This SDS packet was issued with item: 078074104

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).

078071823





Version 3.0	Revision Date: 08/30/2018	SDS Number:Date of last issue:632255-00006Date of first issue:		
SECTION	I 1. IDENTIFICATION			
Prod	uct name	: Imidocarb Injection Formulation		
	ufacturer or supplier's			
Com	pany name of supplier	: Merck & Co., Inc		
Addr	ess	2000 Galloping Hill Road Kenilworth - New Jersey - U.S.A. 07033		
Tele	phone	908-740-4000		
Telet	fax	908-735-1496		
Eme	rgency telephone	: 1-908-423-6000		
E-ma	ail address	: EHSDATASTEWARD@merck.com		
Reco	ommended use of the	emical and restrictions on use		
Reco	ommended use	: Veterinary product		

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200 Reproductive toxicity

Reproductive toxicity	:	Category 2
Specific target organ systemic toxicity - single exposure (Oral)	:	Category 1 (Central nervous system)
Specific target organ systemic toxicity - repeated exposure (Oral)	:	Category 1 (Liver, Kidney)

GHS label elements

Hazard pictograms	:	
Signal Word	:	Danger
Hazard Statements	:	H361d Suspected of damaging the unborn child. H370 Causes damage to organs (Central nervous system) if swallowed. H372 Causes damage to organs (Liver, Kidney) through prolonged or repeated exposure if swallowed.
Precautionary Statements	:	Prevention: P201 Obtain special instructions before use.



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		and understoo P260 Do not b P264 Wash sk P270 Do not e	reathe mist or vapors. in thoroughly after handling. at, drink or smoke when using this product. otective gloves/ protective clothing/ eye protection,			
		Response: P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician. Storage: P405 Store locked up.				
		Disposal:				
		P501 Dispose of contents/ container to an approved posal plant.				
Other	hazards					
None	known.					

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)				
Imidocarb	27885-92-3	>= 10 - < 20				
Propionic acid	79-09-4	>= 1 - < 5				
Actual concentration is withheld as a trade conrat						

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. Get medical attention.
In case of skin contact	:	In case of contact, immediately flush skin with soap and plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
In case of eye contact	:	Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.
If swallowed	:	If swallowed, DO NOT induce vomiting.



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			ention. oroughly with water. thing by mouth to an unconscious person.	
Most i and ef delaye	mportant symptoms fects, both acute and ed	 Suspected of damaging the unborn child. Causes damage to organs if swallowed. Causes damage to organs through prolonged or repeated exposure if swallowed. 		
Protection of first-aiders		and use the rec	ders should pay attention to self-protection, commended personal protective equipment tial for exposure exists.	
Notes	to physician	: Treat symptoma	atically 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	:	Exposure to combustion products may be a hazard to health.
	Hazardous combustion prod- ucts	:	Carbon oxides
l	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 so. Evacuate area.
	Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- :	Use personal protective equipment.
tive equipment and emer-	Follow safe handling advice and personal protective
gency procedures	equipment recommendations.
Environmental precautions :	Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g., by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages



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	ds and materials for nment and cleaning up	: Soal For I cont can Clea abso Loca dispo emp dete Sect	arge spills, p ainment to k be pumped, ainer. n up remain rbent. I or national bsal of this n oyed in the mine which ons 13 and	ned. It absorbent material. provide diking or other appropriate eep material from spreading. If diked material store recovered material in appropriate ing materials from spill with suitable regulations may apply to releases and naterial, as well as those materials and items cleanup of releases. You will need to regulations are applicable. 15 of this SDS provide information regarding ational requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures :	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation :	Use only with adequate ventilation.
Advice on safe handling :	Avoid inhalation of vapor or mist. Do not swallow. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment Take care to prevent spills, waste and minimize release to the environment.
Conditions for safe storage :	Keep in properly labeled containers. Store locked up. Store in accordance with the particular national regulations.
Materials to avoid :	Do not store with the following product types: Strong oxidizing agents Organic peroxides Explosives Gases

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
Imidocarb	27885-92-3	TWA	50 µg/m3 (OEB 3)	Internal
		Wipe limit	500 µg/100 cm ²	Internal
Propionic acid	79-09-4	TWA	10 ppm	ACGIH



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			TWA	10 ppm 30 mg/m³	NIOSH REL
			ST	15 ppm 45 mg/m³	NIOSH REL
Engii	neering measures	technologie less quick c All engineer design and protect proc Containmer are required the compou containmen	s to control airborn onnections). ing controls shoul operated in accor lucts, workers, an at technologies su to control at sour nd to uncontrolled	controls and manu ne concentrations Id be implemented dance with GMP p d the environment itable for controllin rce and to prevent d areas (e.g., open	(e.g., drip- by facility principles to g compounds migration of
Perso	onal protective equip	oment			
Resp	iratory protection	maintain va concentratic unknown, a Follow OSH use NIOSH by air purify hazardous o supplied res release, exp	por exposures belows are above rec ppropriate respirat A respirator regul (MSHA approved ing respirators ag chemical is limited spirator if there is posure levels are is the where air purify	ntilation is recomm low recommended ommended limits of tory protection sho lations (29 CFR 19 respirators. Protect ainst exposure to a l. Use a positive pl any potential for up unknown, or any o ring respirators ma	I limits. Where or are buld be worn. 010.134) and ction provided any ressure air ncontrolled ther
Hand	protection				
Ma	aterial	: Chemical-re	esistant gloves		
Re	emarks	: Consider do	ouble gloving.		
Eye p	protection	If the work e mists or aer Wear a face	environment or ac osols, wear the ap eshield or other fu	e shields or goggle tivity involves dust ppropriate goggles Il face protection if the face with dusts	y conditions, s. there is a
Skin a	and body protection	Additional b task being p disposable s	performed (e.g., sl suits) to avoid exp riate degowning to	bat. buld be used base leevelets, apron, g bosed skin surface echniques to remo	auntlets, s.
Hygie	ene measures		eye flushing syste e to the working p	ems and safety sh blace.	owers are



