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A Geno Technology, Inc. (USA) brand name

Safety Data Sheet

Cat. # RC-192

Rifampicin USP Grade

Size: 25g





Rifampicin USP Grade Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 Date of issue: 7/30/2013 Revision date: 5/11/2017 Version: 1.1

	lentification of the substa	ance/mixture and of t	he company/undertaking			
1.1. Product ide	ntifier					
Product form		: Substance				
Substance name		: Rifampicin USP Grade	: Rifampicin USP Grade			
EC-No.		: 236-312-0				
CAS-No.		: 13292-46-1				
Product code		: 825A				
Type of product		: Pure substance				
, i						
Formula		: C43H58N4O12				
Synonyms		 : 3((4-methyl-1-piperazinyl)iminomethyl)rifamycin sv / 3(4- methylpiperazinyliminomethyl)rifamycin sv / 5,6,9,17,19,21-hexahydro-23-methoxy- 2,4,12,16,18,20,22-heptamethyl-8(N(4-methyl-1- piperazinyl)formimidoyl)2,7(epoxypentadeca(1,11,13)trienimino)naphtho(2,1-b)furan- 1,11(2H)dione 21-acetate / 8(((4-methyl-1-piperazinyl)imino)methyl)rifamycin sv / 8(4- methylpiperazinyliminomethyl)rifamycin sv / archidyn / arficin / dione-21-acetate / L-5103 / NSC113926 / R/AMP / rifa / rifadin / rifadine / rifagen / rifaldazin / rifaldazine / rifampicinum / rifamate / rifampicin / rifampicin crystalline / rifampicin sv / rifampicine / rifampicinum / rifampin / rifamycin / rifamycin amp / rifamycin sv / rifamycin, 3-(((4-methyl-1- piperazinyl)imino)methyl)- / rifanah / rifaprodin / rifobac / rifoldin / rifoldine / riforal / rimactan / rimactane / rimactazid / rimactizid / tubocin 				
Product group		: Raw material				
BIG No		: 21488				
	entified uses of the substar		advised against			
Geno Technology, 9800 Page Avenue 63132-1429 Saint T 800-628-7730 - F technical@GBiosci	mation available te supplier of the safety dat Inc./ G-Biosciences Louis - United States = 314-991-1504 iences.com - www.GBiosciences. telephone number =	<u>.com</u> Chemtrec 1-800-424-9300 ((USA/Canada), +1-703-527-3887	' (Inti)		
Country	Organisation/Company	Address	Emergency number	Comment		
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA Belfast	0344 892 0111			
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111			
United Kingdom	National Poisons Information Service (Cardiff Centre) Gwenwyn Ward, Llandough Hospital	Penarth CF64 2XX Cardiff	0344 892 0111			
United Kingdom	National Poisons Information Service Edinburgh Royal Infirmary of Edinburgh	Little France Crescent EH16 4SA Edinburgh	0344 892 0111			
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	+44 20 7188 7188			
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre, Wolfson Unit	Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle	0344 892 0111			

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according to Regulation (EC) No. 1907/2006 (REA	CH) with its amendment Rec	julation (EU) 2015/830
SECTION 2: Hazards identificatio		
2.1. Classification of the substance of	r mixture	
Classification according to Regulation (E	C) No. 1272/2008 [CLP]	
Acute toxicity (oral), Category 4		H302
Serious eye damage/eye irritation, Category	2	H319
Specific target organ toxicity — Single expose Respiratory tract irritation	ure, Category 3,	H335
Full text of H statements : see section 16		
Adverse physicochemical, human health Harmful if swallowed. May cause respiratory 2.2. Label elements		
Labelling according to Regulation (EC) No Hazard pictograms (CLP)	6. 1272/2008 [CLP]	
CLP Signal word	: Warning	
Hazard statements (CLP)	H319 - Caus	nful if swallowed. les serious eye irritation. cause respiratory irritation.
Precautionary statements (CLP)	P264 - Wash P270 - Do no P271 - Use o P280 - Wear P301+P312 - P304+P340 -	I breathing dust/fume/gas/mist/vapours/spray. h hands, forearms and face thoroughly after handling. ot eat, drink or smoke when using this product. only outdoors or in a well-ventilated area. protective gloves/protective clothing/eye protection/face protection. - IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell. - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P338 - IF IN FYES: Rinse cautiously with water for several minutes. Remove

