

SAFETY DATA SHEET

	1 - 1 1			н н н	: * *	1 I	н н н		Date	Accesse	d: 25/08	s/2023
•••.	н н н	÷.,	· · .		1		1 1 1		Dat	e Revise	d: 25/11	/2022
	19. 19.			···,	1	н 1 — 1	· · · .			1947 - S.		
SEC		1. ID	ENT		ΓΙΟΝ	I						
_				1	_		н н 1				111	
				noparticle	•							
CAS	#: 7440-0	5-3	11.		1	· · .	1	1.	· · .		1.	· · ·
Relev	vant iden	tified us	ses of t	he subst	ance: \$	Scienti	fic resea	rch and	develo	opment		
Supp	lier detai	ls:										
Stanfo	ord Advar	nced Ma	terials		: * *						111	
E-ma	il: sales@	samate	rials.co	m								
Tel: (9	949) 407-	8904			1		н н н	1	· · .		1	۰۰,
Addre				_ake Fore								
_	_			RDS II			_			· · · ·		
Class	ification a	ccording	g to Re	gulation (I	EC) No	1272/2	2008					
GHSC)2 Flame	1.		···.	· ,	1 1				11.	· .	
Flam.	Sol, 1 H2	228 Flan	nmable	solid.	; • •			; • •				
Class	ification a	ccording	g to Dir	ective 67/								
F; Hig	ghly flamn	nable	11		1	11			11		1	· · .
R11:	Highly fla	mmable	:		1. 1.		· · ·			· · .	1. 1.	
				ular hazaro								
N/A		: • •						: • •			: • •	
Hazaı	rds not ot	herwise	classif	ed								

			1	1		1			1		
No data available.	· · .	1 - 1 1	1	· · ·		÷.,				· · .	
Label elements											
Labelling according to R	≀egulati	on (EC) Ւ	√o 127:	2/2008	· · ·	1.	н н н	11			۰۰,
The substance is classif	fied and										
Hazard pictograms											
GHS02	· · ·	1 - 1 1		· · ·	· · ·	÷.,	1. L.			· · .	
Signal wordDanger			· .		• x						
Hazard statements					· · ·						
H228 Flammable solid.									;··		
Precautionary statement		1		ı	,						
P210 Keep away from h	ieat/spa	arks/open	flames	s/hot su	rfaces. N	lo smok	ing.		1	· · .	
P280 Wear protective gl	loves/p	rotective (clothing	g/eye p	rotection/	face pro	otection	I	1.		
P240 Ground/bond cont	tainer a	nd receivi	ing eqı	Jipmen	i.						
P241 Use explosion-pro	of elec	trical/vent	tilating/	lighting	/equipme	ent. ; · ·			111		
P370+P378 In case of fi	ire: Use	e for extine	ction: C	CO2, pc	wder or v	water sp	oray.				
WHMIS classification			i ,	· · ·	н х 1					· · .	
B4 - Flammable solid			1.	1 1 1	· · .	1. 1.		11. 1			
Classification system											
HMIS ratings (scale 0-4))	н н н	1.1.1	1 I 1	н н н	111			111		
(Hazardous Materials Id	lentifica	ition Syste	em)								
Health (acute effects) =											
Flammability = 3	н 1 - 1		1.	1 1 1	· · .	1.		· · · ·	14		
Physical Hazard = 1											
Other hazards	1 1	1 - 1 1	1.1.1	1 1		:**	1 I		111		
Results of PBT and vPv	B. asse	ssment:		· · ·			11. 1			· · .	
PBT:											
N/A.						1.			1.		
vPvB:											
N/A.	1		ı						ı		
<u> </u>											

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances		· · .	1. 1.		· · ·	1.1		· · .			
CAS No. / Substance	e Name:										
7440-05-3 Palladium	· · ·	н н н			1 - 1 1		· · ·		111	1 I 1	
Identification number	(s):		;		н н н	;					
EC number:	,						,	,		ı	,
231-115-6								· · .		, , ,	
ni in an	1 - 1 1	1 - 1 1			1 I	1.1.1		1 - 1 1	1.1.1	1 I	
SECTION 4. F	IRST		MEAS	URE	S	1					
Description of first aid	d measui	res	,			,	,		,		,
If inhaled:		· · · ·		, , ,	· · · ·			11.			
Supply fresh air. If no	ot breathi	ng, provi			piration. k	Keep pat	ient wa	rm,			
Seek immediate med	lical advi	ce.	,			ı			i i	,	
In case of skin contac	ct:	н н н	1.		1 - 1 1	1	· · .	н н Н		Υ.	
Immediately wash wi	th soap a	and wate	r; rinse tl	horoug	hly.				÷.,		
Seek immediate med	lical advi	ce.									
In case of eye contac	ot:								;		
Rinse opened eye for											
If swallowed:	· · · .		÷.,	· · .		÷.,	· · .		÷.,	۰.	
Seek medical treatme	ent.	· · .	· .		· · .	· .		· · .	1. 1.		
Information for docto	r										
Most important symp	toms and	d effects,	both ac	ute and	delayed			н н Н			
No information availa	ble.										
Indication of any imm											
No information availa	ible.	· · ·		, , ,	· · ,			···,	1		