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			Wash contaminate The effective oper engineering contro appropriate degov	ot eat, drink or smoke. ed clothing before re-use. ration of a facility should include review of ols, proper personal protective equipment, wning and decontamination procedures, monitoring, medical surveillance and the ive controls.
SECTION	9. PHYSICAL AND CH	ЕМІС	CAL PROPERTIES	6
Appe	arance	:	liquid	
Color		:	clear	
Odor		:	No information av	vailable.
Odor	Threshold	:	No data available	9
pН		:	4.5	
Meltir	ng point/freezing point	:	212 °F / 100 °C	
Initial range	boiling point and boiling	:	No data available	3
Flash	point	:	No data available	9
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	2
Relati	ive vapor density	:	No data available	2
Densi	ity	:	No data available	9
	ility(ies) ater solubility	:	soluble	
	ion coefficient: n- ol/water	:	No data available	
Autoi	gnition temperature	:	No data available)
Deco	mposition temperature	:	No data available	9



Imidocarb Injection Formulation

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 Е> О: М	Viscosity Viscosity, kinematic Explosive properties Oxidizing properties Molecular weight Particle size		 No data available Not explosive The substance or mixture is not classified as oxidizing. No data available No data available 			
SECTI	ON 10. STABILITY AND RE	EAC	ΤΙVΙΤΥ			
Re	eactivity	:	Not classified as	a reactivity hazard.		
CI	nemical stability	:	Stable under normal conditions.			
	ossibility of hazardous reac- ons	:	Can react with strong oxidizing agents.			
Co	onditions to avoid	:	None known.			
In	compatible materials	:	Oxidizing agents			
	azardous decomposition oducts	:	No hazardous de	ecomposition products are known.		
SECTI	ON 11. TOXICOLOGICAL I	NFC	RMATION			
In Sł In	formation on likely routes halation kin contact gestion /e contact	of e	exposure			

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	: Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Acute dermal toxicity	: Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
<u>Components:</u>	

Imidocarb:	
Acute oral toxicity	: LD50 (Rat): 1,216 - 1,652 mg/kg
	LD50 (Mouse): 544 - 702 mg/kg
	LD50 (Rabbit): 317 mg/kg



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П				
Acu	Acute inhalation toxicity		Remarks: No data	a available
Acu	te dermal toxicity	:	Remarks: No data	a available
	te toxicity (other routes of ninistration)	:	LD50 (Rat): 32.7 r Application Route	
			LD50 (Mouse): 22 Application Route	
Ш _{Рго}	pionic acid:			
	ite oral toxicity	:	LD50 (Rat): 3,455	.1 mg/kg
Acu	te dermal toxicity	:	LD50 (Rat): 3,235	mg/kg
II Ski	n corrosion/irritation			
Not	classified based on availa	ble	information.	
<u>Cor</u>	<u>mponents:</u>			
I.I.	docarb:			
Rer	narks	:	No data available	
llera	pionic acid:			
	ecies		Rabbit	
Res		:		minutes to 1 hour of exposure
	ious eye damage/eye irri			
	classified based on availa	ble	information.	
<u>Cor</u>	nponents:			
	docarb: narks		No data available	
	IIdIKS	•	NU UALA AVAIIADIE	
Pro	pionic acid:			
	ecies	:	Rabbit	
Res	sult	:	Irreversible effects	s on the eye
Res	spiratory or skin sensitiza	atio	n	
-	n sensitization			
	classified based on availa	ble	information.	
	spiratory sensitization classified based on availa	ble	information.	
<u>Cor</u>	nponents:			
Imi	docarb:			
	narks	:	No data available	



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Test	es of exposure ies It	: Maximization : Skin contact : Guinea pig : negative : Based on dat	Test a from similar materials
Not c	n cell mutagenicity lassified based on av ponents:	ailable information.	
	ocarb:		
<u>u</u> .	toxicity in vitro	: Test Type: Ba Result: negat	acterial reverse mutation assay (AMES) ive
		Test Type: In Result: negat	vitro mammalian cell gene mutation test ive
		Test Type: C Result: equiv	hromosome aberration test in vitro ocal
Geno	toxicity in vivo	: Test Type: M cytogenetic a Species: Rat Application R Result: negat	oute: Oral
		Test Type: M cytogenetic a Species: Mou Application R Result: negat	use oute: Oral
	ionic acid:		
ш.	otoxicity in vitro	: Test Type: Back Result: negat	acterial reverse mutation assay (AMES) ive
Genc	otoxicity in vivo	cytogenetic a Species: Chi	nese hamster oute: Intraperitoneal injection
	inogenicity lassified based on av	ailable information.	
Com	ponents:		
Imide	ocarb:		
Spec Appli	ies cation Route	: Rat : Oral	