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312 - Call a POISON CENTRE or doctor if you feel unwell. P330 - Rinse mouth. P337+P313 - If eye irritation persists: Get medical advice/attention. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on i 3.1. Substances	ngredients		
Substance type :	Mono-constituent		
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Rifampicin USP Grade	(CAS-No.) 13292-46-1 (EC-No.) 236-312-0	100	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 STOT SE 3, H335

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

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SECTION 4: First aid measures			
4.1. Description of first aid measures			
First-aid measures general	: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.		
First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.		
First-aid measures after skin contact	: Rinse with water. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.		
First-aid measures after eye contact	: Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.		
First-aid measures after ingestion	: Rinse mouth with water. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.		
4.2. Most important symptoms and effects, both acute and delayed			
Symptoms/effects after inhalation	: AFTER INHALATION OF DUST/MIST: Irritation of the respiratory tract. Irritation of the nasal mucous membranes.		
Symptoms/effects after eye contact	: Irritation of the eye tissue. FOLLOWING SYMPTOMS MAY APPEAR LATER: Conjunctivitis.		
Symptoms/effects after ingestion	: Nausea. Vomiting. Headache. Body temperature rise.		
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation. Change in the haemogramme/blood composition. Yellow skin.		
4.3. Indication of any immediate medical attention and special treatment needed			

Treat symptomatically.

SECTION 5: Firefighting measures		
5.1. Extinguishing media		
Suitable extinguishing media	: Quick-acting ABC powder extinguisher. Class A foam extinguisher. Water (quick-acting extinguisher, reel). Water. Class A foam.	
Unsuitable extinguishing media	: Quick-acting BC powder extinguisher. Quick-acting CO2 extinguisher.	
5.2. Special hazards arising from the substance or mixture		
Hazardous decomposition products in case of fire	: Toxic fumes may be released.	
5.3. Advice for firefighters		
Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.	
Firefighting instructions	: Dilute toxic gases with water spray.	
Protection during firefighting	: Heat/fire exposure: compressed air/oxygen apparatus.	

SECTION 6: Accidental release measures			
6.1. Personal precautions, protective equipment and emergency procedures			
6.1.1. For non-emergency personnel			
Protective equipment	: Gloves. Safety glasses. Head/neck protection. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Dust cloud production: dust-tight suit.		
Emergency procedures	: Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes.		
Measures in case of dust release	: In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.		
6.1.2. For emergency responders			
Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".		
6.2. Environmental precautions			
Avoid release to the environment.			
6.3. Methods and material for containment a	and cleaning up		
For containment	: Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray.		
Methods for cleaning up	: Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.		
Other information	: Dispose of materials or solid residues at an authorized site.		
6.4. Reference to other sections			
For further information refer to section 13.			

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SECTION 7: Handling and storage		
7.1. Precautions for safe handling		
Precautions for safe handling	: Avoid raising dust. Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Clean contaminated clothing. Keep container tightly closed.	
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.	
7.2. Conditions for safe storage, including any incompatibilities		
Storage conditions	: Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.	
Heat and ignition sources	: KEEP SUBSTANCE AWAY FROM: heat sources.	
Information on mixed storage	: KEEP SUBSTANCE AWAY FROM: oxidizing agents.	
Storage area	: Store in a cool area. Store in a dry area. Store in a dark area. May be stored under inert gas. Meet the legal requirements.	
Special rules on packaging	: SPECIAL REQUIREMENTS: closing. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.	

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection 8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:
Gloves
Eye protection:
Safety glasses. In case of dust production: protective goggles
Skin and body protection:
Protective clothing
Respiratory protection:
Dust production: dust mask with filter type P2

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical p	properties		
9.1. Information on basic physical and chemical properties			
Physical state	: Solid		
Appearance	: Solid. Powder.		
Molecular mass	: 822.96 g/mol		
Colour	: Orange to red.		
Odour	: No data available		
Odour threshold	: No data available		
рН	: < 6		
Relative evaporation rate (butylacetate=1)	: No data available		
Melting point	: 183 °C		
Freezing point	: Not applicable		
Boiling point	: Not applicable		
Flash point	: Not applicable		
Auto-ignition temperature	: Not applicable		
Decomposition temperature	: 183 °C		
Flammability (solid, gas)	: Non flammable.		
Vapour pressure	: No data available		
Relative vapour density at 20 °C	: Not applicable		
Relative density	: Not applicable		

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Solubility : Poorly soluble in water. Soluble in organic solvents. Water: poorly soluble, Literature Log Pow : No data available Viscosity, kinematic : No data available Viscosity, dynamic : No data available Explosive properties : No data available	
Log Pow: No data availableViscosity, kinematic: No data availableViscosity, dynamic: No data available	
Viscosity, dynamic : No data available	
Explosive properties . No data available	
Oxidising properties : No data available	
Explosive limits : Not applicable	
9.2. Other information	
VOC content : 0 %	
Other properties : Acid reaction.	

