
Regulation (EC) No 850/2004 on persistent organic pollutants	:	Not applicable
Seveso III: Directive 2012/18/EU of the European Parliament and	nd c	of the Council on the con

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. Not applicable



according to Regulation (EC) No. 1907/2006

HEGF FOR USE IN KGM KIT

Version 2.0	Revision Date 13.12.2018	Print Date 10.03.2021
National regulatory informati	on	

: WGK 1 slightly hazardous to water

Classification according to AwSV, Annex 1 (5.2)

15.2 Chemical safety assessment

Water contaminating class

not required

(Germany)

SECTION 16: Other information

Further information

Full text of other abbreviations

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ATE -Acute Toxicity Estimate: AwSV - Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen / Ordinance on facilities for handling substances that are hazardous to water; BPR - Biocidal Product Regulation; bw - Body weight; CAS - Chemical Abstract Service; CLP - Classification Labelling Packaging Regulation, Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DNEL-Derived No Effect Level; DOT - Department of Transportation; EC – European Community; ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; EmS (Emergency Response Procedures for Ships Carrying Dangerous Goods); EN – European Standard; ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; EU OEL - European Occupational Exposure Limit; GHS -Globally Harmonized System of Classification and Labelling of Chemicals: GLP - Good Laboratory Practice: GV – Danish Exposure Limits for Substances and Materials: IARC - International Agency for Research on Cancer: IATA - International Air Transport Association: IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; IMDG - International Maritime Dangerous Goods; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); LOFT - Danish Threshold Limit Value; MAK - German Threshold Limit Value; MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NIOSH/Guide - National Institute of Safety and Health Guidebook; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NTP -National Toxicology Program; OECD - Organization for Economic Co-operation and Development; PBT -Persistent, Bioaccumulative and Toxic substance; PEL - Permissible Exposure Limit; PNEC - Predicted no Effect Concentration; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; REL -Recommended Exposure Limit; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; STEL - Short-Term Exposure Limit; TDG - Transportation of Dangerous Goods; TGG -Dutch Threshold Limit Value; TGV - Swedish OEL; TLV Threshold Limit Value; TLV-C - Threshold Limit Value Ceiling; TWA -Time Weighted Average; UDS - Unscheduled DNA Synthesis; UN - United Nations; VLE - Valeurs limites d'exposition professionnelle aux agents chimiques en France; VME - Valeur (Limite) Moyenne d'Exposition; VOC - Volatile Organic Compound[s]; WEEL - Workplace Environmental Exposure Level; % w/w Percent weight by weight; %(V) Percent Volume

Date format

: dd.mm.yyyy



according to Regulation (EC) No. 1907/2006

HEGF FOR USE IN KGM KIT

Version 2.0

Revision Date 13.12.2018

Print Date 10.03.2021

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99 / EN

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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Lonza

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Recombinant human insulin 0.5%

Version 2.0	Revision Date 13.12.2018	Print Date 10.03.2021				
SECTION 1: Identification of the substance/mixture and of the company/undertaking						
1.1 Product identifier Product name	: Recombinant human insulin 0.5%					
1.2 Relevant identified uses of the subst Use of the Substance/Mixture	ance or mixture and uses advised against : Scientific research and development					
1.3 Details of the supplier of the safety data sheet						
Company	: Lonza Ltd Muenchensteinerstrasse 38 CH-4002 Basel, Switzerland Business Telephone: +41 61 316 81 11					
	Lonza Verviers Sprl Parc Industriel de Petit-Rechain BE-4800 Verviers, Belgium Business Telephone: +32 8732 1611					
	Lonza Cologne GmbH Nattermannallee 1 DE-50829 Köln, Germany Business Telephone: + 49 221 99 1990					
	Lonza Copenhagen ApS Strandhaven 12 DK-2665 Vallensbaek Strand, Denmark Business Telephone: + 45 4356 7400					
E-mail address Responsible/issuing person	sds@lonza.com					
1.4 Emergency telephone number Emergency telephone number	: Lonza Ltd, CH-4002 Basel, Switzerland Telephone: +41 61 313 94 94 (24h)					

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.



according to Regulation (EC) No. 1907/2006

Recombinant human insulin 0.5%

Version 2.0	Revision Date 13.12.2018	Print Date 10.03.2021
Insulin: may cause hypoglycaemia. Insulin is inactivated in the gastro-int	stinal tract when ingested.	
SECTION 3: Composition/informati	n on ingredients	
3.2 Mixtures		
Components Remarks	: No hazardous ingredients	
SECTION 4: First aid measures		
4.1 Description of first aid measures If inhaled	: No special precautions required.	
In case of skin contact	: Wash with water and soap as a pr If skin irritation persists, call a phy	
In case of eye contact	: Immediately flush eye(s) with plen If eye irritation persists, consult a	
If swallowed	: Immediately give large quantities Do not induce vomiting without me Never give anything by mouth to a	edical advice.
4.2 Most important symptoms and effe		
Symptoms	: No information available.	
4.3 Indication of any immediate medica Treatment	attention and special treatment needs : No information available.	eded
SECTION 5: Firefighting measures		
5.1 Extinguishing media		
Suitable extinguishing media	: Water spray Dry powder Foam	
5.2 Special hazards arising from the su	ostance or mixture	
Specific hazards during firefighting	: Heating or fire can release toxic g	as.
5.3 Advice for firefighters		
Special protective equipment for firefighters	: In the event of fire, wear self-conta	ained breathing apparatus.
Further information	: Use water spray to cool unopened	d containers.
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according to Regulation (EC) No. 1907/2006

