

Version 1.3		Revision Date: 02-10-2020			issue: 04-17-2019 issue: 06-01-2016
SECTION 1. IDENTIFIC	ATION				
Product name		:	KADCYLA(R) So	olution	
Product code		:	00010141697		
Common name(s), s nym(s) of the substa		:	KADCYLA aqueo	ous solution	
Manufacturer or su	upplier's de	eta	ils		
Company name of s	supplier	:	Genentech, Inc.		
Address		:	DNA Way 1 94080 South Sar CA USA	n Francisco	
Telephone E-mail address Emergency telepho		:	001-(650) 225-10 info.sds@roche.		
Emergency telepho ber		:	US Chemtrec ph	one	(800)-424-9300
Recommended us	e of the che	em	nical and restrict	ions on use	
Recommended use		:	Formulated phar	maceutical ac	tive substance
Restrictions on use		:	For professional	users only.	

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Acute toxicity (Oral)	:	Category 4
GHS label elements Hazard pictograms	:	
Signal Word	:	Warning
Hazard Statements	:	H302 Harmful if swallowed.
Precautionary Statements	:	Prevention: P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. Response:
		P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
		Disposal:

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P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Trastuzumab emtansine	1018448-65-1	2.0
.alphaD-Glucopyranoside, .betaD-	57-50-1	6.0
fructofuranosyl		
Butanedioic acid, sodium salt (1:2)	150-90-3	0.14
Sorbitan, monododecanoate,	9005-64-5	0.02
poly(oxy-1,2-ethanediyl) derivs.		
Water	7732-18-5	91.84

SECTION 4. FIRST AID MEASURES

General advice	:	Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	:	Move to fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	:	If on skin, rinse well with water.
In case of eye contact	:	Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Rinse mouth with water.
Most important symptoms and effects, both acute and delayed	:	Harmful if swallowed.
Notes to physician	:	The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

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SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during fire fighting	:	No information available.
Hazardous combustion prod- ucts	:	Carbon oxides Nitrogen oxides (NOx)
Further information	:	Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- tive equipment and emer- gency procedures	:	Avoid exposure Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Prevent further leakage or spillage if safe to do so.
Methods and materials for containment and cleaning up	:	Wash contaminated surfaces with sodium hydroxide solution, c(NaOH)=0.5 mol/L to 1 mol/L, and rinse with water
		Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Advice on safe handling	•	Do not breathe vapors/dust. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage	:	Protected from heat and light Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards.

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Further age con	nformation on stor- ditions	:	See label, packa	ge insert or internal guidelines
Recomn perature	nended storage tem-	:	< -4 °F / < -20 °C	;
Storage	temperature	:	to -20 °C Protected from h	eat and light
Further age stat	nformation on stor- ility	:	No decompositio	n if stored and applied as directed.

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
.alphaD- Glucopyranoside, .betaD- fructofuranosyl	57-50-1	TWA	10 mg/m3	ACGIH
		TWA (Res- pirable)	5 mg/m3	NIOSH REL
		TWA (total)	10 mg/m3	NIOSH REL
		TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respir- able fraction)	5 mg/m3	OSHA Z-1
		TWA (Total dust)	15 mg/m3	OSHA P0
		TWA (respir- able dust fraction)	5 mg/m3	OSHA P0
Trastuzumab emtansine	1018448-65- 1	IOEL	0.0003 mg/m3	Roche In- dustrial Hy- giene Com- mittee (RIHC)

Engineering measures

: No data available

Personal protective equipment

Respiratory protection	:	No personal respiratory protective equipment normally required.	
Hand protection			
Material	:	Protective gloves	
Remarks	:	Wear appropriate protective gloves to prevent skin contact.	



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Eye protection	Replace torn o : Eye wash bott Tightly fitting s	
Skin and body protec	Choose body	thing protection according to the amount and of the dangerous substance at the work place.
Protective measures	: Instruction of e	employees recommended
Hygiene measures	When using do	o not eat or drink. o not smoke. efore breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Sterile liquid
Color	:	colorless
Odor	:	No data available
Odor Threshold	:	No data available
рН	:	No data available
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	does not flash
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Does not sustain combustion.
Flammability (liquids)	:	Does not sustain combustion.
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	No data available
Solubility(ies) Water solubility	:	completely miscible