ersion .0	Revision Date: 08/30/2018	SDS Number: 632255-00006	Date of last issue: 04/15/2018 Date of first issue: 05/02/2016				
Exposure time LOAEL Result Target Organs Remarks		: negative : Mammary gla	 240 mg/kg body weight negative Mammary gland The mechanism or mode of action may not be relevant in hu 				
Speci Applic	ation Route	: Rat : Ingestion					
Resul	sure time t	: 2 Years : negative					
IARC			esent at levels greater than or equal to 0.1% is or confirmed human carcinogen by IARC.				
OSH <i>A</i>		ent of this product p list of regulated card	resent at levels greater than or equal to 0.1% is cinogens.				
NTP			this product present at levels greater than or equal to 0.1% is nown or anticipated carcinogen by NTP.				
Imido Effect	carb: s on fertility	Species: Rat Application R Fertility: LOA	wo-generation reproduction toxicity study oute: Oral EL: 135 mg/kg body weight rse neonatal effects.				
		Species: Rat Application R	wo-generation reproduction toxicity study oute: Oral .EL: 45 mg/kg body weight				
Effect	s on fetal developmer	Species: Rat Application R Development	mbryo-fetal development oute: Oral al Toxicity: LOAEL: 76 mg/kg body weight ts on fetal development., No teratogenic effects.				
		Species: Rat Application R					
		Species: Rab Application R					



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			Result: No effects	on fetal development.
Repro sessr	oductive toxicity - As- nent	:	Some evidence o animal experimen	f adverse effects on development, based on ts.
Prop	ionic acid:			
Effec	ts on fetal development	:	Species: Rat Application Route Result: negative	ro-fetal development : Ingestion on data from similar materials
	Г-single exposure			<i></i>
	es damage to organs (C	enti	al nervous system)	if swallowed.
	ponents:			
Targe	ocarb: et Organs ssment	:	Central nervous s Causes damage t	
u ·	ionic acid: ssment	:	May cause respira	atory irritation.
Caus	F-repeated exposure es damage to organs (Li ponents:	ver	Kidney) through p	rolonged or repeated exposure if swallowed.
Targe	ocarb: et Organs ssment	:	Liver, Kidney Causes damage t exposure.	o organs through prolonged or repeated
Repe	ated dose toxicity			
Com	ponents:			
Spec LOAE Applie Expo		:	Rat 125 mg/kg Oral 90 Days Liver	
Expo	EL	::	Rat 76 mg/kg 415 mg/kg Oral 90 Days Liver	
Spec	ies	:	Dog	
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LOAEL Application Route Exposure time		: 5 mg/kg : Oral : 90 Days	
Targe Symp	et Organs toms	: Liver, Kidney : muscle twitch	ing, Salivation, recumbency, ataxia, splayed le
Speci NOAE		: Rat : 15 mg/kg	
LOAE		: 60 mg/kg	
Applic	cation Route	: Oral	
	sure time	: 104 Weeks	
large	et Organs	: Liver, Kidney	Blood
Speci		: Monkey	
NOAE		: 5 mg/kg	
	cation Route sure time	: Oral : 30 Days	
Rema			adverse effects were reported
II			
_	onic acid:	. Det	
Speci NOAE		: Rat : 50000 ppm	
	cation Route	: Ingestion	
	sure time	: 90 Days	
Aspir	ation toxicity		
-	assified based on ava	ilable information.	
Expe	rience with human e	xposure	
Com	oonents:		
Imido	ocarb:		
Inhala		Symptoms: S mation, ataxia	s: Central nervous system alivation, muscle twitching, Tremors, Lachry- a, lethargy sed on Animal Evidence
	12. ECOLOGICAL IN		

Ecotoxicity

_	Components:		
	Propionic acid:		
	Toxicity to fish	:	LC50 (Lepomis macrochirus (Bluegill sunfish)): 85.3 mg/l Exposure time: 96 h
	Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 22.7 mg/l Exposure time: 48 h
	Toxicity to algae	:	EC50 (Desmodesmus subspicatus (green algae)): 48.7 mg/l Exposure time: 72 h



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II				
Pers	istence and degradabi	lity		
Com	ponents:			
Prop	ionic acid:			
Biode	egradability	:	Result: Readily bi Biodegradation: 9 Exposure time: 20	93 %
Bioa	ccumulative potential			
<u>Com</u>	ponents:			
Imide	ocarb:			
	ion coefficient: n- ol/water	:	log Pow: 3.88	
Prop	ionic acid:			
	ion coefficient: n- ol/water	:	log Pow: 0.33	
Mobi	lity in soil			
No da	ata available			
Othe	r adverse effects			
No da	ata available			
SECTION	13. DISPOSAL CONSI	DEF	RATIONS	
Disp	osal methods			
•	e from residues	:	Dispose of in acc	ordance with local regulations.

Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.
		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.



