SAFETY DATA SHEETS

This SDS packet was issued with item:

078056437

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

078921838

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

078056429



UPDATED PRODUCT CODE: 066999 -12.5mg VERSION DATE: 6/2007

Page 1 of 4

MATERIAL SAFETY DATA SHEET

------ 1. CHEMICAL PRODUCT and COMPANY IDENTIFICATION --------

Product Name: SALIX™ Product Family: PHARMACEUTICALS

PRODUCT:

PRODUCT CODE:

066999 - 12.5 mg

SALIX™ TABLETS

SYNONYMS:

FUROSEMIDE

PRODUCT USE: Refer to product insert for proper usage.

<u>COMPANY ADDRESS</u> - Intervet Inc - 29160 Intervet Lane - Millsboro, DE 19966

------ 2. COMPOSITION / INFORMATION on INGREDIENTS ------

HAZARDOUS COMPONENT:	CONCENTRATION:	CAS NUMBER:
FUROSEMIDE LIQUID	1.0%-5.0%	54-31-9
FUROSEMIDE TABLETS	12.5MG-50MG	54-31-9
3. HAZAP	IDE LIQUID 1.0%-5.0% 54-31-9	

EMERGENCY OVERVIEW: Warning: Milk taken from animals during treatment and for forty-eight hours (four milkings) after the last treatment must not be used for food. Cattle must not be slaughtered for food within forty-eight hours following the last treatment.

SIGNS AND SYMPTOMS OF EXPOSURE: In animals, signs of acute toxicity include lethargy, prostration, diuresis, and weight loss. In humans diuresis should be the first sign of exposure. Excessive diuresis may result in dehydration, hypokalemia, hypocalcemia and orthostatic hypotension. Other symptoms include weakness, fatigue and malaise.

	IUMAN, FIRE, SPILL NIMAL: 1-800-345-4			1-800-228-5635 EXT. 132 24 HRS.		
				SPILL, LEAK, FIRE: 1-800-424-9300		
PRODUCT INFORMATION:	1-800-835-0541	OR	1-302-934-8051	9:00 A.M 5:00 P.M. EST		
Obtained by Global Safety Management, 1-813-435-5161 - www.GSMSDS.com						



UPDATED PRODUCT CODE:066999 -12.5mgVERSION DATE:6/2007

Page 2 of 4

ROUTES OF ENTRY: Dermal, Injection, Inhalation, Ingestion

ACUTE EFFECTS OF EXPOSURE: May cause irritation at site of contact.

CHRONIC EFFECTS OF EXPOSURE: None known

TARGET ORGAN EFFECTS: Kidney. Furosemide inhibits the absorption of sodium and chlorine in the proximal and distal tubules, and in the loop of Henley.

CARCINOGENIC EFFECTS: This product is not considered a carcinogen and is not listed by OSHA, IRA or NTT.

------ 4. FIRST AID MEASURES ------

Treatment is symptomatic and includes replacement of fluid and electrolytes.

SKIN: Wash immediately affected area with soap and water. Contact a physician.

EYES: Immediately flush with plenty of water for fifteen minutes Contact a physician.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration and call for medical help immediately.

INGESTION: Seek medical attention immediately.

------ 5. FIRE FIGHTING MEASURES ------

FLAMMABILITY: Not Available

EXTINGUISHING METHODS: Use Water, Water Mist, Foam or Dry Chemical to extinguish fire.

FIRE FIGHTING INSTRUCTIONS: Wear full bunker gear, including SCBA. Keep upwind.

------ 6. ACCIDENTAL RELEASE MEASURES------- 6.

PROCEDURES IN CASE OF SPILL OR LEAK: Minor spillage may be flushed away with water. Large volume spills should be collected in salvage containers and should be incinerated in accordance with local, state and federal regulations.

	7.	HANDLING and STORAGE
--	----	----------------------

EMERGENCY:

HUMAN, FIRE, SPILL OR ENVIRONMENTAL: 1-800-228-5635 EXT. 132 24 HRS. ANIMAL: 1-800-345-4735 EXT. 104 24 HRS. CHEMTREC® FOR CHEMICAL EMERGENCY SPILL, LEAK, FIRE: 1-800-424-9300

PRODUCT INFORMATION: 1-800-835-0541 OR 1-302-934-8051 9:00 A.M. - 5:00 P.M. EST



UPDATED PRODUCT CODE:066999 -12.5mgVERSION DATE:6/2007

Page 3 of 4

STORAGE: Store at room temperature (below 25C) in well-closed containers with safety closures. The product should be colorless to slightly brown. Do not use if solution is discolored. Product is light sensitive.

SHELF LIFE: See expiration date on product label.

HANDLING PRECAUTIONS: See product label.

------ 8. EXPOSURE CONTROL / PERSONAL PROTECTION ------

Furosemide Workplace Exposure Limit: (interim) 0.5mg/m3

EYES: Prevent eye contact by wearing appropriate eye protection for handling tasks.

SKIN: Avoid skin contact. Wear chemical resistant gloves, long-sleeves and trousers to prevent dermal contact.

RESPIRATOR PROTECTION: Under normal conditions of use, as stated in the product insert, no respiratory protection is necessary. However, if ventilation is inadequate wear a NIOSH approved respirator.

------ 9. PHYSICAL and CHEMICAL PROPERTIES -------

APPEARANCE: 50mL vials, 12.5mg yellow tablet, or 50mg yellow tablet

PH: 7.0-7.8

------ 10. STABILITY and REACTIVITY ------

CHEMICAL STABILITY: Stable

CONDITIONS TO AVOID: None known

INCOMPATIBILITY: None Known

HAZARDOUS POLYMERIZATION: Will not occur

------ 11. TOXICOLOGICAL INFORMATION ------

EMERGENCY: HUMAN, FIRE, SPILL OR ENVIRONMENTAL: 1-800-228-5635 EXT. 132 24 HRS. ANIMAL: 1-800-345-4735 EXT. 104 24 HRS. CHEMTREC® FOR CHEMICAL EMERGENCY SPILL, LEAK, FIRE: 1-800-424-9300

PRODUCT INFORMATION: 1-800-835-0541 OR 1-302-934-8051 9:00 A.M. – 5:00 P.M. EST



UPDATED PRODUCT CODE:066999 -12.5mgVERSION DATE:6/2007

Page 4 of 4

Oral LD 50 Rat: *4600 mg/kg* Intraperitoneal LD50 (rat): *Not available* Intraperitoneal LD50 (mouse): *Not available*

------ 12. ECOLOGICAL INFORMATION------

ECOTOXITY: Salix (Furosemide) administered to animals presents negligible impact on the environment.

Minor spillage may be flushed away with water. Large volume spills should be collected in salvage containers and should be incinerated in accordance with local, state and federal regulations.