SECTION 5. FIREFIGHTING MEASURES

	1	1		1	1						
Extinguishing media	•••		1	· · · .			· · .			··.	
Suitable extinguishing m	edia										
Special powder for metal	l fires.	Do not use	e water	-			, , ,			1	•••
For safety reasons unsui Water	table e	extinguishi	ng mec	lia	· ·	1 - 1 - 1 1			;••		
Special hazards arising f	rom th	eisubstan	ce or m	ixture	н н н		· · .	н н н		· .	
If this product is involved	in a fi	re, the follo	owing c	an be r	eleased:						
Palladium oxide						· ,			· .	1 1	
Advice for firefighters Protective equipment:					· · ·	1 1 1 1					
Wear self-contained resp	pirator.	н н н	1	· · · .	1 - 1 1	1	· · .		1	· · .	
Wear fully protective imp	erviou	s suit.			· · .			··	14. 14.		۰۰,

land the second s			111			: * *	
SECTION 6. ACCIDENTAL F	RELE	ASE N	IEASL	JRES	S		
Personal precautions, protective equipment	and em	ergency pi	rocedure	S S		1	11
Wear protective equipment. Keep unprotect	ed perso	ons away.	1. 1.		11. 1	14. 14.	
Ensure adequate ventilation							
Keep away from ignition sources	· · · ·	н н 1	111	1 - 1 1	н н Н	: * *	· · ·
Environmental precautions:							
Do not allow material to be released to the e	environm						
Do not allow product to reach sewage syste	m or any	y water co	urse.	, , ,		14	
Do not allow to penetrate the ground/soil.							
Methods and material for containment and c	leanup:					111	
Keep away from ignition sources.		1 - 1 1		· · .	н н 1	1	· · .
Ensure adequate ventilation.							
Prevention of secondary hazards:		· · · ,	· ·		11.	` .	
Keep away from ignition sources.			: ···				
Reference to other sections							
See Section 7 for information on safe handli	ng		÷.,		1 I		· · .

	· ·	1	1				
See Section 8 for information on personal prote	ction equipment.		· · .			· · .	
See Section 13 for disposal information.		· .					
SECTION 7. HANDLING AND	STORAGE				111		1
Handling		1.	· · .			11. 11.	
Precautions for safe handling Keep container tightly sealed.		1. 1.		··	14. 1	. :	
Store in cool, dry place in tightly closed containe Ensure adequate ventilation.	ers.	: · ·	· · ·		111		
Information about protection against explosions	and fires:	1	· · .	н н н		•••	
Protect against electrostatic charges.		1. 1.					
Conditions for safe storage, including any incon	npatibilities						
Storage	н н н н н н			н н н	111		
Requirements to be met by storerooms and rec Store in a cool location.		:.	· · .		÷.	1. 1.	
Information about storage in one common stora	ge facility:			1. A.	14		
Do not store together with oxidizing and acidic r	materials.Further	informa	ation al	pout stora	ge		
conditions:	i i i i			н н н	:**		
Keep container tightly sealed.		1	· · .	н н 1		· · .	
Store in cool, dry conditions in well-sealed conta	ainers.						
Specific end use(s)				· · · .	11		•••
No information available							

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that should be monitored at the workplace.

Additional information:

No data

Exposure controls

Personal protective equipment

Follow typical general protective and industrial hygiene measures for handling chemicals.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Breathing equipment:

Use suitable respirator when high concentrations are present.

Recommended filter device for short term use:

Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls.

Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

Protection of hands:

Impervious gloves

Inspect gloves prior to use.

Suitability of gloves should be determined both by material and quality, the latter of which may vary

by

manufacturer.