Recombinant human insulin 0.5%

Version 2.0		Revision Date 13.12.2018	Print Date 10.03.2021
SECTION 6: Accidental release mea	su	res	
6.1 Personal precautions, protective eq	uip	oment and emergency procedures	
Personal precautions	:	Use personal protective equipment.	
6.2 Environmental precautions			
Environmental precautions	:	No special environmental precautions re	quired.
6.3 Methods and material for containme	ent	and cleaning up	
Methods for cleaning up	:	Wipe up with absorbent material (e.g. clo Dispose of in accordance with local regu	
6.4 Reference to other sections			
For personal protection see section 8	•		
SECTION 7: Handling and storage			
7.1 Precautions for safe handling			
Advice on safe handling	:	No special precautions required.	
Advice on protection against fire and explosion	:	No special precautions required.	
Hygiene measures	:	Handle in accordance with good industria practice.	al hygiene and safety
7.2 Conditions for safe storage, includi	nq	any incompatibilities	
	-	No special storage conditions required.	
7.3 Specific end use(s)			
Specific use(s)	:	No information available.	
SECTION 8: Exposure controls/pers	sor	nal protection	
8.1 Control parameters			
Occupational Exposure Limits			
Contains no substances with occ	cup	ational exposure limit values.	

8.2 Exposure controls

Engineering measures

Use only in area provided with appropriate exhaust ventilation.

Personal protective equipment



according to Regulation (EC) No. 1907/2006

Recombinant human insulin 0.5%

Version 2.0	Revision Date 13.12.2018	Print Date 10.03.2021
Eye protection	: Tightly fitting safety goggles	
Hand protection Material Rate of permeability	 Nitrile rubber > 480 min 	
Skin and body protection	: Choose body protection according to concentration of the dangerous subs No special protective equipment req	stance at the work place.
Respiratory protection	: No personal respiratory protective e required.	quipment normally

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

9.1 Information on basic physical and c Appearance	:nei :	Aqueous solution
Colour	:	colourless
Odour	:	odourless
Odour Threshold	:	no data available
рН	:	2 - 4
Freezing point	:	no data available
Boiling point/boiling range	:	no data available
Flash point	:	Water
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Relative density	:	no data available
Density	:	no data available
Solubility(ies) Water solubility	:	completely soluble
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Ref. 45004.4 / 000000015292	ç	SDK_EU / EN



according to Regulation (EC) No. 1907/2006

Recombinant human insulin 0.5%

Version 2.0		Revision Date 13.12.2018	Print Date 10.03.2021
Decomposition temperature	:	no data available	
Viscosity	:	no data available	
Explosive properties	:	no data available	
Oxidizing properties	:	no data available	
9.2 Other information no data available			
SECTION 10: Stability and reactivity	y		
10.1 ReactivityStable under recommended storage of10.2 Chemical stability	cor	iditions.	
Stable under normal conditions.			
10.3 Possibility of hazardous reactions Hazardous reactions	:	Stable under normal conditions.	
10.4 Conditions to avoid Conditions to avoid	:	no data available	
10.5 Incompatible materials Materials to avoid	:	Strong oxidizing agents	
10.6 Hazardous decomposition product No decomposition if stored normally.			
SECTION 11: Toxicological informat	tio	n	
11.1 Information on toxicological effects	ts		
Skin corrosion/irritation		Assessment: No skin irritation	
Serious eye damage/eye irritation		Assessment: No eye irritation	
Further information		5	
		Remarks: No data is available on the product Remarks: Insulin: may cause hypoglycaemi Insulin is inactivated in the gastro-intestinal ingested. May cause central nervous system depress May induce sweating, pallor or visual disturb	a. tract when ion.



according to Regulation (EC) No. 1907/2006

Recombinant human insulin 0.5%

narks: no data available sult: no data available narks: no data available
sult: no data available
sult: no data available
sult: no data available
narks: no data available
narks: no data available
narks: no data available
s substance/mixture contains no components considered to either persistent, bioaccumulative and toxic (PBT), or very sistent and very bioaccumulative (vPvB) at levels of 0.1% or ner.
data available

13.1 Waste treatment methods

Product

Contact waste disposal services. Dispose of in accordance with local regulations.

:



according to Regulation (EC) No. 1907/2006

Recombinant human insulin 0.5%

Version 2.0

Revision Date 13.12.2018

Not dangerous goods

Print Date 10.03.2021

SECTION 14: Transport information

IATA

14.1 14.2 14.3 14.4 14.5	UN number Proper shipping name Transport hazard class Packing group Environmental hazards	:	Not applicable Not applicable Not applicable Not applicable no
IMDG			Not dangerous goods
14.1 14.2 14.3 14.4 14.5 ADR	UN number Proper shipping name Transport hazard class Packing group Environmental hazards		Not applicable Not applicable Not applicable Not applicable Marine pollutant: no Not dangerous goods
14.1 14.2 14.3 14.4 14.5 RID	UN number Proper shipping name Transport hazard class Packing group Environmental hazards	:	Not applicable Not applicable Not applicable Not applicable no
14.1 14.2 14.3 14.4 14.5 DOT	UN number Proper shipping name Transport hazard class Packing group Environmental hazards		Not applicable Not applicable Not applicable Not applicable no Not dangerous goods
14.1 14.2 14.3 14.4 14.5	UN number Proper shipping name Transport hazard class Packing group Environmental hazards	:	Not applicable Not applicable Not applicable Not applicable no



according to Regulation (EC) No. 1907/2006

Recombinant human insulin 0.5%

Versior	1 2.0	Revision Date 13.12.2018	Print Date 10.03.2021
TDG		: Not dangerous goods	
14.1 14.2 14.3 14.4 14.5	UN number Proper shipping name Transport hazard class Packing group Environmental hazards	 Not applicable Not applicable Not applicable Not applicable no 	
14.6	Special precautions for user	: none	
14.7	Transport in bulk according to Annex II of Marpol and the IBC Co	: Not applicable	

