

ProQuad Formulation

Version	Revision Date: 2024/09/28	SDS Number:	Date of last issue: 2024/04/06
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1. PRODUCT AND COMPANY IDENTIFICATION

Chemical product name	:	ProQuad Formulation
Product code	:	Measles, Mumps, Rubella, and Varicela Vaccine Live
Supplier's company name, ad	ddr	ess and phone number
Company name of supplier	:	MSD
Address	:	Kumagaya, Saitama Prefecture, Xicheng 810 MSD Co., Ltd. Menuma factory
Telephone	:	048-588-8411
E-mail address	:	EHSDATASTEWARD@msd.com
Emergency telephone number	:	+1-908-423-6000

Recommended use of the chemical and restrictions on use

Recommended use		Pharmaceutical

Restrictions on use : Not applicable

2. HAZARDS IDENTIFICATION

GHS classification of chemical product						
Short-term (acute) aquatic hazard	:	Category 2				
GHS label elements						
Hazard pictograms	:	None				
Signal word	:	None				
Hazard statements	:	H401 Toxic to aquatic life.				
Precautionary statements	:	Prevention:				
		P273 Avoid release to the environment.				
		Disposal:				
		P501 Dispose of contents/ container to an approved waste disposal plant.				
Other hazards which do not	t res	ult in classification				
Important symptoms and out- lines of the emergency as- sumed	• :	Contact with dust can cause mechanical irritation or drying of the skin.				
		May form combustible dust concentrations in air during pro-				



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cessing, handling or other means.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	: Mixture		
Components			
Chemical name	CAS-No.	Concentration (% w/w)	ENCS No.
Sucrose	57-50-1	>= 50 - < 60	-
Antigen	Not Assign	ed >= 1 - < 10	-
Neomycin, sulfate (salt)	1405-10-3	>= 0.0025 - < 0.025	-

4. FIRST AID MEASURES

If inhaled	:	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
In case of skin contact	:	Wash with water and soap. Get medical attention if symptoms occur.
In case of eye contact	:	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 delayed Protection of first-aiders Notes to physician	:	Contact with dust can cause mechanical irritation or drying of the skin. Dust contact with the eyes can lead to mechanical irritation. No special precautions are necessary for first aid responders. Treat symptomatically and supportively.

5. FIREFIGHTING 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 Nitrogen oxides (NOx) Metal oxides Chlorine compounds
Specific extinguishing meth-	:	Use extinguishing measures that are appropriate to local cir-



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ods			Use water spray	the surrounding environment. to cool unopened containers. ged containers from fire area if it is safe to do
	cial protective equipment refighters	:	essary.	ned breathing apparatus for firefighting if nec- tective equipment.
6. ACCID	ENTAL RELEASE MEAS	SUF	RES	
tive	onal precautions, protec- equipment and emer- cy procedures	:		ling advice (see section 7) and personal pro- t recommendations (see section 8).
Envi	ronmental precautions	:	Retain and dispo	akage or spillage if safe to do so. se of contaminated wash water. should be advised if significant spillages
	nods and materials for ainment and cleaning up	:	tainer for disposa Avoid dispersal of with compressed Dust deposits shift es, as these may leased into the at Local or national posal of this mate employed in the of mine which regul Sections 13 and	f dust in the air (i.e., clearing dust surfaces
7. HAND	LING AND STORAGE			
Han	dling			
	nnical measures	:	causing an explo Provide adequate and bonding, or i	e precautions, such as electrical grounding nert atmospheres.
	Il/Total ventilation ce on safe handling	:	Do not breathe d Handle in accord practice, based o sessment	equate ventilation. ust. ance with good industrial hygiene and safety n the results of the workplace exposure as- neration and accumulation.
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Avoidance of contact Hygiene measures		 Keep away from h Take precautionar Take care to preve environment. Oxidizing agents If exposure to che flushing systems a place. When using do no Wash contaminate The effective oper engineering contro appropriate degov industrial hygiene 		closed when not in use. heat and sources of ignition. ary measures against static discharges. vent spills, waste and minimize release to the emical is likely during typical use, provide eye and safety showers close to the working not eat, drink or smoke. ted clothing before re-use. eration of a facility should include review of trols, proper personal protective equipment, pwning and decontamination procedures, e monitoring, medical surveillance and the ative controls.	
Stora	-				
Cond	itions for safe storage	:		r labelled containers. Ince with the particular national regulations.	
Mater	rials to avoid	: Do not store with the following product types: Strong oxidizing agents			
Packa	aging material	: Unsuitable material: None known.			