Material of gloves

Nitrile rubber, NBR

Penetration time of glove material (in minutes)

>480

Glove thickness

							1			
0.11 mm	1	· · .	 ÷.	· · .		· · .		:	· · .	
Eye protection:										
Safety glasses		1	÷.,	1	14	1		1.		
Body protection:										
Protective work clo		.								

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical pr	operties		: * *		1 - 1 1	: • •		
Appearance:								
Form: Powder	11.	1 I		11.	н н н		· · .	
Color: gray to silverOdor: Odorless		· · .	1.			1.		
Odor threshold: No data available.								
pH: N/A.	· · ·	н н н	; · · ·			; • •		
Melting point/range: 1555 °C (2831 °F)								
Boiling point/range: 3167 °C (5733 °F)			· .		1			
Sublimation temperature / start: No data availa	able.	· · · ·	14. 19		11.	14. 1		
Flammability (solid, gas):								
Highly flammable.	н н н	н н н	1 1 1 1	1 1 1	н н н			
Ignition temperature: No data available.	· · .	1 I		· · .	н н н		· · .	
Decomposition temperature: No data available	е.							
Auto igniting: No data available.	1 1 - 1		Т.			1.		
Danger of explosion: No data available.								
Explosion limits:				1				
Lower: No data available.	· · .	1 I		11. 1	н н н	1	· · .	
Upper: No data available.				1				
Vapor pressure at 1400 °C (2552 °F): 0.0013	hPa		· .					
Density at 20 °C (68 °F): 12.02 g/cm ³ (100.30	7 lbs/gal)	1 1						
Relative density	ı	1			1			
No data available.	11 j.		1.	Ч.,		1.	11. 1	

			1									
Vapor density	:	··.	1 - 1 1	4,	· · .		4,	· · .		4	··.	
N/A. Evaporation rate	1. 1.		· · .			· · · .	1. 1.		· · .			··.
N/A. Solubility in Wate	r (H	1 I 1				н н н				111		
2												
O): No data avail	abla											
Partition coefficie	1.1						14		11.	14		۰.
Viscosity:												
Dynamic: N/A.		1 1		1.1								
Kinematic: N/A.		· · .			· · .		÷.,	· · .	н н н			
Other information	1 ×,	ı								• .		
No information av			1	1	1 1	1	,		1			,
		ï			,				,			
SECTION 1	0. 8	STAE	BILIT	Y AND	RE		/ITY	· · .		1	11	
Reactivity	1. 1.		· · .			· · · .	1. 1.		· · .			· · .
No data available) .											
Chemical stability	/	· · ·	н н н						н н н	111		
Stable under reco	ommei	nded s	torage c	onditions	-		:			:		
Thermal decomp	osition	n / conc	litions to	be avoid	led:				,			,
Decomposition w	ill not	occur i	f used a	nd stored	l accor	ding to s	pecificati	ons.		14		· · .
Dessibility of boz	ordour	, roacti	000									
No dangerous re	action	s know	'n									
Conditions to avo	oid	· · .	н н н		· · .			· · .	1 - 1 1		· · .	
No information av										×		
Incompatible mat			· · .			· · .	÷.		· · ·	1.		· · · .
Oxidizing agents				1.1.1								
Hazardous decor	nposit	ion pro	ducts:		,	1		,				

Palladium oxide

SECTION 11. TO	XICOLO	GICA	AL IN	IFORI	ΜΑΤΙΟ	DN		1.	· · .	
Information on toxicologic	al effectsAcu	te toxicit	y:	· · ·	1.			1. 1.		
The Registry of Toxic Effe										
data for this substance.		111		н н н	111			111		
LD/LC50 values that are r	elevant for cl	assificat	ion:			· · .	1 - 1 1		· · .	
No data										
Skin irritation or corrosion	. 1 I			11.						,
May cause irritation										
Eye irritation or corrosion							1			
May cause irritation		1	· · .	н н Н	÷.,	с.,		1	· · .	
Sensitization:							0.			
No sensitizing effects kno		,		,	,		,			
Germ cell mutagenicity:										
N/A										
Carcinogenicity:		÷.,	· · · .			· · ·		÷.,	11	
No classification data on o	carcinogenic	oropertie	es of th	is materi	al is avai	lable fr	om the E	PA, IAR	C,	
NTP, OSHA or ACGIH.										
Reproductive toxicity:		1.1.1		1 - 1 1			1 - 1 1	111		
N/A		:		1 1						
Specific target organ syst						,			,	
N/A		14		11. 1		, , ,				
Specific target organ syst	em toxicity - s	ingle ex	posure	:						
N/A				н н н				111		
Aspiration hazard:		÷.,	· · .			· · .		÷.,		
N/A										
Subacute to chronic toxic				11.						
The Registry of Toxic Effe										
data for this substance.			1		1	1				
Additional toxicological in	formation:	1	· · · .			· · · .			· · · .	