SECTION 15: Regulatory information

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

 REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). REACH - List of substances subject to authorisation (Annex XIV) Regulation (EC) No 1005/2009 on substances that deplete the source layer Regulation (EC) No 850/2004 on persistent organic pollutants in Not applicable Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. 			
 for Authorisation (Article 59). REACH - List of substances subject to authorisation (Annex : Not applicable XIV) Regulation (EC) No 1005/2009 on substances that deplete the : Not applicable ozone layer Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. 	market and use of certain dangerous substances, preparations	:	Not applicable
 XIV) Regulation (EC) No 1005/2009 on substances that deplete the : Not applicable ozone layer Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. 	, ,	:	Not applicable
 ozone layer Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. 		:	Not applicable
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	S ()	:	Not applicable
major-accident hazards involving dangerous substances.	Regulation (EC) No 850/2004 on persistent organic pollutants	:	Not applicable
Not applicable	major-accident hazards involving dangerous substances.	nd c	of the Council on the control of

National regulatory information

Water contaminating class : nwg not water endangering (Germany)

15.2 Chemical safety assessment

not required

SECTION 16: Other information

Further information

Full text of other abbreviations

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ATE -

according to Regulation (EC) No. 1907/2006

Recombinant human insulin 0.5%

Version 2.0

Revision Date 13.12.2018

Print Date 10.03.2021

Acute Toxicity Estimate; AwSV - Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen / Ordinance on facilities for handling substances that are hazardous to water; BPR - Biocidal Product Regulation; bw - Body weight; CAS - Chemical Abstract Service; CLP - Classification Labelling Packaging Regulation, Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DNEL-Derived No Effect Level; DOT Department of Transportation; EC – European Community; ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; EmS (Emergency Response Procedures for Ships Carrying Dangerous Goods); EN – European Standard; ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; EU OEL - European Occupational Exposure Limit; GHS -Globally Harmonized System of Classification and Labelling of Chemicals; GLP - Good Laboratory Practice; GV - Danish Exposure Limits for Substances and Materials; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; IMDG - International Maritime Dangerous Goods; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); LOFT - Danish Threshold Limit Value; MAK - German Threshold Limit Value: MARPOL - International Convention for the Prevention of Pollution from Ships: n.o.s. - Not Otherwise Specified; NIOSH/Guide - National Institute of Safety and Health Guidebook; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NTP -National Toxicology Program; OECD - Organization for Economic Co-operation and Development; PBT -Persistent, Bioaccumulative and Toxic substance; PEL - Permissible Exposure Limit; PNEC - Predicted no Effect Concentration; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; REL -Recommended Exposure Limit; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; STEL - Short-Term Exposure Limit; TDG - Transportation of Dangerous Goods; TGG -Dutch Threshold Limit Value; TGV – Swedish OEL; TLV Threshold Limit Value; TLV-C - Threshold Limit Value Ceiling; TWA -Time Weighted Average; UDS - Unscheduled DNA Synthesis; UN - United Nations; VLE - Valeurs limites d'exposition professionnelle aux agents chimiques en France; VME - Valeur (Limite) Moyenne d'Exposition; VOC - Volatile Organic Compound[s]; WEEL - Workplace Environmental Exposure Level; % w/w Percent weight by weight; %(V) Percent Volume

Date format

dd.mm.yyyy

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according to Regulation (EC) No. 1907/2006

Hydrocortisone solution

Version 2.0	Revision Date 13.12.2018	Print Date 10.03.2021			
SECTION 1: Identification of the substance/mixture and of the company/undertaking					
1.1 Product identifier					
Product name	: Hydrocortisone solution				
1.2 Relevant identified uses of the sub	ostance or mixture and uses advised against				
Use of the Substance/Mixture	: Scientific research and development				
1.3 Details of the supplier of the safety	y data sheet				
Company	: Lonza Ltd Muenchensteinerstrasse 38 CH-4002 Basel, Switzerland Business Telephone: +41 61 316 81 11				
	Lonza Verviers Sprl Parc Industriel de Petit-Rechain BE-4800 Verviers, Belgium Business Telephone: +32 8732 1611				
	Lonza Cologne GmbH Nattermannallee 1 DE-50829 Köln, Germany Business Telephone: + 49 221 99 1990				
	Lonza Copenhagen ApS Strandhaven 12 DK-2665 Vallensbaek Strand, Denmark Business Telephone: + 45 4356 7400				
E-mail address Responsible/issuing person	sds@lonza.com				
1.4 Emergency telephone number Emergency telephone number	: Lonza Ltd, CH-4002 Basel, Switzerland Telephone: +41 61 313 94 94 (24h)				

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 2 Eye irritation, Category 2

H225: Highly flammable liquid and vapour. H319: Causes serious eye irritation.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms





according to Regulation (EC) No. 1907/2006

Hydrocortisone solution

Version 2.0	Revision Date 13.12.2018	Print Date 10.03.2021
Signal word	: Danger	
Hazard statements	: H225 Highly flammable liquid and H319 Causes serious eye irritation	•
Precautionary statements	Prevention:	
	 P210 Keep away from heat, hot s flames and other ignition sources. N P233 Keep container tightly close P280 Wear protective gloves/ pro protection/ face protection. 	lo smoking. ed.
	Response:	
	P303 + P361 + P353 IF ON SKIN immediately all contaminated clothir P337 + P313 If eye irritation persi attention. P370 + P378 In case of fire: Use alcohol-resistant foam to extinguish	ng. Rinse skin with water. ists: Get medical advice/ dry sand, dry chemical or