DOT SHIPPING INFORMATION: Not regulated by the DOT

------ 15. REGULATORY INFORMATION------

US FEDERAL REGULATIONS: Salix (Furosemide) is regulated under the US FDA.

------16. OTHER INFORMATION ------

DISCLAIMER:

The information contained herein is true and accurate to the best of the knowledge of Intervet Inc. However, all data, instructions and/or recommendations are made without guarantee. The buyer and handler assume all risk and liability of use, storage and/or handling of this product not in accordance with the terms of the product label.

PRODUCT INFORMATION: 1-800-835-0541 OR 1-302-934-8051 9:00 A.M. - 5:00 P.M. EST



Version 4.7	Revision Date: 10/01/2022	SDS Numbe 632214-0001	
SECTIO	N 1. IDENTIFICATION		
Pro	duct name	: Furosem	ide Injection Formulation
Mar	nufacturer or supplier's	details	
Company name of supplier:Merck & Co., IncAddress:126 E. Lincoln Avenue Rahway, New Jersey U.S.A. 07065Telephone:908-740-4000Emergency telephone:1-908-423-6000E-mail address:EHSDATASTEWARD@merck.com		incoln Avenue New Jersey U.S.A. 07065 -4000 23-6000	
Rec	commended use of the	chemical and	restrictions on use
Rec	commended use	: Veterinar	ry product
Res	trictions on use	: Not appli	icable
SECTIO	N 2. HAZARDS IDENTIF		

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Specific target organ toxicity	:	Category 1 (Kidney, Liver)
 repeated exposure 		

GHS label elements

Hazard pictograms	
Signal Word	Danger
Hazard Statements	H372 Causes damage to organs (Kidney, Liver) through prolonged or repeated exposure.
Precautionary Statements :	Prevention: P260 Do not breathe mist or vapors. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product.
	Response: P314 Get medical attention if you feel unwell.
	Disposal: P501 Dispose of contents and container to an approved waste disposal plant.
Other hazards	

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS



ersion .7	Revision Date: 10/01/2022		S Number: 2214-00014	Date of last issue: 04/09/2022 Date of first issue: 05/03/2016		
Subst	tance / Mixture		Mixture			
	oonents					
	nical name		CAS-No.	Concentration (% w/w)		
	emide		54-31-9	>= 5 - < 10		
Actua	I concentration is withhe	eld a	s a trade secret			
ECTION	4. FIRST AID MEASUR	ES				
Gene	ral advice	:	advice immedia	accident or if you feel unwell, seek medical ately. ns persist or in all cases of doubt seek medical		
lf inha	aled	:	lf inhaled, remo Get medical att	ove to fresh air. tention if symptoms occur.		
In cas	se of skin contact	:	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention if symptoms occur.			
In cas	se of eye contact	:	Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.			
lf swa	allowed	:	If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.			
	important symptoms ffects, both acute and ed	:				
Prote	ction of first-aiders	:	: First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).			
Notes	s to physician	:	Treat symptom	atically and supportively.		
ECTION	5. FIRE-FIGHTING ME	ASL	IRES			
Suital	ble extinguishing media	:	Water spray Alcohol-resistar Carbon dioxide Dry chemical			
Unsui media	itable extinguishing	:	None known.			
fightir		:		mbustion products may be a hazard to health.		
Haza ucts	rdous combustion prod-	:	Nitrogen oxides Carbon oxides Sulfur oxides Chlorine compo			
Sneci	fic extinguishing meth-		Use extinguishi	ing measures that are appropriate to local cir-		

Specific extinguishing meth- ods	:	Use extinguishing measures that are appropriate to local cir- cumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do
Special protective equipment	:	so. Evacuate area. In the event of fire, wear self-contained breathing apparatus.





Versic 4.7	on	Revision Date: 10/01/2022		S Number: 2214-00014	Date of last issue: 04/09/2022 Date of first issue: 05/03/2016
fo	or fire-f	ïghters		Use personal prot	ective equipment.
SECT	TION 6.	ACCIDENTAL RELE	ASI	EMEASURES	
ti	ive equ	al precautions, protec- ipment and emer- rocedures	:		ective equipment. ing advice (see section 7) and personal ent recommendations (see section 8).
E	Environ	mental precautions	:	Prevent spreading oil barriers). Retain and dispos	akage or spillage if safe to do so. g over a wide area (e.g., by containment or se of contaminated wash water. should be advised if significant spillages
		s and materials for ment and cleaning up	:	For large spills, pr containment to ke can be pumped, s container. Clean up remainir absorbent. Local or national r disposal of this ma employed in the c determine which r Sections 13 and 1	absorbent material. ovide diking or other appropriate ep material from spreading. If diked material tore recovered material in appropriate ng materials from spill with suitable egulations may apply to releases and aterial, as well as those materials and items leanup of releases. You will need to egulations are applicable. 5 of this SDS provide information regarding tional requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
	 Use only with adequate ventilation. Do not breathe mist or vapors. Do not swallow. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wash skin thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment Do not swallow.
	Do not eat, drink or smoke when using this product. Take care to prevent spills, waste and minimize release to the environment.
Conditions for safe storage	Keep in properly labeled containers. Store in accordance with the particular national regulations.
Materials to avoid	Do not store with the following product types: Strong oxidizing agents Self-reactive substances and mixtures Organic peroxides Explosives Gases



Version	Revision Date:	SDS Number:	Date of last issue: 04/09/2022
4.7	10/01/2022	632214-00014	Date of first issue: 05/03/2016

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
Furosemide	54-31-9	TWA	200 µg/m³	Internal
		TWA	OEB 2 (>=100 - 1000 ug/m3)	Internal

Engineering measures :	Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip- less quick connections). All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment. Laboratory operations do not require special containment.
Personal protective equipment	t i i i i i i i i i i i i i i i i i i i
Respiratory protection :	General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.
Hand protection Material :	Chemical-resistant gloves
Eye protection :	Wear safety glasses with side shields or goggles. If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles. Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.
Skin and body protection : Hygiene measures :	Work uniform or laboratory coat. If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use. The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.