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity	111			; · ·		н н н		н н н	1 I		
Aquatic toxicity:	1	· · .	н н н	÷.,		н н Н		· · ·			· · · .
No information a	available		· · .	· .			· .			· .	
Persistence and						ı					
No information a	available) <u>.</u>					111				
Bioaccumulative											
No information a	available) <u> </u>	1 I	1.		1 I		· · .			· · .
Mobility in soil:	1. 1.		· · .	1. 1.		· · .	1. 1.		· · .		
No information a	available).									
Additional ecolo	gical info	ormatio	on:		н н н	н н 1					
General notes:											
1.1			1.1.1								
Do not allow ma						nt withou					· · · .
	aterial to	be rele	eased to t	the envi	ronme	nt withou	ut official	permits	5.		
Do not allow ma	aterial to	be rele	eased to t	the envi	ronme	nt withou	ut official	permits	5.		
Do not allow ma	aterial to diluted p	be rele	eased to t or large	the envi quantitie	ronme es to re	nt withou each grou	ut official	permits r, wate	s. r course	or sewa	ge
Do not allow ma Do not allow un system.	aterial to diluted p nto the e	be rele roduct nvironi	eased to t or large o ment.	the envi	ronme es to re	nt withou each grou	ut official und wate	permits r, wate	s. r course	or sewa	ge
Do not allow ma Do not allow un system. Avoid transfer in Results of PBT PBT:	aterial to diluted p nto the e and vPv	be rele roduct nvironi B asse	eased to t or large ment. essment:	the envi	ronme	nt withou each grou	und wate	permits	s. r course	or sewa	ge
Do not allow ma Do not allow un system. Avoid transfer in Results of PBT PBT:	aterial to diluted p nto the e and vPv	be rele roduct nvironi B asse	eased to t or large o ment.	the envi	ronme	nt withou each grou	und wate	permits	s. r course	or sewa	ge
Do not allow ma Do not allow un system. Avoid transfer in Results of PBT PBT: N/A. vPvB:	aterial to diluted p nto the e and vPv	be rele roduct nvironi B asse	eased to t or large ment. essment:	the envi	ronme	nt withou each grou	und wate	permits	s. r course	or sewa	ge

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Recommendation:

					1							
Consult state, loc	al or n	ational	regulatio	ns to e	nsure p	roper dis	posal.	· · .		:		
Uncleaned packa	gings:											
Recommendation	1:	1		1.			11			14		···,
Disposal must be												
		1				но на 1970 г. – Сталана 1970 г. – Сталана 1970 г. – Сталана 1970 г. – Сталана						
								· · .	н н 1		11. 11.	
SECTION 1												
UN-Number	1	1 1	1				1		,		1 1	
DOT, IMDG, IATA	A _;											
UN3089												
UN proper shippir	ng nan	ne	1 1 1	1			1.	· · .		1	11	
	1. 1.	1 1 1		Ч.,			1. 1.					···,
Metal powders, fla	ammal	ble, n.c	o.s. (Palla	dium po	owder)							
IMDG, IATA	; • •	1 I	н н Н	1 1 1 1		н н н						
METAL POWDER	R, FLA		LE, N.O.	-	-		:			:		
Transport hazard	class(es)	1	1		r	r.	ł		1		,
DOT	1.	1 1 1					14			14		···,
Class												
4.1 Flammable sc	olids, s	elf-rea	ctive subs	stances	and so	olid deser	nsitised	explosi	ves.	111		
Label	1	· · .	н н Н		· · .	н н Н	1	· · .	1 - 1 1	1		
4.1												
Class	· .	1 1	· · ·	, ,	1 1		' .		· · .	` .		· · · .
4.1 (F3) Flammab			f-reactive									
Label		ı		1						,	1	
4.1	1	· · ·	н н Н	1	· · .	н н н	÷.,	· · .		÷.,	Ч.,	
IMDG, IATA	·			·			·			·		
Class												
4.1 Flammable sc	olids, s	elf-rea	ctive subs	stances	and so	olid deser	nsitised	explosi	ves.			
Label												
4.1	1	· · .		1	· · ·			11.			· · · .	