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. REACH Registration	Classification	Concentration (% w/w)
Ethanol	Number 64-17-5	Flam. Liq. 2; H225	>= 90 - <= 100
	603-002-00-5 01-2119457610-43-XX XX	Eye Irrit. 2; H319	

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

If inhaled	: Remove to fresh air. If breathing is irregular or stopped, administer respiration.	er artificial
In case of skin contact	: After contact with skin, wash immediately wi and water.	th plenty of soap
Ref. 46155.1 / 000000010146	SDK_EU/EN	Page 46



according to Regulation (EC) No. 1907/2006

Hydrocortisone solution

Version 2.0		Revision Date 13.12.2018	Print Date 10.03.2021
		Consult a physician.	
In case of eye contact	:	In the case of contact with eyes, rins of water and seek medical advice. Call a physician immediately.	se immediately with plenty
If swallowed	:	If accidentally swallowed obtain imm Clean mouth with water and drink af Do not induce vomiting without med Never give anything by mouth to an	terwards plenty of water. ical advice.
4.2 Most important symptoms and effe	cts	both acute and delayed	
Symptoms	:	No information available.	
4.3 Indication of any immediate medica	al at	tention and special treatment need	led
Treatment	:	No information available.	
SECTION 5: Firefighting measures			
5.1 Extinguishing media			
Suitable extinguishing media	:	Dry powder Water spray Foam	
5.2 Special hazards arising from the su	ubst	ance or mixture	
Specific hazards during firefighting	:	Heating or fire can release toxic gas	
5.3 Advice for firefighters			
Special protective equipment for firefighters	:	In the event of fire, wear self-contain	ned breathing apparatus.
Further information	:	Use water spray to cool unopened of	containers.
SECTION 6: Accidental release mea	asu	res	
6.1 Personal precautions, protective ed	quip	oment and emergency procedures	
Personal precautions	:	Use respirator when performing ope exposure to vapour of the product.	rations involving potential
6.2 Environmental precautions			
Environmental precautions	:	Prevent product from entering drains	S.
6.3 Methods and material for containm	ent	and cleaning up	
Methods for cleaning up	:	Contain spillage, soak up with non-comaterial, (e.g. sand, earth, diatomac and transfer to a container for dispo- national regulations (see section 13)	ceous earth, vermiculite) sal according to local /



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C 4 Deference to other costions		
6.4 Reference to other sections		
For personal protection see section 8.		
SECTION 7: Handling and storage		
7.1 Precautions for safe handling		
Advice on safe handling	: Provide sufficient air exchange and Avoid contact with skin and eyes.	/or exhaust in work rooms.
Advice on protection against fire and explosion	: Highly flammable. Keep away from smoking. Take precautionary meas discharges.	
Hygiene measures	: Avoid contact with skin, eyes and c breaks and immediately after hand	0
7.2 Conditions for safe storage, includir	g any incompatibilities	
Requirements for storage areas and containers	: Keep away from sources of ignition containers tightly closed in a cool, v	
7.3 Specific end use(s)		
Specific use(s)	: No information available.	

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Countries not listed may have their own country specific values.

Occupational Exposure Limits

Switzerland

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Ethanol	64-17-5	TWA	500 ppm 960 mg/m3	SMAK
		STEL	1 000 ppm 1 920 mg/m3	SMAK

Germany

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Ethanol	64-17-5		500 ppm 960 mg/m3	TRGS 900
Peak-limit: excursion (category)	factor	Peak-limit: excursion	on factor (category) 2	
		MAK	200 ppm 380 mg/m3	DFG MAK
Peak-limit: excursion	factor	Peak-limit: excursion	on factor (category) 4	



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(category)				
Belgium				
Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Ethanol	64-17-5	TWA	1 000 ppm 1 907 mg/m3	BE/OEL

Denmark

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Ethanol	64-17-5	GV	1 000 ppm 1 900 mg/m3	GV (DK)

France

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Ethanol	64-17-5	VLE	5 000 ppm 9 500 mg/m3	FVL
		VME	1 000 ppm 1 900 mg/m3	FVL

Italy

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Ethanol	64-17-5	STEL	1 000 ppm	OEL (IT)

Netherlands

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Ethanol	64-17-5	TGG	260 mg/m3	NL OEL
		TGG 15	1 900 mg/m3	NL OEL

Spain

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Ethanol	64-17-5	STEL	1 000 ppm 1 910 mg/m3	VLA

Sweden

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Ethanol	64-17-5	TWA	500 ppm 1 000 mg/m3	SWO
		STEL	1 000 ppm 1 900 mg/m3	SWO

United Kingdom

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Ethanol	64-17-5	TWA	1 000 ppm 1 920 mg/m3	EH40 WEL



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Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Ethanol	Workers	Inhalation	Acute local effects	1900 mg/m3
	Consumers	Oral	Long-term systemic effects	87 mg/kg
	Consumers	Dermal	Long-term systemic effects	206 mg/kg
	Consumers	Inhalation	Acute local effects	950 mg/m3
	Consumers	Inhalation	Long-term systemic effects	114 mg/m3
	Workers	Inhalation	Long-term systemic effects	950 mg/m3
	Workers	Dermal	Long-term systemic effects	343 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Ethanol	Fresh water	0,96 mg/l
	Soil	0,63 mg/kg
	Fresh water sediment	3,6 mg/kg
	Marine water	0,79 mg/l
	Sewage treatment plant	580 mg/l
	Oral	720 mg/l
	Intermittent use/release	2,75 mg/l

8.2 Exposure controls

Engineering measures

Provide sufficient air exchange and/or exhaust in work rooms.