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Domestic regulation

49 CFR

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ	Calculated product RQ
		(lbs)	(lbs)
Propionic acid	79-09-4	5000	166666

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	:	Reproductive toxicity 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

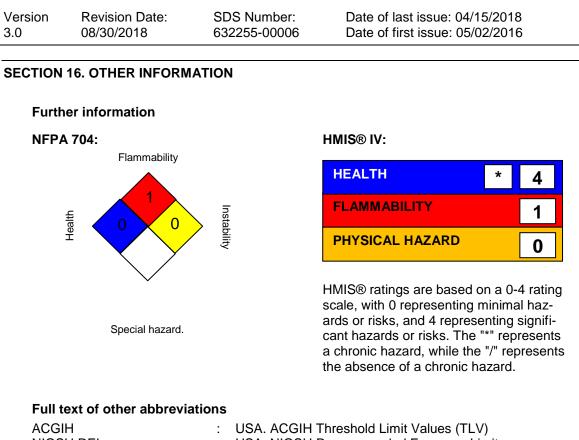
Pennsylvania Right To Know					
Water	7732-18-5				
Imidocarb	27885-92-3				
Propionic acid	79-09-4				

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

California List of Hazardous	Su	Ibstances	
Propionic acid			79-09-4
California Permissible Expo	sur	e Limits for Chemical Contaminants	
Propionic acid			79-09-4
The ingredients of this prod	uct	are reported in the following invento	ries:
AICS	:	not determined	
DSL	:	not determined	
IECSC	:	not determined	





ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
ACGIH / TWA	:	8-hour, time-weighted average
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour
		workday during a 40-hour workweek
NIOSH REL / ST	:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday

AICS - Australian Inventory of Chemical Substances; 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 - (Quanti-



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tative) 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; 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 compile the Material Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen- cy, http://echa.europa.eu/
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Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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





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SECT	ION 1	. IDENTIFICATION			
Р	Produc	t name	:	Imidocarb Injection	on Formulation
N	/lanufa	acturer or supplier's	deta	ails	
С	Compa	iny name of supplier	:	Merck & Co., Inc	
A	ddres	S	:	2000 Galloping H Kenilworth - New	lill Road Jersey - U.S.A. 07033
т	eleph	one	:	908-740-4000	
Т	elefax	c	:	908-735-1496	
E	Emerge	ency telephone	:	1-908-423-6000	
E	E-mail	address	:	: EHSDATASTEWARD@merck.com	
R	Recom	mended use of the o	hen	nical and restriction	ons on use
R	Recom	mended use	:	Veterinary produc	ot
SECT	ION 2	. HAZARDS IDENTIF	ICA [.]	TION	

GHS classification in accordance with 29 CFR 1910.1200

Reproductive toxicity	:	Category 2
Specific target organ systemic toxicity - single exposure (Oral)	:	Category 1 (Central nervous system)
Specific target organ systemic toxicity - repeated exposure (Oral)	:	Category 1 (Liver, Kidney)

GHS label elements

Hazard pictograms	:	
Signal Word	:	Danger
Hazard Statements	:	H361d Suspected of damaging the unborn child. H370 Causes damage to organs (Central nervous system) if swallowed. H372 Causes damage to organs (Liver, Kidney) through prolonged or repeated exposure if swallowed.
Precautionary Statements	:	Prevention: P201 Obtain special instructions before use.



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		and understoo P260 Do not b P264 Wash sk P270 Do not e	reathe mist or vapors. in thoroughly after handling. at, drink or smoke when using this product. otective gloves/ protective clothing/ eye protection
		Response: P307 + P311 I physician.	F exposed: Call a POISON CENTER or doctor/
		Storage: P405 Store loc	sked up.
		Disposal:	
		P501 Dispose posal plant.	of contents/ container to an approved waste dis-
II Other I	hazards		
None k	nown.		

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)				
Imidocarb	27885-92-3	>= 10 - < 20				
Propionic acid	79-09-4	>= 1 - < 5				
Actual concentration is withhold as a trade secret						

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. Get medical attention.	
In case of skin contact	:	In case of contact, immediately flush skin with soap and plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.	
In case of eye contact	:	Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.	
If swallowed	:	If swallowed, DO NOT induce vomiting.	



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		Get medical attention. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.					
	Most important symptoms and effects, both acute and delayed		 Suspected of damaging the unborn child. Causes damage to organs if swallowed. Causes damage to organs through prolonged or repeated exposure if swallowed. 				
Protection of first-aiders		and use th	First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.				
Notes	s to physician	: Treat symp	otomatically 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	:	Exposure to combustion products may be a hazard to health.
	Hazardous combustion prod- ucts	:	Carbon oxides
I	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 so. Evacuate area.
	Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- tive equipment and emer- gency procedures	:	Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.
Environmental precautions	:	Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g., by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages



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	ods and materials for inment and cleaning up	For large spil containment can be pump container. Clean up rem absorbent. Local or natio disposal of th employed in determine wh Sections 13 a	ntained. inert absorbent material. ls, provide diking or other appropriate to keep material from spreading. If diked material ed, store recovered material in appropriate naining materials from spill with suitable onal regulations may apply to releases and is material, as well as those materials and items the cleanup of releases. You will need to nich regulations are applicable. and 15 of this SDS provide information regarding or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures :	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.	
Local/Total ventilation :	Use only with adequate ventilation.	
Advice on safe handling :	Avoid inhalation of vapor or mist. Do not swallow. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment Take care to prevent spills, waste and minimize release to the environment.	
Conditions for safe storage :	Keep in properly labeled containers. Store locked up. Store in accordance with the particular national regulations.	
Materials to avoid :	Do not store with the following product types: Strong oxidizing agents Organic peroxides Explosives Gases	