/ersion I.7	Revision Date: 10/01/2022		S Number: 214-00014	Date of last issue: 04/09/2022 Date of first issue: 05/03/2016
ECTION	9. PHYSICAL AND CHI	ΞΜΙΟ		6
Арреа	arance	:	Aqueous solutior	
Color		:	yellow	
Odor		:	No data available	9
Odor	Threshold	:	No data available	9
рН		:	No data available	9
Meltir	ng point/freezing point	:	No data available	9
Initial range	boiling point and boiling	:	No data available	
Flash	point	:	No data available)
Evapo	oration rate	:	No data available)
Flamr	mability (solid, gas)	:	Not applicable	
Flamr	mability (liquids)	:	No data available)
	r explosion limit / Upper nability limit	:	No data available	
	r explosion limit / Lower nability limit	:	No data available	
Vapo	r pressure	:	No data available	
Relati	ive vapor density	:	No data available	
Relati	ive density	:	No data available	
Densi	ity	:	No data available	9
	ility(ies) ater solubility	:	No data available	,
	ion coefficient: n- ol/water	:	No data available	
	gnition temperature	:	No data available	
Deco	mposition temperature	:	No data available	9
Visco Vis	sity scosity, kinematic	:	No data available	9
Explo	sive properties	:	Not explosive	
Oxidiz	zing properties	:	The substance of	r mixture is not classified as oxidizing.



/ersion I.7	Revision Date: 10/01/2022		0S Number: 2214-00014	Date of last issue: 04/09/2022 Date of first issue: 05/03/2016
Partic	cle size	:	Not applicable	
SECTION	10. STABILITY AND RE	EAC	TIVITY	
Possi tions Cond Incom	nical stability ibility of hazardous reac- itions to avoid npatible materials rdous decomposition	:	Stable under nor Can react with st None known. Oxidizing agents	trong oxidizing agents.
ECTION	11. TOXICOLOGICAL I	NFO	ORMATION	
Inhala Skin o Inges	contact tion	of	exposure	
Eye c	contact			
Acute	contact e toxicity lassified based on availa	ble	information.	
Acute Not c <u>Prod</u>	e toxicity lassified based on availa			mate: > 5,000 mg/kg on method
Acute Not c <u>Prod</u> Acute	e toxicity lassified based on availa <u>uct:</u>		Acute toxicity esti	
Acute Not c Produ Acute	e toxicity lassified based on availa <u>uct:</u> e oral toxicity	:	Acute toxicity esti	on method
Acute Not c Produ Acute	e toxicity lassified based on availa <u>uct:</u> e oral toxicity ponents: semide:	:	Acute toxicity esti Method: Calculati	on method) mg/kg
Acute Not c Produ Acute	e toxicity lassified based on availa <u>uct:</u> e oral toxicity ponents: semide:	:	Acute toxicity esti Method: Calculati LD50 (Rat): 2,600	on method 0 mg/kg 0 mg/kg
Acute Not c Produ Acute Com Furos Acute	e toxicity lassified based on availa <u>uct:</u> e oral toxicity ponents: semide:	:	Acute toxicity esti Method: Calculati LD50 (Rat): 2,600 LD50 (Dog): 2,00	on method 0 mg/kg 0 mg/kg)0 mg/kg - 29 mg/kg
Acute Not c Produ Acute Com Furos Acute	e toxicity lassified based on availa <u>uct:</u> e oral toxicity ponents: semide: e oral toxicity e toxicity (other routes of	:	Acute toxicity esti Method: Calculati LD50 (Rat): 2,600 LD50 (Dog): 2,00 LD50 (Rabbit): 80 LD0 (Humans): 6	on method 0 mg/kg 0 mg/kg 00 mg/kg - 29 mg/kg e: Intravenous mg/kg

Not classified based on available information.



rsion	Revision Date: 10/01/2022	SDS Number: 632214-00014	Date of last issue: 04/09/2022 Date of first issue: 05/03/2016
Respi	iratory or skin sens	itization	
_	sensitization assified based on av	ailable information.	
-	iratory sensitizatior assified based on av		
	cell mutagenicity assified based on av	ailable information.	
Comp	oonents:		
Furos	semide:		
	toxicity in vitro	: Test Type: Bao Result: negativ	cterial reverse mutation assay (AMES) /e
			ritro mammalian cell gene mutation test nouse lymphoma cells e
		thesis in mamr	A damage and repair, unscheduled DNA syr nalian cells (in vitro) nammalian liver cells /e
			romosome aberration test in vitro Chinese hamster ovary cells e
		malian cells	ritro sister chromatid exchange assay in man Chinese hamster cells re
Genot	toxicity in vivo	: Test Type: Ma cytogenetic as Species: Mous Application Ro Result: negativ	e ute: Ingestion
			ute: Ingestion
	nogenicity assified based on av	ailable information.	
Comp	oonents:		
Furos	semide:		
Speci	es cation Route	: Rat	



Version 4.7	Revision Date: 10/01/2022	SDS Number:Date of last issue: 04/09/2022632214-00014Date of first issue: 05/03/2016
LOAE Resu		: 16 mg/kg body weight : equivocal
	cation Route sure time EL	 Mouse Ingestion 2 Years 91 mg/kg body weight positive
IARC	0	ent of this product present at levels greater than or equal to 0.1% is s probable, possible or confirmed human carcinogen by IARC.
OSH		ent of this product present at levels greater than or equal to 0.1% is list of regulated carcinogens.
NTP		ent of this product present at levels greater than or equal to 0.1% is a known or anticipated carcinogen by NTP.
-	oductive toxicity lassified based on av	ilable information.
Com	oonents:	
Furos	semide:	
Effect	ts on fertility	: Test Type: One-generation reproduction toxicity study Species: Rat Application Route: Ingestion General Toxicity Parent: NOAEL: 90 mg/kg body weight Result: No effects on reproduction parameters.
		Test Type: One-generation reproduction toxicity study Species: Mouse Application Route: Ingestion General Toxicity Parent: NOAEL: 200 mg/kg body weight
		Result: No effects on reproduction parameters.
Effect	ts on fetal developme	 Test Type: Fertility/early embryonic development Species: Rat Application Route: Ingestion General Toxicity Maternal: LOAEL: 50 mg/kg body weight Developmental Toxicity: NOAEL: 300 mg/kg body weight Result: No embryotoxic effects., No teratogenic effects.
		Test Type: Fertility/early embryonic development Species: Mouse Application Route: Ingestion General Toxicity Maternal: LOAEL: 25 mg/kg body weight Result: Maternal toxicity observed., Fetal effects.
		Test Type: Fertility/early embryonic development Species: Rabbit Application Route: Ingestion General Toxicity Maternal: LOAEL: <= 12 mg/kg body weight Developmental Toxicity: LOAEL: 12.5 mg/kg body weight Result: Maternal toxicity observed., Reduced number of viable



ersion 7	Revision Date: 10/01/2022	SDS Number: 632214-00014	Date of last issue: 04/09/2022 Date of first issue: 05/03/2016
		fetuses.	
		Species: Ra Application F General Tox	Route: Ingestion icity Maternal: LOAEL: 15 mg/kg body weight ernal toxicity observed., No effects on fetal
STOT	-single exposure		
Not cl	assified based on ava	ilable information.	
STOT	-repeated exposure		
Cause	es damage to organs	(Kidney, Liver) throu	ugh prolonged or repeated exposure.
<u>Comp</u>	oonents:		
Furos	semide:		
Targe	es of exposure et Organs ssment		oduce significant health effects in animals at con- of 10 mg/kg bw or less.
Repe	ated dose toxicity		
<u>Comp</u>	oonents:		
Furos	semide:		
Expos	EL EL cation Route sure time et Organs toms	: Dog : 4 mg/kg : 8 mg/kg : Ingestion : 12 Months : Kidney : Blood disord : Significant to	lers oxicity observed in testing
-	ation toxicity	the last of the second states of	
	assified based on ava rience with human e		
	oonents:		
Furos	semide:		
	contact ontact	: Remarks: M : Remarks: M : Symptoms: I ance, dry mo	ay be harmful if inhaled. ay irritate skin. ay cause eye irritation. Kidney disorders, Headache, electrolyte imbal- buth, hearing loss, Irregular cardiac activity, Gas- disturbance, hypotension