Personal protective equipment

i ci sonai protective equipment	
Eye protection	: Tightly fitting safety goggles
Hand protection Material Rate of permeability	: Nitrile rubber : > 480 min
Skin and body protection	: Choose body protection according to the amount and concentration of the dangerous substance at the work place. No special protective equipment required.
Respiratory protection	: In the case of vapour formation use a respirator with an approved filter.
	Respirator with a vapour filter (EN 141) Respirator with ABEK filter.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	liquid
Colour	:	colourless



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Odour	:	alcohol-like	
Odour Threshold	:	no data available	
pН	:	no data available	
Melting point/range	:	-114,5114 °C Information refers to the main component.	
Boiling point/boiling range	:	78 °C Information refers to the main component.	
Flash point	:	12 °C Information refers to the main component.	
Evaporation rate	:	no data available	
Flammability (solid, gas)	:	no data available	
Upper explosion limit	:	15,0 %(V) Information refers to the main component.	
Lower explosion limit	:	3,5 %(V) Information refers to the main component.	
Vapour pressure	:	no data available	
Relative vapour density	:	no data available	
Relative density	:	no data available	
Density	:	0,79 g/cm3 (20 °C)	
Solubility(ies) Water solubility	:	completely miscible	
Partition coefficient: n-octanol/water	:	no data available	
Auto-ignition temperature	:	no data available	
Decomposition temperature	:	no data available	
Viscosity Viscosity, dynamic	:	1,17 - 1,2 mPa.s (20 °C)	
Explosive properties	:	no data available	
Oxidizing properties	:	no data available	

9.2 Other information

no data available



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SECTION 10: Stability and reactivity		
10.1 Reactivity Stable under recommended storage c	onditions.	
10.2 Chemical stability Stable under normal conditions.		
10.3 Possibility of hazardous reactions Hazardous reactions	: Stable under normal conditions.	
10.4 Conditions to avoid		
Conditions to avoid	: Keep away from heat and sources	of ignition.
10.5 Incompatible materials		
Materials to avoid	: Strong oxidizing agents	
10.6 Hazardous decomposition products Carbon dioxide (CO2) Carbon monoxide No decomposition if stored normally.	5	
SECTION 11: Toxicological informat	ion	
11.1 Information on toxicological effects	3	
Further information	Remarks: No data is available on t	the product itself.
The following toxicological data refer to	:	
Ethanol (CAS-No.: 64-17-5)		
Acute toxicity		
Acute oral toxicity	: LD50 (Rat): > 5 000 mg/kg	
Skin corrosion/irritation	Species: Rabbit Result: Mild skin irritation	
Serious eye damage/eye irritation		
	Species: Rabbit Assessment: Mild eye irritation Result: Moderate eye irritation	
Respiratory or skin sensitisation		
	Exposure routes: Dermal Species: Guinea pig	
Ref. 46155.1 / 00000010146	SDK EU/EN	Page 52 (67)



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	Method: OECD Test Guideline 406 Result: Did not cause sensitisation on labo	ratory animals.
Germ cell mutagenicity		
Suspected of causing genetic defects.		
Genotoxicity in vitro	: Test Type: Ames test	
	Result: negative	
	: Test Type: gene mutation test Species: mouse lymphoma cells Result: negative	
Reproductive toxicity		
Effects on fertility	: Species: Mouse Application Route: Oral Method: OECD Test Guideline 416	

SECTION 12: Ecological information

12.1 Toxicity		
Toxicity to fish	:	Remarks: no data available
12.2 Persistence and degradability		
Biodegradability	:	Result: no data available
12.3 Bioaccumulative potential		
Bioaccumulation	:	Remarks: no data available
12.4 Mobility in soil		
Distribution among environmental compartments	:	Remarks: no data available
12.5 Results of PBT and vPvB assess	men	t
Assessment	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
12.6 Other adverse effects		
Additional ecological information	:	No data is available on the product itself.

SECTION 13: Disposal considerations

13.1 Waste treatment methods



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Pr	oduct	: Dispose of in accordance with local regu Contact waste disposal services.	llations.
Co	ontaminated packaging	: Dispose of as unused product.	
SECTI	ON 14: Transport information		
ΙΑΤΑ			
14.1 14.2 14.3 14.4 14.5	UN number Proper shipping name Transport hazard class Packing group Labels Environmental hazards	: 1170 : Ethanol solution : 3 : II : 3 : no	
		. 10	
IMDG 14.1 14.2 14.3 14.4	UN number Proper shipping name Transport hazard class Packing group	: 1170 : Ethanol solution : 3 : II	
14.5	Labels EmS Number 1 EmS Number 2 Environmental hazards	: 3 : F-E : S-D : Marine pollutant: no	
ADR			
14.1 14.2 14.3 14.4 14.5	UN number Proper shipping name Transport hazard class Packing group Classification Code Hazard Identification Number Labels Environmental hazards	: 1170 : ETHANOL SOLUTION : 3 : II : F1 : 33 : 3 : no	
RID			
RID 14.1 14.2 14.3 14.4 14.5	UN number Proper shipping name Transport hazard class Packing group Classification Code Hazard Identification Number Labels Environmental hazards	: 1170 : ETHANOL SOLUTION : 3 : II : F1 : 33 : 3 : no	



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Versior	n 2.0	Revision Date 13.12.2018	Print Date 10.03.2021
DOT			
14.1 14.2 14.3 14.4	UN number Proper shipping name Transport hazard class Packing group Labels Emergency Response Guidebook Number	: 1170 : Ethanol solutions : 3 : II : 3 : 127	
14.5	Environmental hazards	: no	
TDG			
14.1 14.2 14.3 14.4 14.5	UN number Proper shipping name Transport hazard class Packing group Labels Environmental hazards	: 1170 : ETHANOL SOLUTION : 3 : II : 3 : no	
14.6	Special precautions for user	: none	
14.7	Transport in bulk according to Annex II of Marpol and the IBC Co	: Not applicable ode	