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Comp	oonents	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
Imido	carb	27885-92-3	TWA	50 µg/m3 (OEB 3)	Internal
			Wipe limit	500 µg/100 cm²	Internal
Propie	onic acid	79-09-4	TWA	10 ppm	ACGIH



			DS Number:Date of last issue: 04/15/20182255-00006Date of first issue: 05/02/2016			
				TWA	10 ppm 30 mg/m³	NIOSH REL
				ST	15 ppm 45 mg/m³	NIOSH REL
Engi	neering measures	:	technologies t less quick cor All engineerin design and op protect produc Containment t are required to	o control airborr nections). g controls should berated in accord cts, workers, and technologies sui control at sour to uncontrolled levices).	controls and manufac ne concentrations (e. d be implemented by dance with GMP prin d the environment. table for controlling c ce and to prevent mi areas (e.g., open-fa	g., drip- r facility ciples to compounds gration of
Perse	onal protective equip	ment				
Resp	iratory 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					
M	aterial	:	Chemical-resi	stant gloves		
Re	emarks	:	Consider doul	ole gloving.		
Eye p	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 a	and body protection	:	Additional boo task being per disposable su	formed (e.g., sle its) to avoid exp ite degowning te	at. uld be used based u eevelets, apron, gau osed skin surfaces. echniques to remove	ntlets,
Hygie	ene measures	:		ye flushing syste to the working p	ems and safety show lace.	ers are



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			Wash contaminate The effective oper engineering contro appropriate degov	t eat, drink or smoke. ed clothing before re-use. ation of a facility should include review of ols, proper personal protective equipment, vning and decontamination procedures, monitoring, medical surveillance and the ive controls.
SECTIO	N 9. PHYSICAL AND CHE	EMIC		3
Арр	pearance	:	liquid	
Col	or	:	clear	
Odd	or	:	No information av	vailable.
Odd	or Threshold	:	No data available	
pН		:	4.5	
Mel	ting point/freezing point	:	212 °F / 100 °C	
Initi rang	al boiling point and boiling ge	:	No data available	
Flas	sh point	:	No data available	
Eva	poration rate	:	No data available	
Flai	mmability (solid, gas)	:	Not applicable	
Flai	mmability (liquids)	:	No data available	
	per explosion limit / Upper nmability limit	:	No data available	
	ver explosion limit / Lower nmability limit	:	No data available	
Vap	oor pressure	:	No data available	
Rel	ative vapor density	:	No data available	
Der	nsity	:	No data available	
	ubility(ies) Water solubility	:	soluble	
	tition coefficient: n- anol/water	:	No data available	
Aut	oignition temperature	:	No data available	
Dec	composition temperature	:	No data available	



Imidocarb Injection Formulation

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_∨ II	′iscosity Viscosity, kinemati	c :	No data avail	able		
	xplosive properties	· ·	Not explosive			
)xidizing properties		-	e or mixture is not classified as oxidizing.		
	Iolecular weight		No data avail	, and the second s		
	Particle size		No data avail			
	allicle size	•	ino uala avai	able		
SECT	ION 10. STABILITY	AND REAC	ΤΙνιτγ			
F	Reactivity	:	Not classified	as a reactivity hazard.		
C	Chemical stability	:	Stable under	normal conditions.		
	Possibility of hazardou ons	us reac- :	- : Can react with strong oxidizing agents.			
C	Conditions to avoid	:	None known.			
Ir	ncompatible materials	s :	Oxidizing agents			
	lazardous decompos roducts	ition :	No hazardou	s decomposition products are known.		
SECT	ION 11. TOXICOLO	GICAL INFO	ORMATION			
lr S Ir	nformation on likely halation kin contact ngestion ye contact	routes of e	exposure			
A	Acute toxicity					

Not classified based on available information.

Product:

Acute oral toxicity	: Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Acute dermal toxicity	: Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Components: Imidocarb:	
Acute oral toxicity	: LD50 (Rat): 1,216 - 1,652 mg/kg

LD50 (Mouse): 544 - 702 mg/kg

LD50 (Rabbit): 317 mg/kg



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п				
Ac	ute inhalation toxicity	:	Remarks: No data	available
Ac	ute dermal toxicity	:	Remarks: No data	available
	ute toxicity (other routes of ministration)	:	LD50 (Rat): 32.7 r Application Route	
			LD50 (Mouse): 22 Application Route	
Шег	opionic acid:			
	ute oral toxicity	:	LD50 (Rat): 3,455	.1 mg/kg
Ac	ute dermal toxicity	:	LD50 (Rat): 3,235	mg/kg
II Sk	in corrosion/irritation			
No	t classified based on availa	ble	information.	
<u>Co</u>	emponents:			
Im	idocarb:			
Re	marks	:	No data available	
П.,	onionio opidu			
	opionic acid: ecies		Rabbit	
	sult	:		ninutes to 1 hour of exposure
Se	rious eye damage/eye irri	tati	on	
	t classified based on availab			
Co	omponents:			
IIIm	idocarb:			
U.	marks	:	No data available	
ll _{Pr}	opionic acid:			
	ecies	:	Rabbit	
	sult	:	Irreversible effects	s on the eye
Re	spiratory or skin sensitiza	atio	n	
Sk	in sensitization			
No	t classified based on availa	ble	information.	
Re	spiratory sensitization			
No	t classified based on availa	ble	information.	
<u></u> Co	emponents:			
Im	idocarb:			
Re	marks	:	No data available	