SECTION 10: Stability and reactivity
10.1. Reactivity
The product is non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability
Stable under normal conditions.
10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.
10.4. Conditions to avoid
None under recommended storage and handling conditions (see section 7).
10.5. Incompatible materials
No additional information available
10.6. Hazardous decomposition products
Hazardous decomposition products.

SECTION 11: Toxicological information	
11.1. Information on toxicological effects	
Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Rifampicin USP Grade (13292-46-1)	
LD50 oral rat	1570 mg/kg (Rat, Oral)
Skin corrosion/irritation	: Not classified
	pH: < 6
Serious eye damage/irritation	: Causes serious eye irritation.
	pH: < 6
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Harmful if swallowed. May cause respiratory irritation. Causes serious eye irritation.

SECTION 12: Ecological information	
12.1. Toxicity	
Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Ecology - air	: Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: Mild water pollutant (surface water). No data available on ecotoxicity.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified
12.2. Persistence and degradability	
Rifampicin USP Grade (13292-46-1)	
Persistence and degradability	Biodegradability in water: no data available.

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12.3. Bioaccumulative potential		
Rifampicin USP Grade (13292-46-1)		
Bioaccumulative potential	No bioaccumulation data available.	
12.4. Mobility in soil		
No additional information available		
12.5. Results of PBT and vPvB assessment		
No additional information available		
12.6. Other adverse effects		
No additional information available		

SECTION 13: Disposal considerations 13.1. Waste treatment methods Waste treatment methods	: Waste treatment methods.
waste treatment methods	. Waste treatment methods.
Product/Packaging disposal recommendations	: Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery. Dissolve or mix with a combustible solvent.
Additional information	: Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.
European List of Waste (LoW) code	: 15 01 10* - packaging containing residues of or contaminated by dangerous substances 16 03 05* - organic wastes containing dangerous substances

SECTION 14: Transport information	
In accordance with ADR / RID / IMDG / IATA / ADN	
14.1. UN number	
UN-No. (ADR)	: Not regulated
UN-No. (IMDG)	: Not regulated
UN-No. (IATA)	: Not regulated
UN-No. (ADN)	: Not regulated
UN-No. (RID)	: Not regulated
14.2. UN proper shipping name	
Proper Shipping Name (ADR)	: Not regulated
Proper Shipping Name (IMDG)	: Not regulated
Proper Shipping Name (IATA)	: Not regulated
Proper Shipping Name (ADN)	: Not regulated
Proper Shipping Name (RID)	: Not regulated
14.3. Transport hazard class(es)	
ADR	
Transport hazard class(es) (ADR)	: Not regulated
IMDG	
Transport hazard class(es) (IMDG)	: Not regulated
ΙΑΤΑ	
Transport hazard class(es) (IATA)	: Not regulated
ADN	
Transport hazard class(es) (ADN)	: Not regulated
RID	-
Transport hazard class(es) (RID)	: Not regulated
14.4. Packing group	
Packing group (ADR)	: Not regulated
Packing group (IMDG)	: Not regulated
Packing group (IATA)	: Not regulated
Packing group (ADN)	: Not regulated
Packing group (RID)	: Not regulated
14.5. Environmental hazards	
Dangerous for the environment	: No
Marine pollutant	: No

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Other information

: No supplementary information available

14.6. Special precautions for user Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

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/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Rifampicin USP Grade is not on the REACH Candidate List

Rifampicin USP Grade is not on the REACH Annex XIV List

Rifampicin USP Grade is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Rifampicin USP Grade is not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

VOC content

:0%

15.1.2. National regulations

SECTION 46. Oth

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other Information		
Full text of H- and EUH-statements:		
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2	
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	
H302	Harmful if swallowed.	
H319	Causes serious eye irritation.	
H335	May cause respiratory irritation.	

Safety Data Sheet applicable for regions

: GB - United Kingdom

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.