			,	1					
Packing group	1 1	1			1	· .		1	· · .
DOT, IMDG, IATA									
II. I. A.	· · · ,					н н н		14. 1	
Environmental hazards: N/A.									
Environmental hazards: N/A. Special precautions for user	1					1			
Warning: Flammable solids, self	-reactive	substar	nces ar	id solid de	sensitis	ed exp	losives	1	· .
EMS Number: F-G,S-G Segregation groups	··.	1. 1.		94. 1	14. 1		··.	14. 1	
Heavy metals and their salts (ind	cluding th	eir orga	nometa	allic compo	ounds),	powde	red metal	S	
Transport in bulk according to A	nnex II of	MARP	OL73/7	8 and the	IBC Co	de			1
N/A.	1 1 1	1	· · ·	н н н	1	11. 1	1 - 1 1	÷.	· · .
Transport/Additional information	: DOT	·		· · .	·		· · .	·	
Marine Pollutant (DOT): No									
UN "Model Regulation":	1		· ·	· · ·					
UN3089, Metal powders, flamma						··.			· · .

SECTION 15. REGULATORY INFORMATION

Safety, health and environm	ental regulat	ions/leg	gislation	specific f	or the s	ubstan	ce or mixt	ure
National regulations	1 - 1 1	1	· · .		1	· · .		:
All components of this produ	ct are listed	in the L	J.S. Env	/ironmenta	al Prote	ction A	gency To>	(ic
Substances Control Act Che	mical substa	ance Inv	entory.	· · ·	· · ·		· · ·	
All components of this produ	ct are listed	on the	Canadia	an Domes	tic Sub	stances	s List (DSL	.).
SARA Section 313 (specific	toxic chemic	al listing	gs)					
Substance is not listed.	н н. Н	1		1 I	1	· · .	н н н	1
California Proposition 65 Prop 65 - Chemicals known				99. 19	14. 14.		ч.,	14. 1
Substance is not listed.								
Prop 65 - Developmental tox						,		
Substance is not listed.		1.		1 I	1		1 - 1 1	1

	i i	,						
Prop 65 - Developmental toxicity, fema	le	· · .		÷.	· · .		÷.,	
Substance is not listed.								
Prop 65 - Developmental toxicity, male			11				1.	
Substance is not listed.								
Information about limitation of use:								
For use only by technically qualified inc	lividuals	j,		÷.,	· · .			· · .
Other regulations, limitations and prohi	bitive re	gulațio	ns					
Substance of Very High Concern (SVH	C) acco	ording to	o the RE	ACH Re	gulation	is (EC) N	lo. 1907/	2006.
Substance is not listed.								
The conditions of restrictions according								
1907/2006 (REACH) for the manufactu	ring, pla	icing or	n the mai	rket and	use mu	ist be ob	served.	· · .
Substance is not listed.			· · · .			· · .	÷.,	
Annex XIV of the REACH Regulations	(requirin	ng Auth	orisation	for use)				
Substance is not listed.							: • •	
REACH - Pre-registered substances Substance is listed.	÷.,	· · .	1 - 1 1		· · .	н н н	:	· · .
Chemical safety assessment:	1. 1.		· · .	1.			14	
A Chemical Safety Assessment has no	t been c	arried	out.					
		i i	1 - 1 1			1 - 1 1		
SECTION 2. HAZARDS II	DENT	TIFIC	ATIO	N	1 1 1		:.	11. 11.
Classification of the substance or mixtu	ire	, , ,		14	, , ,	· · .	14. 14.	
Hazard Statements: H400-H410								
Very toxic to aquatic life. Very toxic to a	quatic l	ife with	long las	ting effec	cts.	н н Н		
Precautionary Statements: P273-P391								

Avoid release to the environment. Collect spillage. Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

				1					
SubstancesCAS No. / Substance Name:	-	· · · .			· · .				
7440-05-3 Palladium									
Identification number(s):				1.			1.		
EC number: 231-115-6									
7732-18-5 Water									
Identification number(s):			1 I		· · .	н н Н	1	· · .	
EC number: 231-791-2	÷.,		· · .	1. j.		· · .			
SECTION 4. FIRST AID M			:e	111			;**		
SECTION 4. FIRST AID IVI									
Description of first aid measures				1	· · · ·		1.	· · .	1
If inhaled:	۰.		· · .	1. 1.		· · · .	1. 1.		
Supply patient with fresh air. If not breath	hing, p	orovide	artificial	respiratio	on. Kee	p patien	t warm.		
Seek immediate medical advice.			н н н				111		
In case of skin contact:	ı			1					
Immediately wash with soap and water;				· .	· · .		· .	•••	
Seek immediate medical advice.	1. 1.		· · ·				14		
In case of eye contact:									
Rinse opened eye for several minutes ur	nder rı	unning	water. Co	onsult a p	ohysicia	an.	; · ·		
If swallowed:									
Seek medical treatment.									
Information for doctor		1 1 - 1	· · · .			· · · .	14		
Most important symptoms and effects, be									
No data available		1 I 1		111			111		
Indication of any immediate medical atte	ention a	and spe	cial trea	tment _. ne	eded		1	· · .	:
No data available									
			· · .			· · ·			