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Furosemide Injection Formulation

Version 4.7	Revision Date: 10/01/2022	SDS Number: 632214-00014	Date of last issue: 04/09/2022 Date of first issue: 05/03/2016
SECTION	N 12. ECOLOGICAL IN	IFORMATION	
Ecot	toxicity		
<u>Com</u>	ponents:		
	osemide: city to fish	: LC50: 500 mg/l Exposure time:	
No d	sistence and degradal lata available	-	
	accumulative potentia	I	
Parti	osemide: ition coefficient: n- nol/water	: log Pow: 2.03	
	ility in soil lata available		
	er adverse effects lata available		
SECTION	13 DISPOSAL CON		

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues Contaminated packaging	Dispose of in accordance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.
	If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG Not regulated as a dangerous good

IATA-DGR Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR Not regulated as a dangerous good



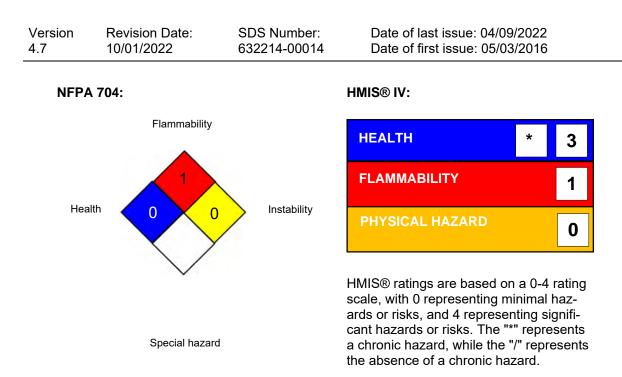


Version 4.7	Revision Date: 10/01/2022	SDS Ni 632214		Date of last issue: 0 Date of first issue: 0					
-	Special precautions for user Not applicable								
SECTION	15. REGULATORY IN	FORMAT	ION						
	CLA Reportable Quant naterial does not conta	-	nponents with	a CERCLA RQ.					
	A 304 Extremely Hazar material does not contai		•	•	RQ.				
	SARA 302 Extremely Hazardous Substances Threshold Planning Quantity This material does not contain any components with a section 302 EHS TPQ.								
SAR	A 311/312 Hazards	: Spe	cific target or	gan toxicity (single or	repeated exposure)				
SAR	A 313	kno	wn CAS num		mical components with hreshold (De Minimis) Fitle III, Section 313.				
US S	tate Regulations								
Penn	sylvania Right To Kno Water Furosemide	w			7732-18-5 54-31-9				
	The ingredients of this product are reported in the following inventories:								
AICS		: not	determined						
DSL		: not	determined						
IECS	С	: not	determined						

SECTION 16. OTHER INFORMATION

Further information





Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; 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; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative



Version 4.7	Revision Date: 10/01/2022		DS Number: 2214-00014	Date of last issue: 04/09/2022 Date of first issue: 05/03/2016
	es of key data used to e the Material Safety heet	:		data, data from raw material SDSs, OECD Irch results and European Chemicals Agen- ropa.eu/
Revisio	on Date	:	10/01/2022	

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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

US / Z8



Version 5.7	Revision Date: 10/01/2022		OS Number: 5633-00013	Date of last issue: 04/09/2022 Date of first issue: 05/03/2016
SECTIO	N 1. IDENTIFICATION			
Pro	duct name	:	Furosemide So	lid Formulation
Ma	nufacturer or supplier's	deta	ails	
Cor Ado Tele	mpany name of supplier dress ephone	:	Merck & Co., Ir 126 E. Lincoln	
	ergency telephone nail address	:	1-908-423-600 EHSDATASTE	0 WARD@merck.com
Red	commended use of the c	hen	nical and restrie	ctions on use
Red	commended use	:	Veterinary proc	luct
Res	strictions on use	:	Not applicable	
191	S classification in accor 0.1200) nbustible dust	dan	ce with the OSI	HA Hazard Communication Standard (29 CF
	ecific target organ toxicity peated exposure	:	Category 1 (Ki	dney, Liver)
GH	S label elements			
Haz	zard pictograms	:		
Sig	nal Word	:	Danger	
Haz	zard Statements	:	handling or by concentrations H372 Causes of	es are generated during further processing, other means, may form combustible dust in air. damage to organs (Kidney, Liver) through epeated exposure.
Pre	cautionary Statements	:	P270 Do not ea Response: P314 Get med Disposal:	reathe dust. in thoroughly after handling. at, drink or smoke when using this product. ical attention if you feel unwell. of contents and container to an approved waste



Version	Revision Date:	SDS Number:	Date of last issue: 04/09/2022
5.7	10/01/2022	645633-00013	Date of first issue: 05/03/2016

Other hazards

Dust contact with the eyes can lead to mechanical irritation. Contact with dust can cause mechanical irritation or drying of the skin.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Starch	9005-25-8	>= 50 - < 70
Furosemide	54-31-9	>= 10 - < 20
Cellulose	9004-34-6	>= 1 - < 5

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice	:	In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.
If inhaled	:	If inhaled, remove to fresh air.
In case of skin contact	:	Get medical attention if symptoms occur. In case of contact, immediately flush skin with soap and plenty of water.
In case of eye contact	:	Get medical attention if symptoms occur. If in eyes, rinse well with water. Get medical attention if irritation develops and persists.
If swallowed	:	If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and	:	Causes damage to organs through prolonged or repeated exposure.
delayed		Contact with dust can cause mechanical irritation or drying of the skin.
Protection of first-aiders	:	Dust contact with the eyes can lead to mechanical irritation. First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the perturbial for exposure exists (see section 8)
Notes to physician	:	when the potential for exposure exists (see section 8). Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	•	None known.
Specific hazards during fire fighting	:	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Exposure to combustion products may be a hazard to health.