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Threshold limit value and permissible exposure limits for each component in the work en-
vironment

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Concentra- tion standard / Permissible con- centration	Basis			
Sucrose	57-50-1	TWA	10 mg/m3	ACGIH			
Neomycin, sulfate (salt)	1405-10-3	TWA	1 mg/m3 (OEB 1)	Internal			
	Further informa	ation: DSEN, OT	0				
		Wipe limit	0.1 mg/100 cm ²	Internal			
Engineering measures :	compound. All engineerin design and op	g controls shoul	rols to minimize expo d be implemented by dance with GMP princ d the environment.	facility			
Personal protective equipmen	t						
Respiratory protection :	: If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the rec- ommended guidelines, use respiratory protection.						
Filter type : Hand protection	•	Particulates type					



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Ma	aterial	:	Chemical-resista	ant gloves			
	protection and body 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. Work uniform or laboratory coat. 				
	CAL AND CHEMICAL P	ROP					
Physi	cal state	:	solid				
Colou		:	white				
			light yellow				
Odou	r	:	No data availat	ble			
Odou	r Threshold	:	No data availat	ole			
Meltir	ng point/freezing point	:	No data availat	ble			
	g point, initial boiling and boiling range	:	No data availat	ble			
Flam	nability (solid, gas)	:		oustible dust concentrations in air during pro- ng or other means.			
Flam	mability (liquids)	:	Not applicable				
Up	r explosion limit and upp oper explosion limit / Up er flammability limit						
	wer explosion limit / wer flammability limit	:	No data availat	ble			
Flash	point	:	Not applicable				
Deco	mposition temperature	:	No data availat	le			
рН		:	6.6 - 7.1				
Evap	oration rate	:	Not applicable				
Auto-	ignition temperature	:	No data availat	le			
Visco Vis	sity scosity, kinematic	:	Not applicable				
Solub	ility(ies)						



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	Wat	er solubility	:	No data available)
	Partitio octanol	n coefficient: n- /water	:	Not applicable	
	Vapour	pressure	:	Not applicable	
		v and / or relative densit ative density	у :	No data available	
	Den	sity	:	No data available)
	Relativ	e vapour density	:	Not applicable	
	Explosi	ve properties	:	Not explosive	
	Oxidiziı	ng properties	:	The substance of	r mixture is not classified as oxidizing.
	Molecu	lar weight	:	No data available	9
		e characteristics ticle size	:	No data available)

10. STABILITY AND REACTIVITY

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

11. TOXICOLOGICAL INFORMATION

Information on likely routes of	:	Inhalation
exposure		Skin contact
		Ingestion
		Eye contact

Acute toxicity

Not classified based on available information.

Components:

Sucrose:



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Acute	e oral toxicity	:	LD50 (Rat): 29,70	00 mg/kg
Neor	nycin, sulfate (salt):			
Acute	e oral toxicity	:	LD50 (Mouse): 2,	880 mg/kg
			LD50 (Rat): 2,750) mg/kg
	e toxicity (other routes of nistration)	:	LD50 (Rat): 633 n Application Route	
			LD50 (Mouse): 11 Application Route	
			LD50 (Mouse): 27 Application Route	
			LD50 (Mouse): 27 Application Route	
<u>Com</u>		ble :	Information. Rabbit Mild skin irritation	
	ous eye damage/eye irri classified based on availa			
	ponents:		inionnation.	
Neor Spec Resu	nycin, sulfate (salt):	:	Rabbit	
		:	No eye irritation	
		: atio	-	
Resp Skin	ılt		n	
Resp Skin Not c Resp	ult biratory or skin sensitisa sensitisation	ble	n information.	
Resp Skin Not c Resp Not c	ult biratory or skin sensitisa sensitisation classified based on availa biratory sensitisation	ble	n information.	
Resp Skin Not c Resp Not c <u>Com</u>	biratory or skin sensitisa sensitisation classified based on availa biratory sensitisation classified based on availa	ble	n information.	