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture REACH - Restrictions on the manufacture, placing on the Not applicable : market and use of certain dangerous substances, preparations and articles (Annex XVII) REACH - Candidate List of Substances of Very High Concern Not applicable : for Authorisation (Article 59). REACH - List of substances subject to authorisation (Annex Not applicable XIV) Regulation (EC) No 1005/2009 on substances that deplete the : Not applicable ozone layer Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. Quantity 2 Quantity 1

P5c FLAMMABLE LIQUIDS 5 000 t 50 000 t

National regulatory information

Water contaminating class	: WGK 1 slightly hazardous to water
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(Germany)		Code Number: 96 Remarks: The rating refers to pure ethat must be classified in accordance with Ap AwSV.	
15.2 Chemical safety assessme not required	nt		
SECTION 16: Other informat	ion		
Classification of the mixtur	e:	Classification proce	edure:
Flam. Liq. 2	H225	Based on product dat assessment	ta or
Eye Irrit. 2	H319	Calculation method	
Full text of H-Statements			
H225 H319	:	Highly flammable liquid and vapour. Causes serious eye irritation.	

Further information

Full text of other abbreviations

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road: ATE -Acute Toxicity Estimate; AwSV - Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen / Ordinance on facilities for handling substances that are hazardous to water; BPR - Biocidal Product Regulation; bw - Body weight; CAS - Chemical Abstract Service; CLP - Classification Labelling Packaging Regulation, Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DNEL-Derived No Effect Level; DOT - Department of Transportation; EC – European Community; ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; EmS (Emergency Response Procedures for Ships Carrying Dangerous Goods); EN – European Standard; ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; EU OEL - European Occupational Exposure Limit; GHS -Globally Harmonized System of Classification and Labelling of Chemicals; GLP - Good Laboratory Practice; GV – Danish Exposure Limits for Substances and Materials; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; IMDG - International Maritime Dangerous Goods; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); LOFT - Danish Threshold Limit Value; MAK - German Threshold Limit Value; MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NIOSH/Guide – National Institute of Safety and Health Guidebook; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NTP -National Toxicology Program; OECD - Organization for Economic Co-operation and Development; PBT -Persistent, Bioaccumulative and Toxic substance; PEL - Permissible Exposure Limit; PNEC - Predicted no Effect Concentration; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; REL -Recommended Exposure Limit; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; STEL - Short-Term Exposure Limit; TDG - Transportation of Dangerous Goods; TGG -Dutch Threshold Limit Value; TGV – Swedish OEL; TLV Threshold Limit Value; TLV-C - Threshold Limit Value Ceiling: TWA -Time Weighted Average: UDS - Unscheduled DNA Synthesis: UN - United Nations:



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VLE - Valeurs limites d'exposition professionnelle aux agents chimiques en France; VME - Valeur (Limite) Moyenne d'Exposition; VOC - Volatile Organic Compound[s]; WEEL - Workplace Environmental Exposure Level; % w/w Percent weight by weight; %(V) Percent Volume

Date format

dd.mm.yyyy

:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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Version 2.0	Revision Date 13.12.2018	Print Date 10.03.2021		
SECTION 1: Identification of the substance/mixture and of the company/undertaking				
1.1 Product identifier				
Product name	: GA-1000			
1.2 Relevant identified uses of the su	bstance or mixture and uses advised agains	t		
Use of the Substance/Mixture	: Scientific research and development			
1.3 Details of the supplier of the safe	ty data sheet			
Company	: Lonza Ltd Muenchensteinerstrasse 38 CH-4002 Basel, Switzerland Business Telephone: +41 61 316 81 11			
	Lonza Verviers Sprl Parc Industriel de Petit-Rechain BE-4800 Verviers, Belgium Business Telephone: +32 8732 1611			
	Lonza Cologne GmbH Nattermannallee 1 DE-50829 Köln, Germany Business Telephone: + 49 221 99 1990			
	Lonza Copenhagen ApS Strandhaven 12 DK-2665 Vallensbaek Strand, Denmark Business Telephone: + 45 4356 7400			
E-mail address Responsible/issuing person	sds@lonza.com			
1.4 Emergency telephone number				
Emergency telephone number	: Lonza Ltd, CH-4002 Basel, Switzerland Telephone: +41 61 313 94 94 (24h)			

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Respiratory sensitisation, Category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)



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Hazard pictograms		
Signal word	: Danger	
Hazard statements	: H317 May cause an allergic skin r H334 May cause allergy or asthm difficulties if inhaled.	
Precautionary statements	 Prevention: P261 Avoid breathing dust/ fume/ P280 Wear protective gloves. P284 Wear respiratory protection. Response: P304 + P340 IF INHALED: Remo keep comfortable for breathing. P333 + P313 If skin irritation or ra advice/ attention. P342 + P311 If experiencing resp POISON CENTER/doctor. 	ve person to fresh air and sh occurs: Get medical

Hazardous components which must be listed on the label:

Gentamicin, sulfate (salt)

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No.	Classification	Concentration
	EC-No.		(% w/w)
	Index-No.		
	REACH Registration		
	Number		
Gentamicin, sulfate (salt)	1405-41-0	Resp. Sens. 1; H334	>= 3 - < 5
		Skin Sens. 1; H317	

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

: When symptoms persist or in all cases of doubt seek medical advice.