Imidocarb Injection Formulation

Propionic acid: Test Type Maximization Test Routes of exposure Skin contact Species Schinea pig Result in egative Remarks is Based on data from similar materials Gern cell mutagenicity Not classified based on available information. Components: Inidocarb: Inidocarb: Genotoxicity in vitro Genotoxicity in vitro Test Type: Bacterial reverse mutation assay (AMES) Result: negative Test Type: Chromosome aberration test in vitro Result: regative Test Type: Chromosome aberration test in vitro Result: negative Test Type: Rammalian erythrocyte micronucleus test (in v cytogenetic assay) Species: Rat Application Route: Oral Result: negative Test Type: Mammalian erythrocyte micronucleus test (in v cytogenetic assay) Species: Mouse Application Route: Oral Result: negative Result: negative Genotoxicity in vitro Test Type: Mammalian erythrocyte micronucleus test (in v cytogenetic assay) Species: Mouse Application Route: Oral Result: negative Genotoxicity in vitro Test Type: Mammalian eryt	ersion 0	Revision Date: 08/30/2018	SDS Number: 632255-00006	Date of last issue: 04/15/2018 Date of first issue: 05/02/2016
Not classified based on available information. Components: Imidocarb: Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES) Result: negative Test Type: In vitro mammalian cell gene mutation test Result: negative Test Type: Chromosome aberration test in vitro Result: equivocal Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in v cytogenetic assay) Species: Rat Application Route: Oral Result: negative Test Type: Mammalian erythrocyte micronucleus test (in v cytogenetic assay) Species: Rouse Application Route: Oral Result: negative Propionic acid: Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES) Species: Mouse Application Route: Oral Result: negative Propionic acid: Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES) Result: negative Genotoxicity in vitro : Test Type: Mammalian erythrocyte micronucleus test (in v cytogenetic assay) Species: Chinese hamster Application Route: Intraperitoneal injection Result: negative Carcinogenicity Not classified based on available information. Components: Imidocarb: Species : Rat	Test Route Speci Resu	Type es of exposure ies It	: Skin contac : Guinea pig : negative	t
Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES) Result: negative Test Type: In vitro mammalian cell gene mutation test Result: negative Test Type: Chromosome aberration test in vitro Result: equivocal Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in v cytogenetic assay) Species: Rat Application Route: Oral Result: negative Test Type: Mammalian erythrocyte micronucleus test (in v cytogenetic assay) Species: Mouse Application Route: Oral Result: negative Propionic acid: Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES) Result: negative Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES) Result: negative Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES) Result: negative Genotoxicity in vitro : Test Type: Mammalian erythrocyte micronucleus test (in v cytogenetic assay) Species: Chinese hamster Application Route: Intraperitoneal injection Result: negative Carcinogenicity Not classified based on available information. Components: Imidocarb: Imidocarb: Species : Rat	Not c	lassified based on av	ailable information.	
Result: negative Test Type: Chromosome aberration test in vitro Result: equivocal Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in v cytogenetic assay) Species: Rat Application Route: Oral Result: negative Test Type: Mammalian erythrocyte micronucleus test (in v cytogenetic assay) Species: Rat Application Route: Oral Result: negative Propionic acid: Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES) Result: negative Genotoxicity in vitro : Test Type: Mammalian erythrocyte micronucleus test (in v cytogenetic assay) Species: Chinese hamster Application Route: Intraperitoneal injection Result: negative Carcinogenicity Not classified based on available information. Components: Imidocarb: Species Species Result: negative	UL.			
cytogenetic assay) Species: Rat Application Route: Oral Result: negative Test Type: Mammalian erythrocyte micronucleus test (in v cytogenetic assay) Species: Mouse Application Route: Oral Result: negative Propionic acid: Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES) Result: negative Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in v cytogenetic assay) Species: Chinese hamster Application Route: Intraperitoneal injection Result: negative Carcinogenicity Not classified based on available information. Components: Imidocarb: Species : Rat			Result: nega Test Type: (ative Chromosome aberration test in vitro
cytogenetic assay) Species: Mouse Application Route: Oral Result: negative Propionic acid: Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES) Result: negative Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in v cytogenetic assay) Species: Chinese hamster Application Route: Intraperitoneal injection Result: negative Carcinogenicity Not classified based on available information. Components: Imidocarb: Species : Rat	Geno	toxicity in vivo	cytogenetic Species: Ra Application	assay) t Route: Oral
Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES) Result: negative Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in v cytogenetic assay) Species: Chinese hamster Application Route: Intraperitoneal injection Result: negative Carcinogenicity Not classified based on available information. Components: Imidocarb: Species : Rat			cytogenetic Species: Mo Application	assay) ouse Route: Oral
Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES) Result: negative Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in v cytogenetic assay) Species: Chinese hamster Application Route: Intraperitoneal injection Result: negative Carcinogenicity Not classified based on available information. Components: Imidocarb: : Rat		ionic acid:		
cytogenetic assay) Species: Chinese hamster Application Route: Intraperitoneal injection Result: negative Carcinogenicity Not classified based on available information. Components: Imidocarb: Species : Rat	- LL			
Not classified based on available information. Components: Imidocarb: Species : Rat	Geno	toxicity in vivo	cytogenetic Species: Ch Application	assay) inese hamster Route: Intraperitoneal injection
Imidocarb: Species : Rat		• •	ailable information.	
Imidocarb: Species : Rat	Com	ponents:		
Species : Rat	11			
Application Route : Oral	Speci	ies	: Rat : Oral	