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	Solubility in other so	olvents :	No data availabl	e
	Partition coefficient: n- octanol/water	:	No data availabl	e
	Autoignition temperatur	re :	No data availabl	e
	Decomposition tempera	ature :	No data availabl	e
	Viscosity Viscosity, dynamic	:	No data availabl	e
	Viscosity, kinematic	:	No data availabl	e

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reac- tions	:	No decomposition if stored and applied as directed.
Conditions to avoid	:	Exposure to light. Heat.
Incompatible materials	:	No data available
Hazardous decomposition products	:	No data available

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity Harmful if swallowed.		
Product: Acute oral toxicity		Acute toxicity estimate: 1,389 mg/kg
hours or a reality	•	Method: Expert judgment
Components:		
.alphaD-Glucopyranoside	, .be	taD-fructofuranosyl:
Acute oral toxicity	:	LD50 Oral (Rat): 29,700 mg/kg
		LD50 Oral (Mouse): 14,000 mg/kg
Acute inhalation toxicity	:	Acute toxicity estimate: > 30 mg/l Test atmosphere: dust/mist Method: Expert judgment
Acute dermal toxicity	:	Acute toxicity estimate: > 5,001 mg/kg Method: Expert judgment

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ADCYLA(R)	Solution		
ersion 3	Revision 02-10-202		Date of last issue: 04-17-2019 Date of first issue: 06-01-2016
Trastuzumab e	emtansine:		
Acute oral toxic	ity :		city estimate (Mouse): 27.77 mg/kg Expert judgment
		Method: C	city estimate (Mouse): 0.5 mg/kg DECD Test Guideline 423 is given in analogy to the following substances sin P3
Acute inhalation	n toxicity :	Exposure Test atmo	city estimate (Rat): 0.277 mg/l time: 4 h sphere: dust/mist xpert judgment
		Exposure Test atmo	sphere: dust/mist is given in analogy to the following substances
Acute toxicity (or administration)	other routes of :	monkey):	Highest Non-Severely Toxic Dose) (cynomolgus 30 mg/kg n Route: i.v.
			Highest Non-Severely Toxic Dose) (Rat): 20 mg n Route: i.v.
Skin corrosior Not classified b	i/irritation ased on available	information	1.
Components:			
Trastuzumab e	emtansine:		
Result Remarks	:	Irritating to Expert juc	
•	amage/eye irritat ased on available		ı.
Respiratory or	skin sensitizatio	on	
Skin sensitizat	tion		
Not classified b	ased on available	information	ı.
Respiratory se Not classified b	ensitization ased on available	informatior	l.
Germ cell mut Not classified b	agenicity ased on available	informatior).
Components:			

Trastuzumab emtansine:

Genotoxicity in vitro

Method: OECD Test Guideline 471 Result: negative The value is given in analogy to the following substances:

:

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rsion	Revision 02-10-2		Date of last issue: 04-17-2019 Date of first issue: 06-01-2016
		DM1	
Genotoxicity ir	n vivo	Resu	od: Mutagenicity (micronucleus test) lt: positive value is given in analogy to the following substances:
Germ cell mut Assessment	agenicity -	: In viv	o tests showed mutagenic effects
Carcinogenic Not classified	ity based on availab	le inform	ation.
<u>Components</u>	<u>:</u>		
.alphaD-Glu	copyranoside, .t	petaD-f	ructofuranosyl:
Remarks		equa	gredient of this product present at levels greater than or to 0.1% is identified as probable, possible or confirmed in carcinogen by IARC.
Trastuzumab	emtansine:		
Carcinogenicit ment	ty - Assess-	: Limite	ed evidence of a carcinogenic effect.
IARC			duct present at levels greater than or equal to 0.1% is ossible or confirmed human carcinogen by IARC.
OSHA			oduct present at levels greater than or equal to 0.1% is ted carcinogens.
NTP			duct present at levels greater than or equal to 0.1% is anticipated carcinogen by NTP.
Reproductive	e toxicity		
Not classified	based on availab	le inform	ation.
<u>Components</u>	<u>:</u>		
Trastuzumab	emtansine:		
Reproductive sessment	toxicity - As-		umed human reproductive toxicant, May damage fertility damage the unborn child.
STOT-single Not classified	exposure based on availab	le inform	ation.
<u>Components</u>	<u>:</u>		
.alphaD-Glu	copyranoside, .t	petaD-f	ructofuranosyl:
Assessment			substance or mixture is not classified as specific target to toxicant, single exposure.
Treeture	emtansine:		
Trastuzuman			



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STOT-repeated exposure

Not classified based on available information.