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Germ	cell mutagenicity		
Not cl	lassified based on ava	ilable information.	
<u>Comp</u>	oonents:		
Sucro	ose:		
Geno	toxicity in vitro	: Test Type: In Result: nega	n vitro mammalian cell gene mutation test tive
Neom	nycin, sulfate (salt):		
Geno	toxicity in vitro	: Test Type: E Result: nega	Bacterial reverse mutation assay (AMES) tive
			n vitro mammalian cell gene mutation test : Chinese hamster ovary cells ttive
			Chromosomal aberration : Human lymphocytes ive
		Test Type: ir Result: nega	n vitro micronucleus test itive
Geno	toxicity in vivo	Species: Mo Cell type: Bo	one marrow Route: Intravenous injection

Carcinogenicity

Not classified based on available information.

Components:

Neomycin, sulfate (salt):

Species	:	Rat
Exposure time	:	2 Years
Result	:	negative

Reproductive toxicity

Not classified based on available information.

Components:

Neomycin, sulfate (salt):

E	ffects on fertility	:	Test Type: Three-generation reproduction toxicity study
			Species: Rat
			Application Route: Oral
			General Toxicity - Parent: NOAEL: 25 mg/kg body weight



ersion .0	Revision Date: 2024/09/28	SDS Number: 11206662-0000	Date of last issue: 2024/04/06 Date of first issue: 2023/04/27
		Result: No e ment were c	ffects on fertility and early embryonic develop- etected.
Effec ment	ts on foetal develop-	Species: Ra Application Embryo-foet Result: No a	Route: Oral al toxicity: NOAEL: 275 mg/kg body weight dverse effects, No teratogenic effects
			t Route: Subcutaneous ital Toxicity: LOAEL: 6 mg/kg body weight
Repro sessr	oductive toxicity - As- nent	: Some evide animal expe	nce of adverse effects on development, based or riments.
	<u>ponents:</u> nycin, sulfate (salt):		
Targe	et Organs ssment		r ear lamage to organs through prolonged or repeated
Rema	arks	exposure. : Based on hu	iman experience.
Repe	ated dose toxicity		
	ponents:		
	nycin, sulfate (salt):	Maura	
Expo		: Mouse : 30 mg/kg : Subcutaneo : 14 d : Kidney	us
Spec NOA LOAE	EL	: Guinea pig : 50 mg/kg : 100 mg/kg	



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Expo Rema Spec LOAE Applie	ies		Oral 90 d No significant ad Guinea pig 100 mg/kg Subcutaneous 34 d	dverse effects were reported
Expo			Dog 24 mg/kg Intramuscular 30 d Kidney	
Expo Targe	EL cation Route sure time et Organs otoms		Rat 25 mg/kg oral (feed) 84 Weeks ear hearing loss mortality observe	ed
Expo			Dog 20 mg/kg Subcutaneous 90 d Kidney	
Not c	ration toxicity lassified based on ava rience with human e			
Com	ponents:			
	nycin, sulfate (salt): contact	:	Symptoms: Sen Remarks: May ii	
Eye c	contact	:	Remarks: May c	ause eye irritation.
Inges	tion	:	Symptoms: Nau loss, Loss of bal	sea, Vomiting, Diarrhoea, tinnitus, hearing ance



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12. ECOLOGICAL INFORMATION

Ecotoxicity

EC50 (Daphnia magna (Water flea)): > 72 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 LC50 (Americamysis): 39 mg/l Exposure time: 96 h Method: US-EPA OPPTS 850.1035
Exposure time: 48 h Method: OECD Test Guideline 202 LC50 (Americamysis): 39 mg/l Exposure time: 96 h
Exposure time: 96 h
EC50 (Anabaena flos-aquae (cyanobacterium)): 0.00075 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
NOEC (Anabaena flos-aquae (cyanobacterium)): 0.0003 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
EC50 (Pseudokirchneriella subcapitata (green algae)): 0.0099 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
NOEC (Pseudokirchneriella subcapitata (green algae)): 0.0022 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
1,000
10
EC50 (Natural microorganism): 107.6 mg/l Exposure time: 3 h Test Type: Respiration inhibition Method: OECD Test Guideline 209
EC10 (Natural microorganism): 2.8 mg/l Exposure time: 3 h Test Type: Respiration inhibition Method: OECD Test Guideline 209