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Exposu LOAEL Result Target Remark	Organs	 104 weeks 240 mg/kg body weight negative Mammary gland The mechanism or mode of action may not be relevant in humans.
Species	tion Route	: Rat : Ingestion : 2 Years : negative
IARC		of this product present at levels greater than or equal to 0.1% is probable, possible or confirmed human carcinogen by IARC.
OSHA		nt of this product present at levels greater than or equal to 0.1% is st of regulated carcinogens.
NTP		t of this product present at levels greater than or equal to 0.1% is a known or anticipated carcinogen by NTP.
Compo Imidoc Effects		 nborn child. Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: Oral Fertility: LOAEL: 135 mg/kg body weight Result: Adverse neonatal effects. Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: Oral Fertility: NOAEL: 45 mg/kg body weight Test Type: Embryo-fetal development Species: Rat Application Route: Oral Developmental Toxicity: LOAEL: 76 mg/kg body weight Result: Effects on fetal development., No teratogenic effects. Test Type: Embryo-fetal development., No teratogenic effects. Test Type: Embryo-fetal development Species: Rat Application Route: Oral Developmental Toxicity: NOAEL: 19 mg/kg body weight Test Type: Embryo-fetal development Species: Rat Application Route: Oral Developmental Toxicity: NOAEL: 19 mg/kg body weight



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II			Result: No effects	on fetal development.
Repro sessn	oductive toxicity - As- nent	:	Some evidence o animal experimer	f adverse effects on development, based on ts.
Propi	onic acid:			
Effect	s on fetal development	:	Species: Rat Application Route Result: negative	ro-fetal development : Ingestion on data from similar materials
STOT	-single exposure			
	es damage to organs (C	entr	al nervous system) if swallowed.
<u>Com</u>	<u>oonents:</u>			
UL.	ocarb:			
	et Organs ssment	:	Central nervous s Causes damage f	
			0	C .
UL Č	onic acid:			
Asses	ssment	:	May cause respire	atory irritation.
STOT	-repeated exposure			
	es damage to organs (Li conents:	ver,	Kidney) through p	rolonged or repeated exposure if swallowed.
<u>Com</u> Imido	ponents:	ver,		rolonged or repeated exposure if swallowed
Com Imido Targe	oonents:	ver, :	Liver, Kidney	rolonged or repeated exposure if swallowed. o organs through prolonged or repeated
Com Imido Targe Asses	oonents: ocarb: ot Organs	ver, :	Liver, Kidney Causes damage t	
Com Imido Targe Asses Repe	oonents: ocarb: et Organs ssment	ver, : :	Liver, Kidney Causes damage t	rolonged or repeated exposure if swallowed. o organs through prolonged or repeated
Com Imido Targe Asses Repe	oonents: ocarb: et Organs ssment ated dose toxicity oonents:	ver, : :	Liver, Kidney Causes damage t	
Com Imido Targe Asses Repe Com Imido	oonents: ocarb: ot Organs ssment ated dose toxicity oonents: ocarb: es	ver, : :	Liver, Kidney Causes damage t exposure.	
Com Imido Targe Asses Repe Com Imido Speci LOAE	oonents: ocarb: et Organs ssment ated dose toxicity oonents: ocarb: es EL	ver,	Liver, Kidney Causes damage t exposure. Rat 125 mg/kg	
Com Imido Targe Asses Repe Com Imido Speci LOAE Applio Expos	<pre>conents: corpans st Organs ssment ated dose toxicity conents: conents: carb: es L cation Route sure time</pre>	ver,	Liver, Kidney Causes damage t exposure. Rat 125 mg/kg Oral 90 Days	
Com Imido Targe Asses Repe Com Imido Speci LOAE Applio Expos	conents: carb: et Organs ssment ated dose toxicity conents: carb: es L cation Route	ver,	Liver, Kidney Causes damage t exposure. Rat 125 mg/kg Oral	
Com Imido Targe Asses Repe Com Imido Speci LOAE Applio Expos Targe	conents: poarb: et Organs ssment ated dose toxicity ponents: poarb: es EL cation Route sure time et Organs es	ver,	Liver, Kidney Causes damage f exposure. Rat 125 mg/kg Oral 90 Days Liver Rat	
Com Imido Targe Asses Repe Com Imido Speci LOAE Applio Expos Targe	conents: carb: et Organs ated dose toxicity conents: carb: es cation Route sure time et Organs	ver,	Liver, Kidney Causes damage f exposure. Rat 125 mg/kg Oral 90 Days Liver Rat 76 mg/kg	
Com Imido Targe Asses Repe Com Imido Speci LOAE Applio Expos Targe	conents: carb: et Organs ated dose toxicity conents: carb: es cation Route sure time et Organs es cation Route sure time et Organs es cation Route cation Route	ver,	Liver, Kidney Causes damage t exposure. Rat 125 mg/kg Oral 90 Days Liver Rat 76 mg/kg 415 mg/kg Oral Oral	
Com Imido Targe Asses Repe Com Imido Speci LOAE Applio Expos Targe	conents: carb: et Organs ated dose toxicity conents: carb: es cation Route sure time et Organs	ver,	Liver, Kidney Causes damage f exposure. Rat 125 mg/kg Oral 90 Days Liver Rat 76 mg/kg 415 mg/kg	
Com Imido Targe Asses Repe Com Imido Speci LOAE Applio Expos Targe	conents: ocarb: et Organs ated dose toxicity onents: ocarb: es EL cation Route sure time et Organs es EL cation Route sure time et Organs es EL cation Route sure time et Organs	ver,	Liver, Kidney Causes damage t exposure. Rat 125 mg/kg Oral 90 Days Liver Rat 76 mg/kg 415 mg/kg Oral 90 Days	