Versio 5.7	on	Revision Date: 10/01/2022		9S Number: 5633-00013	Date of last issue: 04/09/2022 Date of first issue: 05/03/2016
	Hazardo ucts	ous combustion prod-	:	Nitrogen oxides (N Carbon oxides Sulfur oxides Chlorine compour	
C	Specific extinguishing meth- ods Special protective equipment		:	Use extinguishing measures that are appropriate to local cir- cumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area. In the event of fire, wear self-contained breathing apparatus.	
f	or fire-f	fighters		Use personal prot	
SECT	FION 6.	ACCIDENTAL RELE	ASI	EMEASURES	
ti	ive equ	al precautions, protec- ipment and emer- procedures	:		ective equipment. ing advice (see section 7) and personal ent recommendations (see section 8).
E	Environ	mental precautions	:	Retain and dispos	akage or spillage if safe to do so. e of contaminated wash water. should be advised if significant spillages
		s and materials for ment and cleaning up	:	container for disper Avoid dispersal of with compressed Dust deposits sho surfaces, as these released into the a Local or national r disposal of this ma employed in the c determine which r Sections 13 and 1	dust in the air (i.e., clearing dust surfaces

SECTION 7. HANDLING AND STORAGE

Technical measures	:	Static electricity may accumulate and ignite suspended dust causing an explosion. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.
Local/Total ventilation Advice on safe handling		Use only with adequate ventilation. Do not breathe dust. Do not swallow. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wash skin thoroughly after handling. Handle in accordance with good industrial hygiene and safety



Version 5.7	Revision Date: 10/01/2022	SDS Number: 645633-00013	Date of last issue: 04/09/2022 Date of first issue: 05/03/2016
		assessment Minimize dust Keep containe Keep away fro Take precautic Do not eat, dri	d on the results of the workplace exposure generation and accumulation. r closed when not in use. m heat and sources of ignition. onary measures against static discharges. nk or smoke when using this product. revent spills, waste and minimize release to the
Cond	itions for safe storage		rly labeled containers. dance with the particular national regulations.
Mate	rials to avoid	: Do not store w Strong oxidizir	ith the following product types: ng agents ubstances and mixtures

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
Starch	9005-25-8	TWA	10 mg/m ³	ACGIH
		TWA (Res- pirable)	5 mg/m³	NIOSH REL
		TWA (total)	10 mg/m ³	NIOSH REL
		TWA (total dust)	15 mg/m³	OSHA Z-1
		TWA (respir- able fraction)	5 mg/m³	OSHA Z-1
Furosemide	54-31-9	TWA	200 µg/m³	Internal
		TWA	OEB 2 (>=100 - 1000 ug/m3)	Internal
Cellulose	9004-34-6	TWA	10 mg/m ³	ACGIH
		TWA (Res- pirable)	5 mg/m³	NIOSH REL
		TWA (total)	10 mg/m ³	NIOSH REL
		TWA (total dust)	15 mg/m³	OSHA Z-1
		TWA (respir- able fraction)	5 mg/m³	OSHA Z-1

Ingredients with workplace control parameters

Engineering measures :	Use feasible engineering controls to minimize exposure to compound. All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.
Personal protective equipment	
Respiratory protection :	General and local exhaust ventilation is recommended to



Version 5.7	Revision Date: 10/01/2022	SDS Number: 645633-00013	Date of last issue: 04/09/2022 Date of first issue: 05/03/2016
	protection	concentration unknown, ap Follow OSH/ use NIOSH/I by air purifyin hazardous cl supplied resp release, exp circumstance adequate pro	or exposures below recommended limits. Where ns are above recommended limits or are propriate respiratory protection should be worn. A respirator regulations (29 CFR 1910.134) and MSHA approved respirators. Protection provided ng respirators against exposure to any hemical is limited. Use a positive pressure air pirator if there is any potential for uncontrolled osure levels are unknown, or any other e where air purifying respirators may not provide otection.
	rotection		glasses with side shields or goggles.
Цуер		If the work end mists or aero Wear a faces	nvironment or activity involves dusty conditions, pools, wear the appropriate goggles. shield or other full face protection if there is a direct contact to the face with dusts, mists, or
	and body protection ne measures	: If exposure t eye flushing working plac When using Wash contar The effective engineering appropriate o industrial hys	n or laboratory coat. o chemical is likely during typical use, provide systems and safety showers close to the e. do not eat, drink or smoke. ninated clothing before re-use. e operation of a facility should include review of controls, proper personal protective equipment, degowning and decontamination procedures, giene monitoring, medical surveillance and the istrative controls.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	powder
Color	:	yellow
Odor	:	No data available
Odor Threshold	:	No data available
рН	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	Not applicable
Evaporation rate	:	No data available
Flammability (solid, gas)	:	May form explosive dust-air mixture during processing, handling or other means.

SAFETY DATA SHEET



Furosemide Solid Formulation

Ver 5.7	sion	Revision Date: 10/01/2022		S Number: 633-00013	Date of last issue: 04/09/2022 Date of first issue: 05/03/2016
	Flamma	ability (liquids)	:	No data available	
		explosion limit / Upper bility limit	:	No data available	
		explosion limit / Lower bility limit	:	No data available	
	Vapor p	pressure	:	No data available	
	Relative	e vapor density	:	No data available	
	Relative	e density	:	No data available	
	Density	,	:	No data available	
	Solubili Wat	ty(ies) er solubility	:	No data available	
	Partition octanol	n coefficient: n-	:	No data available	
		ition temperature	:	No data available	
	Decom	position temperature	:	No data available	
	Viscosi Visc	ty osity, kinematic	:	No data available	
	Explosi	ve properties	:	Not explosive	
	Oxidizir	ng properties	:	The substance or	mixture is not classified as oxidizing.
	Molecu	lar weight	:	Not applicable	
	Particle	size	:	No data available	

SECTION 10. STABILITY AND REACTIVITY

Reactivity Chemical stability Possibility of hazardous reac- tions		Not classified as a reactivity hazard. Stable under normal conditions. May form explosive dust-air mixture during processing, handling or other means. Can react with strong oxidizing agents.
Conditions to avoid	:	Heat, flames and sparks. Avoid dust formation.
Incompatible materials Hazardous decomposition		Oxidizing agents No hazardous decomposition products are known.
products		