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:	Move to fresh air.	
	Call a physician immediately.	
	respiration.	administer artificiai
	After contact with skin, wash immed	liately with plenty of soap
	and water.	
	Wash clothing before reuse.	
	Get medical attention if irritation dev	elops and persists.
:		se immediately with plenty
		ocialist
	in eye initation persists, consult a sp	
:		
fects,	both acute and delayed	
:	Allergic appearance	
	sensitising enects	
cal at	tention and special treatment need	led
:	Treat symptomatically.	
-		
S		
S		
s :	Not combustible.	
S :	Use extinguishing measures that ar	
S		
:	Use extinguishing measures that ar	
:	Use extinguishing measures that ar circumstances and the surrounding	environment.
: subst	Use extinguishing measures that ar circumstances and the surrounding ance or mixture	environment.
: subst	Use extinguishing measures that an circumstances and the surrounding ance or mixture Heating or fire can release toxic gas	environment.
: subst	Use extinguishing measures that ar circumstances and the surrounding ance or mixture	environment.
	: : fects, :	 Call a physician immediately. If breathing is irregular or stopped, a respiration. After contact with skin, wash immediately water. Wash clothing before reuse. Get medical attention if irritation device. In the case of contact with eyes, rins of water and seek medical advice. If eye irritation persists, consult a sp Immediately give plenty of water (if Do not induce vomiting without med Never give anything by mouth to an Take victim immediately to hospital. fects, both acute and delayed Allergic appearance sensitising effects

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

•	· •	• •		•	
Personal precautions	5	:	Use respirator	when	performing operations involving potential
			exposure to va	pour	of the product.



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		Refer to protective measures listed	in sections 7 and 8.
6.2 Environmental precautions			
Environmental precautions	:	No special environmental precaution	ons required.
6.3 Methods and material for containm	nent	and cleaning up	
Methods for cleaning up	:	Contain spillage, soak up with non material, (e.g. sand, earth, diatoma and transfer to a container for disp national regulations (see section 1	aceous earth, vermiculite) osal according to local /
6.4 Reference to other sections			
For personal protection see section	8.		
SECTION 7: Londling and store so			
SECTION 7: Handling and storage			
7.1 Precautions for safe handling			
Advice on safe handling	:	In case of insufficient ventilation, w	ear suitable respiratory
		equipment. Avoid exposure - obtain special ins Use only in area provided with app Avoid contact with skin and eyes.	structions before use.
Advice on protection against fire and explosion	: t	equipment. Avoid exposure - obtain special ins Use only in area provided with app Avoid contact with skin and eyes.	structions before use.
Advice on protection against fire and	: k	equipment. Avoid exposure - obtain special ins Use only in area provided with app Avoid contact with skin and eyes.	structions before use. propriate exhaust ventilation. kin and the eyes. Avoid hands before breaks and
Advice on protection against fire and explosion Hygiene measures	:	equipment. Avoid exposure - obtain special ins Use only in area provided with app Avoid contact with skin and eyes. Stable under normal conditions. DANGER! Avoid contact with the s breathing dust or spray mist. Wash immediately after handling the prov	structions before use. propriate exhaust ventilation. kin and the eyes. Avoid hands before breaks and
Advice on protection against fire and explosion	: ling	equipment. Avoid exposure - obtain special ins Use only in area provided with app Avoid contact with skin and eyes. Stable under normal conditions. DANGER! Avoid contact with the s breathing dust or spray mist. Wash immediately after handling the prov any incompatibilities	structions before use. propriate exhaust ventilation. kin and the eyes. Avoid hands before breaks and
Advice on protection against fire and explosion Hygiene measures 7.2 Conditions for safe storage, includ Requirements for storage areas and	: ling	equipment. Avoid exposure - obtain special ins Use only in area provided with app Avoid contact with skin and eyes. Stable under normal conditions. DANGER! Avoid contact with the s breathing dust or spray mist. Wash immediately after handling the prov any incompatibilities	structions before use. propriate exhaust ventilation. kin and the eyes. Avoid hands before breaks and

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Engineering measures

Provide sufficient air exchange and/or exhaust in work rooms.



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Personal protective equipment	t	
Eye protection	: Safety glasses Safety goggles	
Hand protection		
Material	: Nitrile rubber	
Rate of permeability	: > 480 min	
Skin and body protection	: Choose body protection according concentration of the dangerous sul Complete suit protecting against ch	ostance at the work place.
Respiratory protection	: In case of mist, spray or aerosol expersonal respiratory protection and	•
	Respirator with ABEK filter. Respirator with combination filter for 141)	or vapour/particulate (EN

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	Aqueous solution
Colour	:	light yellow
Odour	:	odourless
Odour Threshold	:	no data available
рН	:	no data available
Freezing point	:	0°C
Boiling point/boiling range	:	no data available
Flash point	:	Does not sustain combustion.
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Relative density	:	no data available
Solubility(ies)		



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Water solubility	:	soluble	
Partition coefficient: n-octanol/water	:	no data available	
Auto-ignition temperature	:	no data available	
Decomposition temperature	:	no data available	
Viscosity	:	no data available	
Explosive properties	:	no data available	
Oxidizing properties	:	no data available	
9.2 Other information no data available			
SECTION 10: Stability and reactivit	у		
10.1 Reactivity Stable under recommended storage	cor	nditions.	
10.2 Chemical stability Stable under normal conditions.			
10.3 Possibility of hazardous reactions	6		
Hazardous reactions	:	Stable under normal conditions.	
10.4 Conditions to avoid			
Conditions to avoid	:	None known.	
10.5 Incompatible materials			
Materials to avoid	:	Strong oxidizing agents	
10.6 Hazardous decomposition produc	ts		
Nitrogen oxides (NOx) Carbon dioxide (CO2) Carbon monoxide			
SECTION 11: Toxicological information	atio	n	
11.1 Information on toxicological effec	ts		
11.1 Information on toxicological effec Further information	ts		