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media

			,	,	1		1				
Suitable extinguishing a	agents	н н н	1	· · .	н н н	1	· · .		1	· · .	
Special powder for meta											
For safety reasons uns	uitable e	extinguish	ing ag	ents	· · .			11.	1.		•••.
Water											
Special hazards arising	from th	e substar	nce or I	mixture							
If this product is involve											
Metal oxide fume Advice for firefighters	. :	··	14	. :		14. 14.		· · ·	14. 1		۰۰,
Protective equipment: Wear self-contained res	spirator			1 - 1 1				н н Н			
Wear fully protective im	•	s suit.	÷.,	11. 1		١.	· · .	н н н	÷.	· · .	

.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protectiv	ve equipme								
Use personal protective equipr	nent. Keep			persons a		· · .	1	· .	· · .
Ensure adequate ventilation	· · ·	1. 1.			1.			14	
Environmental precautions:Do	not allow	materia	l to be	released t	o the e	nvironn	nent witho	ut offici	al
permits.	н н н	; • •		н н н				: • •	
Methods and materials for con			•						
Pick up mechanically.		÷.			1	11.		1	
Prevention of secondary hazar	ds:	Т.	1	· · · ·	1.		· · ·	1. 1.	
No special measures required.									
Reference to other sections	н н н		1 I	н н н	1 1 1 1		н н н		н н н
See Section 7 for information of	on safe hai	ndling			1	· · ·		1	
See Section 8 for information of	on persona	al protec	ction ec	quipment.					
See Section 13 for disposal inf	ormation.		1 1 - 1	· · ·		4 4 - 4	· · ·		

SECTION 7. HANDLING AND STORAGE

Handling		· · .		1		
Precautions for safe handling						
Keep container tightly sealed.	· · .			14		۰.
Store in cool, dry place in tightly closed containers.						
Ensure good ventilation at the workplace.						
Information about protection against explosions and fires:	1	· · .			· · ·	
No data available	· .			· .		
Conditions for safe storage, including any incompatibilities			i.			
Requirements to be met by storerooms and receptacles:						
No special requirements.						
Information about storage in one common storage facility:	1.	· · .			11	
Do not store together with oxidizing and acidic materials.	۰.		· · .	1. 1.		· · .
Further information about storage conditions:						
Keep container tightly sealed.				111		
Store in cool, dry conditions in well-sealed containers.						
Specific end use(s)		· · .				1
No data available	1.		· · · ·			۰.
SECTION 8. EXPOSURE CONTROLS/PE						
PROTECTION						
Exposure controls						
Personal protective equipment						
Follow typical protective and hygienic practices for handling che	emicals.				,	,
Keep away from foodstuffs, beverages and feed.	1	· · · .			11. 1	
Remove all soiled and contaminated clothing immediately.	·					
Wash hands before breaks and at the end of work.						
Maintain an ergonomically appropriate working environment.				: **		
Breathing equipment:						
Use suitable respirator when high concentrations are present.	1	· · · .				

Protection of har	nds:	· · .		;	· · .			· · .		1	···.
Impervious glove	es										
Inspect gloves p	rior to ι	lse.				· · · ·	1.		· · · ·	1. 1.	
Suitability of glov	ves sho	ould be	determine	d both	by mate	erial and q	uality, t	the latte	er of which	i may va	ary
by	: * *		1 1		· · ·	1 I			1		
manufacturer.	÷.,	•••		÷.,	· · .			· · .	н н Н	÷.,	· · .
Penetration time	-										
No data available	Э		· · ·	1.			1.1				
Eye protection:											
Safety glasses			1		1 I 1	1 I					
Body protection:	Protect	ive wo	k clothing	. :,	· · ·	1 I	1,		1 - 1 1		· · .