Components:

.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl:

Assessment

: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

Trastuzumab emtansine:

Species	: cynomolgus monkey
	: 10 mg/kg
Application Route	: i.v.
Exposure time	: 9 Weeks
Number of exposures	: 3
Remarks	: Subacute toxicity

Aspiration toxicity

Not classified based on available information.

Components:

.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl: No data available

Further information

Components:

.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl:

Remarks : Health injuries are not known or expected under normal use.

Trastuzumab emtansine:

Remarks : Globular proteins are generally well biodegradable The value is given in analogy to the following substances: Trastuzumab

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl:

Toxicity to fish

: LC50: > 100 mg/l Exposure time: 96 h



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Ecotoxicology	Assessment					
Acute aquatic to	oxicity	:	This product has	no known ecotoxicological effects.		
Chronic aquatic	toxicity	:	This product has	no known ecotoxicological effects.		
Toxicity Data on	n Soil	:	Not expected to a	adsorb on soil.		
Other organisms the environment		:	No data available	9		
Trastuzumab e Toxicity to fish	mtansine:	:	Exposure time: 9 Test Type: semi-	static test Fest Guideline 203		
			Exposure time: 9 Test Type: semi-	static test Test Guideline 203		
Toxicity to daph aquatic inverteb		:	End point: Immol Exposure time: 4	8 h Test Guideline 202		
			End point: Immol Exposure time: 4	8 h Test Guideline 202		
Toxicity to algae plants	e/aquatic	:	Exposure time: 7	est Guideline 201		
			mg/l Exposure time: 7	est Guideline 201		
Toxicity to micro	oorganisms	:	(activated sludge Exposure time: 1 Test Type: Respi	4 d		



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Method: OECD Test Guideline 301F GLP: yes Remarks: Barely inhibitory on aerobic bacterial reproduction (activated sludge) nominal concentration

Persistence and degradability

Components:

Trastuzumab emtansine:

Biodegradability

: Concentration: 1,000 mg/l Theoretical oxygen demand Result: Not readily biodegradable. Biodegradation: 84 % Exposure time: 28 d Method: OECD Test Guideline 301F GLP: yes

Bioaccumulative potential

Components:

.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl:

Partition coefficient:	า-	:	log Pow: -3.67
octanol/water			

Trastuzumab emtansine:

Partition coefficient: n-	:	Remarks: No data available
octanol/water		

Mobility in soil

No data available

Other adverse effects

Product:

Ozone-Depletion Potential :	:	Regulation: 40 CFR Protection of Environment; Part 82 Pro- tection of Stratospheric Ozone - CAA Section 602 Class I Substances
		Remarks: This product neither contains, nor was manufac- tured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods		
Waste from residues	:	Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company. Can be disposed as waste water, when in compliance with local regulations.

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Contaminated packagi	Dispose of as un Empty container	hused product. s should be taken to an approved waste recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG Not regulated as a dangerous good

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

IATA-DGR

49 CFR Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

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

Components	CAS-No.	Component TPQ (lbs)
SARA 311/312 Hazards	: Acute toxicity (any	route of exposure)

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

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This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3. This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section

307 US State Regulations

Massachusetts Right To Know

Maine Chemicals of High Concern

Vermont Chemicals of High Concern

Washington Chemicals of High Concern

The ingredients of this product are reported in the following inventories:

DSL	: This product contains the following components that are no on the Canadian DSL nor NDSL.	ot
	Trastuzumab emtansine	
AICS	: Not in compliance with the inventory	
NZIoC	: Not in compliance with the inventory	
ENCS	: Not in compliance with the inventory	
ISHL	: Not in compliance with the inventory	
KECI	: Not in compliance with the inventory	
PICCS	: Not in compliance with the inventory	
IECSC	: Not in compliance with the inventory	
TCSI	: Not in compliance with the inventory	
TSCA	: Not On TSCA Inventory	

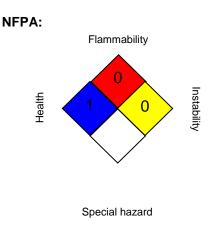
TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

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HMIS® IV:

HEALTH	1	1
FLAMMABILITY		0
PHYSICAL HAZARD		0

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		USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA P0	:	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Lim- its for Air Contaminants
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
OSHA P0 / TWA	:	8-hour time weighted average
OSHA Z-1 / TWA	:	8-hour time weighted average

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 - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act;

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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

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

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