ECTION 11. TOXICOLOGICAL INFORMATION Information on likely routes of exposure Inhalation Skin contact Ingestion Eye contact Acute toxicity Not classified based on available information. Product: Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method Components: Starch: Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg Acute oral toxicity : LD50 (Rat): 2,600 mg/kg Acute oral toxicity (other routes of administration) : LD50 (Rat): 2,000 mg/kg Application Route: Intravenous : LD50 (Rat): 800 mg/kg Application Route: Intravenous : LD50 (Rat): > 5,000 mg/kg Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg <t< th=""><th>Date of last issue: 04/09/20 Date of first issue: 05/03/20</th><th>OS Number: 5633-00013</th><th></th><th>Revision Date: 10/01/2022</th><th>ersion .7</th></t<>	Date of last issue: 04/09/20 Date of first issue: 05/03/20	OS Number: 5633-00013		Revision Date: 10/01/2022	ersion .7
Inhalation Skin contact Ingestion Eye contactAcute toxicity Not classified based on available information.Product: Acute oral toxicityAcute toxicity estimate: > 5,000 mg/kg Method: Calculation methodAcute oral toxicity:Acute toxicity estimate: > 5,000 mg/kg Method: Calculation methodStarch: Acute oral toxicity:LD50 (Rat): > 5,000 mg/kgAcute oral toxicity:LD50 (Rat): > 2,000 mg/kgAcute oral toxicity:LD50 (Rat): 2,000 mg/kgAcute oral toxicity (other routes of administration):LD50 (Rat): 800 mg/kgAcute oral toxicity:LD50 (Rat): 5,000 mg/kgAcute oral toxicity:LD50 (Rat): > 5,000 mg/kgAcute oral toxicity::Macute oral toxicity::Acute oral toxicity::Acute oral toxicity::Acute oral toxicity::Acute	 	ORMATION	AL INF	11. TOXICOLOGICAL	ECTION 1
Not classified based on available information.Product: Acute oral toxicity:Acute toxicity estimate: > 5,000 mg/kg Method: Calculation methodComponents: Starch: 		exposure	utes of	ation contact tion	Inhalati Skin co Ingestic
Product: Acute oral toxicity:Acute toxicity estimate: > 5,000 mg/kg Method: Calculation methodComponents: Starch: Acute oral toxicity:LD50 (Rat): > 5,000 mg/kgAcute dermal toxicity:LD50 (Rat): > 2,000 mg/kgAcute oral toxicity:LD50 (Rat): > 2,000 mg/kgFurosemide: Acute oral toxicity:LD50 (Rat): 2,000 mg/kgAcute oral toxicity:LD50 (Rat): 2,000 mg/kgAcute oral toxicity:LD50 (Rat): 2,000 mg/kgAcute toxicity (other routes of administration):LD50 (Rat): 2,000 mg/kg Application Route: IntravenousLD50 (Rat): 800 mg/kg Application Route: Intravenous:LD50 (Rat): 800 mg/kg Application Route: IntravenousCellulose: Acute oral toxicity:LD50 (Rat): > 5,000 mg/kg Application Route: IntravenousAcute inhalation toxicity:LD50 (Rat): > 5,8 mg/l Exposure time: 4 h 				-	
Acute oral toxicity:Acute toxicity estimate: > 5,000 mg/kg Method: Calculation methodComponents:Starch:Acute oral toxicity:LD50 (Rat): > 5,000 mg/kgAcute dermal toxicity:LD50 (Rat): > 2,000 mg/kgFurosemide:Acute oral toxicity:LD50 (Rat): 2,600 mg/kgAcute oral toxicity:LD50 (Rat): 2,000 mg/kgAcute oral toxicity:LD50 (Rat): 2,000 mg/kgAcute toxicity (other routes of administration):LD50 (Rat): 800 mg/kgAcute toxicity (other routes of administration):LD50 (Rat): 800 mg/kgAcute oral toxicity:LD50 (Rat): 800 mg/kgAcute oral toxicity:ILD50 (Rat): 800 mg/kgAcute inhalation toxicity:ILD50 (Rat): > 5,800 mg/kgAcute inhalation toxicity:ILC50 (Rat): > 5.8 mg/lExposure time: 4 h Test atmosphere: dust/mist:		information.	vailable		
Starch:Acute oral toxicity:LD50 (Rat): > 5,000 mg/kgAcute dermal toxicity:LD50 (Rabbit): > 2,000 mg/kgFurosemide:.Acute oral toxicity:LD50 (Rat): 2,600 mg/kgAcute oral toxicity:LD50 (Dog): 2,000 mg/kgAcute toxicity (other routes of administration):LD50 (Rabbit): 800 mg/kgAcute toxicity (other routes of administration):LD50 (Rat): 800 mg/kgAcute oral toxicity:LD50 (Rat): 800 mg/kgApplication Route: Intravenous.LD50 (Rat): 800 mg/kgAcute oral toxicity:LD50 (Rat): 800 mg/kgAcute inhalation toxicity:LD50 (Rat): > 5,000 mg/kgAcute inhalation toxicity:LC50 (Rat): > 5,8 mg/lExposure time: 4 h Test atmosphere: dust/mist:			:		_
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Acute dermal toxicity:LD50 (Rabbit): > 2,000 mg/kgFurosemide: Acute oral toxicity:LD50 (Rat): 2,600 mg/kg LD50 (Dog): 2,000 mg/kg LD50 (Rabbit): 800 mg/kgAcute toxicity (other routes of administration):LD0 (Humans): 6 - 29 mg/kg Application Route: Intravenous LD50 (Rat): 800 mg/kgCellulose: Acute oral toxicity:LD50 (Rat): > 5,000 mg/kg Application Route: IntravenousCellulose: Acute inhalation toxicity:LC50 (Rat): > 5.8 mg/l Exposure time: 4 h Test atmosphere: dust/mist					
Furosemide:Acute oral toxicity: LD50 (Rat): 2,600 mg/kgLD50 (Dog): 2,000 mg/kgLD50 (Rabbit): 800 mg/kgAcute toxicity (other routes of administration): LD0 (Humans): 6 - 29 mg/kg Application Route: IntravenousLD50 (Rat): 800 mg/kg Application Route: IntravenousCellulose:Acute oral toxicity: LD50 (Rat): > 5,000 mg/kgAcute inhalation toxicity: LC50 (Rat): > 5.8 mg/l Exposure time: 4 h Test atmosphere: dust/mist	5,000 mg/kg	LD50 (Rat):	:	oral toxicity	Acute o
Acute oral toxicity:LD50 (Rat): 2,600 mg/kgLD50 (Dog): 2,000 mg/kgLD50 (Rabbit): 800 mg/kgAcute toxicity (other routes of administration):LD0 (Humans): 6 - 29 mg/kg Application Route: IntravenousLD50 (Rat): 800 mg/kg Application Route: IntravenousLD50 (Rat): 800 mg/kg Application Route: IntravenousCellulose: Acute oral toxicity:LD50 (Rat): > 5,000 mg/kgAcute inhalation toxicity:LC50 (Rat): > 5.8 mg/l Exposure time: 4 h Test atmosphere: dust/mist	: > 2,000 mg/kg	LD50 (Rabb	:	dermal toxicity	Acute d
LD50 (Dog): 2,000 mg/kg LD50 (Rabbit): 800 mg/kg Acute toxicity (other routes of : LD0 (Humans): 6 - 29 mg/kg Application Route: Intravenous LD50 (Rat): 800 mg/kg Application Route: Intravenous Cellulose: Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg Acute inhalation toxicity : LC50 (Rat): > 5.8 mg/l Exposure time: 4 h Test atmosphere: dust/mist				semide:	Furose
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Acute toxicity (other routes of administration):LD0 (Humans): 6 - 29 mg/kg Application Route: IntravenousLD50 (Rat): 800 mg/kg Application Route: IntravenousCellulose: Acute oral toxicity:LD50 (Rat): > 5,000 mg/kgAcute inhalation toxicity:LD50 (Rat): > 5,8 mg/l Exposure time: 4 h Test atmosphere: dust/mist	,000 mg/kg	LD50 (Dog):			
administration)Application Route: IntravenousLD50 (Rat): 800 mg/kg Application Route: IntravenousCellulose: Acute oral toxicityAcute oral toxicity:LD50 (Rat): > 5,000 mg/kgAcute inhalation toxicity:LC50 (Rat): > 5.8 mg/l Exposure time: 4 h Test atmosphere: dust/mist	: 800 mg/kg	LD50 (Rabb			
Application Route: Intravenous Cellulose: Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg Acute inhalation toxicity : LC50 (Rat): > 5.8 mg/l Exposure time: 4 h Test atmosphere: dust/mist			es of :		
Acute oral toxicity:LD50 (Rat): > 5,000 mg/kgAcute inhalation toxicity:LC50 (Rat): > 5.8 mg/l Exposure time: 4 h Test atmosphere: dust/mist					
Acute inhalation toxicity : LC50 (Rat): > 5.8 mg/l Exposure time: 4 h Test atmosphere: dust/mist				lose:	Cellulo
Exposure time: 4 h Test atmosphere: dust/mist	5,000 mg/kg	LD50 (Rat):	:	oral toxicity	Acute o
Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg	e: 4 h	Exposure tin	:	inhalation toxicity	Acute ir
	: > 2,000 mg/kg	LD50 (Rabb	:	dermal toxicity	Acute d
Skin corrosion/irritation				corrosion/irritation	Skin co