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical a			perties							
Appearance:			· · ·		1	· · ·	н н Н	÷.,	· · .	
Form: Liquid	· · ·	· .	1	· · ·	1. 1.		· · .		1 1 1	,
Odor: Characteristic										
Odor threshold: No data availa	ble.	1 1 1	· ·	1 I	; • •	1 I 1		: • •		
pH: N/A										
Melting point/Melting range: No	o data avai	lable.	· · .	1	۰.	· · ·	1	1.	· · .	,
Boiling point/Boiling range: No	data avail	able.	, , ,		1.	, , ,	· · ·	1. 1.		,
Sublimation temperature / star	t: No data	availab	le							
Flammability (solid, gas)	1 I			1 I	; · · ·	1 I 1	1 I	111		
No data available. Ignition temperature: No data a	wailable	1	1 I 1		1	· · .		1.	· · .	
Decomposition temperature: N					·			÷.,		
		liapie								
Autoignition: No data available										
Danger of explosion: No data a	available.		,	1		,				,
Explosion limits:	н н н	1	· · .	· · ·	1	· · ,	1 I		· · .	

Lower: No data availabl	le		1	· · .	н н н	1			1	· · .	
Upper: No data availabl											
Vapor pressure: N/A	, , ,			1	· · · .	<u>''</u>	1				· · .
Density at 20 °C (68 °F): No da	ata availa	ble.								
Relative density		н н н		1 1	н н н		1 1				
No data available.	11	н н Н	1		н н н		· · .	н н н		11	
Vapor density N/A			1. 1.		· · · .			۰۰.			··.
Evaporation rate N/A			: · ·					 	:		
Partition coefficient (n-c	octanol/	water): N	o data a	availabl	le.		· · .	н н н		11	
Viscosity: Dynamic: N/A		· · .	14. 1			1. 1.		··.	14. 1		···.
Kinematic: N/A				н н н			н н н				
Other information No data available	•••		Ξ.	···,		:	···,		:	···.	

SECTION 10. STABILITY AND REACTIVITY

Reactivity	· · .	1 I	:		1 I	÷.,			1		
No data available											
Chemical stability		11	· · .		11.	'н, Т			1.		
Stable under recommer		•									
Thermal decomposition											
Decomposition will not o	occur if	used and	stored	acçordi	ng to spec	cificatio	ns.			· · .	
Possibility of hazardous	reactio	ns				1					
No dangerous reactions				1 1	· · ·	· .		· · .	<u>'</u> .		
Conditions to avoid	1 1			1 1							
No data available	ł	,			,						
Incompatible materials:	· · .	н н н		· · .	· · ·	÷.,	· · .		1.	· · .	

			,				,		
Oxidizing agentsHazardo	ous decomposi	ition pro	ducts:		÷.,	· · .	н н н		· · .
letal oxide fume									
SECTION 11. TO	OXICOLO	GICA	AL IN	IFOR	ΜΑΤΙΟ	ON	· ·	;••	
nformation on toxicologi	cal effects	÷.,			1	· · .			· · .
Acute toxicity:		۰,			· .				
The Registry of Toxic Eff									
substance.									
D/LC50 values that are	relevant for cla	assificat	ion:						
No data		÷.,		н н н	1	· · .			Ο,
Skin irritation or corrosio	n:	·					· · .		
May cause irritation									
Eye irritation or corrosion	12	: • •	1 I						
May cause irritation									
Sensitization:		÷.,	· · .		÷.,	· · · .		1	· · .
No sensitizing effects kno	own.	÷.,		· · .	÷.,		· · .		
Germ cell mutagenicity:									
No effects known.	· · · · ·		1 I 1	н н н	111			111	• •
Carcinogenicity:									
EPA-D: Not classifiable a	as to human ca	arcinoge	nicity: i	nadequa	ate huma	n and a	animal ev	vidence c	of
carcinogenicity or no data	a are available	- -	, , ,				11. 1	14	
The Registry of Toxic Eff									
arcinogenic and/or neop	plastic data for	this sub	ostance	, , ,	111			111	• •
Reproductive toxicity:									
No effects known.									
Specific target organ sys	tem toxicity - r				14			14	
lo effects known	-								
Specific target organ sys	tem toxicity - s							111	
No effects known.	-	-	-		1	· · .			
NO UNUUS KIIUWII.			-						