Persistence and degradability

Components:

Neomycin, sulfate (salt):



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Biode	egradability	Biodegra Exposure	apidly degradable dation: 50 % e time: 1.2 d DECD Test Guideline 314
Bioad	ccumulative potential		
Com	ponents:		
	ose: ion coefficient: n- ol/water	: Pow: < 1	
Partit	nycin, sulfate (salt): ion coefficient: n- ol/water	: log Pow:	< -2
	lity in soil ata available		
	rdous to the ozone la pplicable	yer	
	r adverse effects ata available		

Disposal methods		
Waste from residues	:	Dispose of in accordance with local regulations. Do not dispose of waste into sewer.
Contaminated packaging	:	Empty containers should be taken to an approved waste han- dling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.

14. TRANSPORT INFORMATION

International Regulations

U	Ν	R.	TI	DC	3

UN number Proper shipping name Class Subsidiary risk Packing group Labels Environmentally hazardous	:	Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable no
IATA-DGR UN/ID No. Proper shipping name Class Subsidiary risk	:	Not applicable Not applicable Not applicable Not applicable



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Packing group Labels Packing instruction (cargo aircraft) Packing instruction (passen- ger aircraft)	:	Not applicable Not applicable Not applicable Not applicable
o ,		
IMDG-Code		
UN number	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable
EmS Code	:	Not applicable
Marine pollutant	:	Not applicable

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

Not applicable for product as supplied.

National Regulations

Refer to section 15 for specific national regulation.

Special precautions for user

Not applicable

15. REGULATORY INFORMATION

Related Regulations

Fire Service Law

Not applicable to dangerous materials / designated flammables.

Chemical Substance Control Law

Not applicable for Specified Chemical Substance, Monitoring Chemical Substance and Priority Assessment Chemical Substance.

Industrial Safety and Health Law

Harmful Substances Prohibited from Manufacture

Not applicable

Harmful Substances Required Permission for Manufacture

Not applicable

Substances Prevented From Impairment of Health

Not applicable

Circular concerning Information on Chemicals having Mutagenicity - Annex 2: Information on Existing Chemicals having Mutagenicity

Not applicable

Circular concerning Information on Chemicals having Mutagenicity - Annex 1: Information on Notified Substances having Mutagenicity

Not applicable



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	tances Subject to be	Notified Names	
	tances Subject to be	e Indicated Names	
	and Eye Damage Su oplicable	bstances for PPE Req	uirements (ISHL MO Art. 594-2)
tions	-	s (Article 577-2 of the	Occupational Health and Safety Regula-
	ance on Prevention	of Hazards Due to Sp	ecified Chemical Substances
	ance on Prevention	of Lead Poisoning	
	ance on Prevention	of Tetraalkyl Lead Po	isoning
	ance on Prevention	of Organic Solvent Po	bisoning
Subs	cement Order of the tances) oplicable	e Industrial Safety and	Health Law - Attached table 1 (Dangerous
	onous and Deleterio	us Substances Contro	l Law
viron			of Specific Chemical Substances in the Er he Management Thereof
-	Pressure Gas Safety	/ Act	
•	osive Control Law		
	el Safety Law egulated as a dangero	ous good	
	ion Law egulated as a dangero	ous good	
Marin	e Pollution and Sea	Disaster Prevention e	etc Law
Bulk t	ransportation	: Not classified as	s noxious liquid substance
Pack	transportation	: Not classified as	s marine pollutant
Narco	otics and Psychotro	pics Control Act	
	tic or Psychotropic R oplicable	aw Material (Export / Im	port Permission)
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•	ic Narcotic or Psychoti pplicable	ropic	Raw Material (Exp	ort / Import permission)
	e Disposal and Public rial waste	Cle	ansing Law	
The co	omponents of this pr	oduo	ct are reported in t	the following inventories:
AICS		:	not determined	
DSL		:	not determined	
IECSC	2	:	not determined	

16. OTHER INFORMATION

Further information

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

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

Date format	:	yyyy/mm/dd
Full text of other abbreviation	ns	
ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH / TWA	:	8-hour, time-weighted average

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; 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; 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; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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, Bioaccumu-



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lative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

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.

JP / EN