Serious eye damage/eye irritation

Not classified based on available information.



	Revision Date: 10/01/2022	SDS Number: 645633-00013	Date of last issue: 04/09/2022 Date of first issue: 05/03/2016
Comp	oonents:		
Starc	h:		
Speci	es	: Rabbit	
Resul		: No eye irrita	ation
Resp	iratory or skin sens	itization	
-	sensitization		
Not cl	assified based on av	ailable information.	
Resp	iratory sensitizatior	1	
Not cl	assified based on av	ailable information.	
Comp	oonents:		
Starc	h:		
Test 7		: Maximizatio	
	es of exposure	: Skin contac	t
Speci Resul		: Guinea pig : negative	
	cell mutagenicity assified based on av	ailable information.	
Comp	oonents:		
Starc	h:		
	h: toxicity in vitro	: Test Type: Result: neg	Bacterial reverse mutation assay (AMES) ative
Geno			
Geno Furos	toxicity in vitro	Result: neg	ative Bacterial reverse mutation assay (AMES)
Geno Furos	toxicity in vitro	Result: neg : Test Type: Result: neg Test Type:	ative Bacterial reverse mutation assay (AMES) ative In vitro mammalian cell gene mutation test n: mouse lymphoma cells
Geno Furos	toxicity in vitro	Result: neg : Test Type: Result: neg Test Type: Test systen Result: pos Test Type: thesis in ma	ative Bacterial reverse mutation assay (AMES) ative In vitro mammalian cell gene mutation test n: mouse lymphoma cells itive DNA damage and repair, unscheduled DNA syn- ammalian cells (in vitro) n: mammalian liver cells
Geno Furos	toxicity in vitro	Result: neg : Test Type: Result: neg Test Type: Test systen Result: pos Test Type: thesis in ma Test systen Result: neg Test Type:	ative Bacterial reverse mutation assay (AMES) ative In vitro mammalian cell gene mutation test n: mouse lymphoma cells itive DNA damage and repair, unscheduled DNA syn- ammalian cells (in vitro) n: mammalian liver cells ative Chromosome aberration test in vitro n: Chinese hamster ovary cells
Geno Furos	toxicity in vitro	Result: neg : Test Type: Result: neg Test Type: Test systen Result: pos Test Type: thesis in ma Test systen Result: neg Test Type: Test systen Result: pos Test Type: Test systen Result: pos	ative Bacterial reverse mutation assay (AMES) ative In vitro mammalian cell gene mutation test n: mouse lymphoma cells itive DNA damage and repair, unscheduled DNA syn- ammalian cells (in vitro) n: mammalian liver cells ative Chromosome aberration test in vitro n: Chinese hamster ovary cells itive



ersion 7	Revision Da 10/01/2022		OS Number: 5633-00013	Date of last issue: 04/09/2022 Date of first issue: 05/03/2016
			cytogenetic as Species: Mous Application Ro Result: negativ	e ute: Ingestion
				ute: Ingestion
Cellu	llose:			
	otoxicity in vitro	:	Test Type: Bac Result: negativ	eterial reverse mutation assay (AMES)
			Test Type: In v Result: negativ	itro mammalian cell gene mutation test e
Genc	otoxicity in vivo	:	Test Type: Man cytogenetic ass Species: Mous Application Ro Result: negativ	e ute: Ingestion
	inogenicity lassified based	l on available	information.	
<u>Com</u>	ponents:			
Furo	semide:			
Spec		:	Rat	
	cation Route sure time		Ingestion 104 weeks	
LOAE		:	16 mg/kg body	weight
Resu	lt		o guis (o o o l	Weight
	int int	•	equivocal	
Spec		:	Mouse	
	ies cation Route	:	Mouse Ingestion	
Appli Expo	ies cation Route sure time		Mouse Ingestion 2 Years	
Appli	ies cation Route sure time EL		Mouse Ingestion	
Appli Expo LOAE Resu	ies cation Route sure time EL		Mouse Ingestion 2 Years 91 mg/kg body	
Appli Expo LOAE Resu Cellu Spec	ies cation Route sure time EL It I lose: ies		Mouse Ingestion 2 Years 91 mg/kg body positive Rat	
Appli Expo LOAE Resu Cellu Spec Appli	ies cation Route sure time EL It Ilose: ies cation Route		Mouse Ingestion 2 Years 91 mg/kg body positive Rat Ingestion	
Appli Expo LOAE Resu Cellu Spec Appli	ies cation Route sure time EL It Ilose: ies cation Route sure time		Mouse Ingestion 2 Years 91 mg/kg body positive Rat	
Appli Expo LOAE Resu Cellu Spec Appli Expo	ies cation Route sure time EL It Ilose: ies cation Route sure time It No i		Mouse Ingestion 2 Years 91 mg/kg body positive Rat Ingestion 72 weeks negative his product pres	