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Expo	cation Route sure time et Organs	: 5 mg/kg : Oral : 90 Days : Liver, Kidney : muscle twitchin	g, Salivation, recumbency, ataxia, splayed legs
Expo	EL	: Rat : 15 mg/kg : 60 mg/kg : Oral : 104 Weeks : Liver, Kidney, B	Blood
	EL cation Route sure time	: Monkey : 5 mg/kg : Oral : 30 Days : No significant a	dverse effects were reported
Spec NOA Appli		: Rat : 50000 ppm : Ingestion : 90 Days	
Not c	ration toxicity lassified based on ava rience with human e		
11	ponents: ocarb: ation	Symptoms: Sal mation, ataxia,	Central nervous system ivation, muscle twitching, Tremors, Lachry- lethargy ed on Animal Evidence
Ecot	12. ECOLOGICAL IN oxicity ponents:	FORMATION	

	Propionic acid:		
Ĭ	Toxicity to fish	:	LC50 (Lepomis macrochirus (Bluegill sunfish)): 85.3 mg/l Exposure time: 96 h
	Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 22.7 mg/l Exposure time: 48 h
	Toxicity to algae	:	EC50 (Desmodesmus subspicatus (green algae)): 48.7 mg/l Exposure time: 72 h



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II				
Pers	istence and degradab	oility		
Com	ponents:			
Prop	bionic acid:			
Biod	egradability	:	Result: Readily b Biodegradation: Exposure time: 2	93 %
Bioa	ccumulative potential	l		
Com	ponents:			
Imid	ocarb:			
	tion coefficient: n- nol/water	:	log Pow: 3.88	
Prop	bionic acid:			
	tion coefficient: n- nol/water	:	log Pow: 0.33	
Mob	ility in soil			
No d	ata available			
Othe	er adverse effects			
No d	ata available			
SECTION	13. DISPOSAL CONS	SIDE	RATIONS	
Disp	osal methods			
•	te from residues	:	Dispose of in acc	ordance with local regulations.

Contaminated packaging	: 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.

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Domestic regulation

49 CFR Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ	Calculated product RQ
		(lbs)	(lbs)
Propionic acid	79-09-4	5000	166666

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	:	Reproductive toxicity 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				
Water	7732-18-5			
Imidocarb	27885-92-3			
Propionic acid	79-09-4			

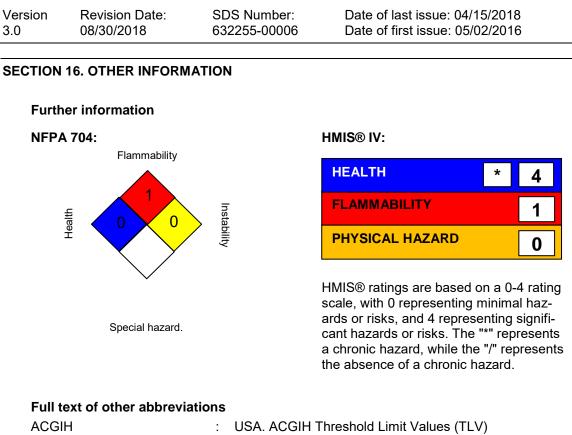
California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

California List of Hazardous	s Su	bstances	79-09-4
Propionic acid California Permissible Expo	osui	e Limits for Chemical Contaminants	79-09-4
Propionic acid			79-09-4
The ingredients of this product are reported in the following inventories:			
AICS	:	not determined	
DSL	:	not determined	
IECSC	:	not determined	



Imidocarb Injection Formulation



ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
ACGIH / TWA	:	8-hour, time-weighted average
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour
		workday during a 40-hour workweek
NIOSH REL / ST	:	STEL - 15-minute TWA exposure that should not be exceeded
		at any time during a workday

AICS - Australian Inventory of Chemical Substances; 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 - (Quanti-



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tative) 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; 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
Sources of key data used to compile the Material Safety		eChem Portal search results and European Chemicals Agen-
Data Sheet		cy, http://echa.europa.eu/
Data Sheet		

Revision Date : 08/30/2018

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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