						1		,				
Aspiration hazard	I: _{},}		1 - 1 1		· · .					1		
No effects known												
Subacute to chro	nic toxi	city:		ч - т	, , ,	· · · .						
The Registry of T	oxic Ef	fects o	f Chemica	l Substa	ances ((RTECS)	contain	s multip	ole dose to	oxicity d	ata	
for	; • •		1 I							: * *		
this substance.	1	· · .	1 - 1 1		· · .					÷.,	· · ·	
Additional toxicol												
To the best of our	knowl	edge tl	ne acute a	nd chro	nic tox	icity of this	s subst	ance is	not fully k	nown.		
Carcinogenic cate												
OSHA-Ca (Occup	pational	Safet	y & Health	Admini	istratio	n)						
Substance is not	listed.	· · ,		1	· · .		1	· · .		÷.	· · .	
	1.	, , ,	· · · .	1. 1.		···.	14. 14.		· · · .	14. 19		
SECTION 1	2. E	COL	OGICA		FOR	RMATI	ON					
Toxicity				: · ·			: · ·			:		
Aquatic toxicity:	1.	· · .	н н н	1	· · .		1	· · .		÷.,	Ч.,	

No data available and degradability
No data available and a second secon

Bioaccumulative potential
No data available
Mobility in soilNo data available
Ecotoxical effects:
Remark:

Very toxic for aquatic organisms

Additional ecological information:

Do not allow product to reach groundwater, water courses, or sewage systems.

Do not allow material to be released to the environment without official permits.

Danger to drinking water if even small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

		1			1	1 1 1				, ,	
May cause long lasting	harmfr	ul effects	to aquat	tic life.	1 - 1 1		· · .		1	· · .	
Avoid transfer into the											
Very toxic for aquatic o	rganisr	ns	1.		· · · .						···,
Results of PBT and vP PBT:		essment	; · ·	1 I 1	а – а а	;	1 - 1 1	1 1 1	; · ·	1 - 1 - 1	
N/A	· · ·	н н Н	÷.,	· · .	1 - 1 1		с. С.		÷.	· · .	
vPvB: N/A			1. 1.	, , ,	۰.	÷.,		··.			···,
Other adverse effects					1 - 1 1			1 - 1 1	111		
No data available		1 1	;								
Waste treatment metho Recommendation Consult official regulatio Uncleaned packagings Recommendation:	ons to a	ensure pr	oper dis	sposal.							· · ·
Disposal must be made	e accor	ding to of	ficial reg	julatior	IS.						1
len di Santa	1. 1.	 	÷.,	· · · .	1 - 1 1	1	11		÷.	· · .	
SECTION 14. T	RAN	NSPOR	RT IN	FOR	MATI	ON		··.	<u>.</u>		۰۰,
DOT (US) Not dangerous goods		с. с. с	1.1		н н Н	: · ·		1 - 1 1	111	· · · ·	
IMDG		1 - 1 1				1			1	· · .	
UN number: 3082 Class:9		··	14. 1	1 1 1	· · .	14. 14.		11	14. 14.		· · .
Packing group:III											

F-A, S-F

Proper shipping name:			1			÷.				
ENVIRONMENTALLY H										
Marine pollutant:		11	14			14		11	14	
Marine pollutant										
IATA										
UN number: 3082	· · .	н н н	÷.,			÷.,	· · .		÷.,	· · .
Class: 9 Packing group: III		··.	÷.,			14. 14.		11. 1	· .	
Proper shipping name:										
Environmentally hazard										
Further information	· · .	н н н		· · ·	н н н	1	· · .	н н н	÷.,	· · .
EHS-Mark required (AD combinationpackagings						- ·			quids or	> 5kg

for solids

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulation	ons/leg	islation	specific f	or the s	ubstan	ce or mixt	ure
National regulations					1 1		
All components of this product are listed in						1	
Substances Control Act Chemical substar	nce Inv	entory.	1 - 1 1		· · .		1
All components of this product are listed of	on the (Canadia	an Domes	tic Sub	stances	List (DSI	_).,
California Proposition 65							
Prop 65 - Chemicals known to cause can	cer	1 I 1		1 1 1			
Substance is not listed.							
Prop 65 - Developmental toxicity		· · .			· · .		
Substance is not listed.	· .			с. С.		с.,	14. 191
Prop 65 - Developmental toxicity, female							
Substance is not listed.		1 I 1		1 1 1 1	н н н		111
Prop 65 - Developmental toxicity, male	1	· · .		1	· · .		

Substance is not listed. Information about limitation of use: For use only by technically qualified individuals. Other regulations, limitations and prohibitive regulations Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed. The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed. Substance is not listed. Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed. Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

SECTION 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.