SECTION 12: Ecological information

- 12.1 Toxicity
 - Toxicity to fish

: Remarks: no data available



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12.2 Persistence and degradability	. Desult as data sucilable	
Biodegradability	: Result: no data available	
12.3 Bioaccumulative potential		
Bioaccumulation	: Remarks: no data available	
12.4 Mobility in soil		
Distribution among environmental compartments	: Remarks: no data available	
12.5 Results of PBT and vPvB assess	nent	
Assessment	: This substance/mixture contains r be either persistent, bioaccumulat persistent and very bioaccumulati higher.	tive and toxic (PBT), or very
12.6 Other adverse effects		
Additional ecological information	: No data is available on the produc	ct itself.
SECTION 13: Disposal considerati	ons	
13.1 Waste treatment methods		
Product	: Dispose of in accordance with loc	al regulations.
Contaminated packaging	: Dispose of as unused product.	
SECTION 14: Transport informatio	n	
ΙΑΤΑ	Not dangerous goods	
14.1 UN number	: Not applicable	
14.2 Proper shipping name	: Not applicable	
14.3 Transport hazard class	: Not applicable	
14.4 Packing group 14.5 Environmental hazards	: Not applicable : no	

IMDG

14.1	UN number	: Not applicable
14.2	Proper shipping name	: Not applicable
14.3	Transport hazard class	: Not applicable
14.4	Packing group	: Not applicable
14.5	Environmental hazards	: Marine pollutant: no

Not dangerous goods



according to Regulation (EC) No. 1907/2006

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ADR		: Not dangerous goods	
14.1 14.2 14.3 14.4 14.5	UN number Proper shipping name Transport hazard class Packing group Environmental hazards	 Not applicable Not applicable Not applicable Not applicable no 	
RID		: Not dangerous goods	
14.1 14.2 14.3 14.4 14.5	UN number Proper shipping name Transport hazard class Packing group Environmental hazards	 Not applicable Not applicable Not applicable Not applicable no 	
DOT		: Not dangerous goods	
14.1 14.2 14.3 14.4 14.5	UN number Proper shipping name Transport hazard class Packing group Environmental hazards	 Not applicable Not applicable Not applicable Not applicable no 	
TDG		: Not dangerous goods	
14.1 14.2 14.3 14.4 14.5	UN number Proper shipping name Transport hazard class Packing group Environmental hazards	 Not applicable Not applicable Not applicable Not applicable no 	
14.6	Special precautions for user	: none	
14.7	Transport in bulk according to Annex II of Marpol and the IBC Cod	: Not applicable de	

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation sp	oec	fic for the substance or mixture
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	:	Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable



according to Regulation (EC) No. 1907/2006

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Regulation (EC) No 10 ozone layer	005/2009 on substances	that deplete the : Not appli	cable		
Regulation (EC) No 85	50/2004 on persistent org	anic pollutants : Not appli	cable		
	involving dangerous su	an Parliament and of the Cou ubstances. applicable	ncil on the control of		
National regulatory in	formation				
Water contaminating class:WGK 1 slightly hazardous to water(Germany):Classification according to AwSV, Annex 1 (5.2)					
5.2 Chemical safety ass	essment				
not required					
SECTION 16: Other info	ormation				
		Classification			
Classification of the	mixture:	olassineation	procedure:		
Classification of the Resp. Sens. 1	mixture: H334	Calculation met			
		•	nod		
Resp. Sens. 1	H334 H317	Calculation met	nod		
Resp. Sens. 1 Skin Sens. 1	H334 H317 ents : May	Calculation met	nod nod		

Further information

Full text of other abbreviations

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ATE -Acute Toxicity Estimate; AwSV - Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen / Ordinance on facilities for handling substances that are hazardous to water; BPR - Biocidal Product Regulation; bw - Body weight; CAS - Chemical Abstract Service; CLP - Classification Labelling Packaging Regulation, Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant: DIN - Standard of the German Institute for Standardisation: DNEL-Derived No Effect Level: DOT - Department of Transportation; EC – European Community; ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; EmS (Emergency Response Procedures for Ships Carrying Dangerous Goods); EN – European Standard; ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; EU OEL - European Occupational Exposure Limit; GHS -Globally Harmonized System of Classification and Labelling of Chemicals; GLP - Good Laboratory Practice; GV - Danish Exposure Limits for Substances and Materials; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; IMDG - International Maritime Dangerous Goods; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); LOFT - Danish Threshold Limit Value; MAK - German Threshold Limit Value; MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified: NIOSH/Guide - National Institute of Safety and Health Guidebook: NO(A)EC - No

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Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NTP -National Toxicology Program; OECD - Organization for Economic Co-operation and Development; PBT -Persistent, Bioaccumulative and Toxic substance; PEL - Permissible Exposure Limit; PNEC - Predicted no Effect Concentration; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; REL -Recommended Exposure Limit; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; STEL - Short-Term Exposure Limit; TDG - Transportation of Dangerous Goods; TGG – Dutch Threshold Limit Value; TGV – Swedish OEL; TLV Threshold Limit Value; TLV-C - Threshold Limit Value Ceiling; TWA -Time Weighted Average; UDS - Unscheduled DNA Synthesis; UN - United Nations; VLE - Valeurs limites d'exposition professionnelle aux agents chimiques en France; VME - Valeur (Limite) Moyenne d'Exposition; VOC - Volatile Organic Compound[s]; WEEL - Workplace Environmental Exposure Level; % w/w Percent weight by weight; %(V) Percent Volume

Date format

dd.mm.yyyy

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