Version 5.7	Revision Date: 10/01/2022	SDS Number: 645633-00013	Date of last issue: 04/09/2022 Date of first issue: 05/03/2016
NTP			sent at levels greater than or equal to 0.1% is ed carcinogen by NTP.
-	roductive toxicity classified based on ava	ilable information.	
Com	iponents:		
	osemide: cts on fertility	Species: Rat Application Ro General Toxic Result: No effe Test Type: On Species: Mous Application Ro General Toxic	ity Parent: NOAEL: 90 mg/kg body weight acts on reproduction parameters. e-generation reproduction toxicity study se
Effec	cts on fetal developmen	t : Test Type: Fe Species: Rat Application Ro General Toxic Developmenta Result: No em	rtility/early embryonic development
		Species: Mous Application Ro General Toxic	se i
		Species: Rabb Application Ro General Toxic Developmenta	
		Species: Rabb Application Ro General Toxic	
Celli	ulose:		
	cts on fertility	: Test Type: On Species: Rat Application Ro	e-generation reproduction toxicity study oute: Ingestion



rsion	Revision Date: 10/01/2022		S Number: 5633-00013	Date of last issue: 04/09/2022 Date of first issue: 05/03/2016
			Result: negative	
Effects	s on fetal development	:	Test Type: Fertil Species: Rat Application Rout Result: negative	ity/early embryonic development e: Ingestion
	-single exposure assified based on availa	ble	information.	
STOT	-repeated exposure			
		idne	ey, Liver) through	prolonged or repeated exposure.
	onents:			
Furos	emide:			
	s of exposure	:	Ingestion	
Targe	t Organs sment	:	Kidney Shown to produc	e significant health effects in animals at co mg/kg bw or less.
Repea	ated dose toxicity			
Comp	onents:			
Starcl	า:			
Specie		:	Rat	
NOAE		:	>= 2,000 mg/kg	
	ation Route ure time	:	Skin contact 28 Days	
Metho		:	OECD Test Guid	leline 410
Furos	emide:			
Specie	es	:	Dog	
NOAE		:	4 mg/kg	
LOAE		÷	8 mg/kg Ingestion	
	ation Route ure time	•	12 Months	
	t Organs	÷	Kidney	
Sympt		:	Blood disorders	
Rema	rks	:	Significant toxici	y observed in testing
Cellul	ose:			
Specie		:	Rat	
NOAE	L ation Route	:	>= 9,000 mg/kg Ingestion	
		-	Indestion	

Not classified based on available information.



rsion ,	Revision Date: 10/01/2022		DS Number: 5633-00013	Date of last issue: 04/09/2022 Date of first issue: 05/03/2016
Expe	rience with human e	exposi	ure	
<u>Com</u>	ponents:			
Furo	semide:			
-	contact		Remarks: May Remarks: May Symptoms: Kid ance, dry mout	be harmful if inhaled. irritate skin. cause eye irritation. ney disorders, Headache, electrolyte imbal- h, hearing loss, Irregular cardiac activity, Ga turbance, hypotension
CTION	12. ECOLOGICAL II	NFORI	MATION	
Ecot	oxicity			
Com	ponents:			
Furo	semide:			
Toxic	ity to fish	:	LC50: 500 mg/l Exposure time:	
Cellu	lose:			
Toxic	ity to fish	:	Exposure time:	latipes (Japanese medaka)): > 100 mg/l 48 h d on data from similar materials
Persi	stence and degrada	bility		
Com	ponents:			
Cellu	lose:			
Biode	egradability	:	Result: Readily	biodegradable.
Bioa	ccumulative potentia	al		
Com	ponents:			
Partit	semide: ion coefficient: n- ol/water	:	log Pow: 2.03	
	lity in soil ata available			
	r adverse effects ata available			

Disposal methods		
Waste from residues Contaminated packaging	:	Dispose of in accordance with local regulations. Empty containers should be taken to an approved waste



Version 5.7	Revision Date: 10/01/2022	SDS Number: 645633-00013	Date of last issue: 04/09/2022 Date of first issue: 05/03/2016			
			or recycling or disposal. e specified: Dispose of as unused product.			
SECTION	14. TRANSPORT IN	FORMATION				
Interi	national Regulations	5				
UNR ⁻ Not re	TDG egulated as a danger	ous good				
	IATA-DGR Not regulated as a dangerous good					
	IMDG-Code Not regulated as a dangerous good					
	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable for product as supplied.					
Dom	Domestic regulation					
	49 CFR Not regulated as a dangerous good					
-	Special precautions for user Not applicable					

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards	:	Combustible dust Specific target organ toxicity (single or repeated exposure)
SARA 313	:	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Pennsylvania Right To Know	
Starch	9005-25-8
D-Glucose, 4-O-β-D-galactopyranosyl-, monohydrate	64044-51-5
Furosemide	54-31-9
Cellulose	9004-34-6
California Permissible Exposure Limits for Chemical Contaminants	
Starch	9005-25-8
Cellulose	9004-34-6

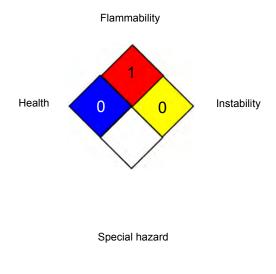


Version	Revision Date:	SDS Number:	Date of last issue: 04/09/2022
5.7	10/01/2022	645633-00013	Date of first issue: 05/03/2016
The in	gredients of this pr	oduct are reported	d in the following inventories:
AICS		: not determir	ned
DSL		: not determir	ned
IECSC	>	: not determir	ned

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

ACGIH NIOSH REL OSHA Z-1	:	USA. ACGIH Threshold Limit Values (TLV) USA. NIOSH Recommended Exposure Limits USA. Occupational Exposure Limits (OSHA) - Table Z-1 Lim- its for Air Contaminants
ACGIH / TWA NIOSH REL / TWA	:	8-hour, time-weighted average Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
OSHA Z-1 / TWA	:	8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; 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



Version	Revision Date:	SDS Number:	Date of last issue: 04/09/2022
5.7	10/01/2022	645633-00013	Date of first issue: 05/03/2016

in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to	:	Internal technical data, data from raw material SDSs, OECD
compile the Material Safety		eChem Portal search results and European Chemicals Agen-
Data Sheet		cy, http://echa.europa.eu/

Revision Date : 10/01/2022

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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

US / Z8