NAUGARD® 412S



Version 1.4	Revision Date: 2022/03/25	-	DS Number: 00000003549	Country : US Language: Z8
SECTION ²	1. IDENTIFICATION			
Other	Identifiers	:		/lthio)-1-oxopropoxy]methyl]propane-1,3-diyl)propionate], Antioxidant Solid
	nmended use of the on nmended use	: he r	nical and restriction	ons on use
Restric	ctions on use	:	Reserved for indu	strial and professional use.
Manuf	acturer or supplier's	deta	ails	
Compa	iny:		<u>Supplier</u> SI Group USA (US	

Company:	<u>Supplier</u>
	SI Group USA (USAA), LLC
	4 Mountainview Terrace
	Suite 200
	Danbury, CT
	United States of America (USA)
	06810

Emergency telephone

Emergency telephone:	CHEMTREC/US : +1 703-741-5970 NCEC/ROW : +44 1235 239670 NCEC/CHINA : 400 120 6011 For additional emergency telephone numbers see section 16 of the Safety Data Sheet.
	Safety Data Sheet.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Specific target organ toxicity : Category 2 (Kidney, Liver) - repeated exposure (Oral)

GHS label elements

Hazard pictograms



NAUGARD® 412S



Revision Date: 2022/03/25			Country : US Language: Z8
Word	:	Warning	
d Statements	:	H373 May cause repeated exposu	e damage to organs through prolonged or ire if swallowed.
utionary Statements	:	Prevention: P260 Do not bre	athe dust/ fume/ gas/ mist/ vapors/ spray.
		Response: P314 Get medica	al advice/ attention if you feel unwell.
		Disposal: P501 Dispose of disposal plant.	contents/ container to an approved waste
	2022/03/25 Word d Statements	2022/03/25 40 Word : d Statements :	2022/03/25 40000003549 Word : Warning d Statements : H373 May cause repeated exposu utionary Statements : Prevention: P260 Do not bre Response: P314 Get medica Disposal: P501 Dispose of

Other hazards

May form combustible dust concentrations in air.

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Substance
Substance name	:	2,2-bis[[3-(dodecylthio)-1-oxopropoxy]methyl]propane-1,3-diyl bis[3-(dodecylthio)propionate]
Chemical nature	:	Antioxidant

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
2,2-bis[[3-(dodecylthio)-1-	29598-76-3	>= 80 - <= 100
oxopropoxy]methyl]propane-1,3-diyl bis[3-		
(dodecylthio)propionate]		

The exact percentage concentrations of components are being withheld as a trade secret in accordance with paragraph (i) of \$1910.1200

SECTION 4. FIRST AID MEASURES

General advice	:	No hazards which require special first aid measures.
If inhaled	:	Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion. If symptoms persist, call a physician.
In case of skin contact	:	Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water.

NAUGARD® 412S



Version 1.4	Revision Date: 2022/03/25		DS Number: 0000003549	Country : US Language: Z8
In	case of eye contact	:	Flush eyes with w Remove contact l Protect unharmed Keep eye wide op	l eye.
lf s	wallowed	:	Do not give milk o	water and drink afterwards plenty of water. or alcoholic beverages. ng by mouth to an unconscious person.
an	ost important symptoms d effects, both acute and layed	:	Product dust may system.	be irritating to eyes, skin and respiratory

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific hazards during fire fighting	:	Do not allow run-off from fire fighting to enter drains or water courses. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
		Burning produces irritant fumes. Exposure to decomposition products may be a hazard to health.
Further information	:	Standard procedure for chemical fires.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Non-sparking tools should be used. Avoid dust formation.
Environmental precautions	:	
		No special environmental precautions required.
Methods and materials for containment and cleaning up	:	Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

NAUGARD® 412S



Vers 1.4	sion	Revision Date: 2022/03/25		DS Number: 0000003549	Country : US Language: Z8
		on protection against explosion	:	Avoid dust format at places where d	ion. Provide appropriate exhaust ventilation ust is formed.
	Advice on safe handling		:	Routine housekee dusts do not accu Dry powders can subjected to the fi	neration and accumulation. eping should be instituted to ensure that mulate on surfaces. build static electricity charges when riction of transfer and mixing operations. neat and sources of ignition.
					ection see section 8. ng advice required.
	Conditi	ons for safe storage	:	Keep container tig place.	ghtly closed in a dry and well-ventilated
	Materia	als to avoid	:	No special restric	tions on storage with other products.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Exposure controls

Engineering measures	:	It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure adequate ventilation, especially in confined areas.
		Dust formation may be relevant in the processing of this product. In addition to substance-specific OELs, general limitations of concentrations of particulates in the air at workplaces have to be considered in workplace risk assessment. Relevant limits include: OSHA PEL for Particulates Not Otherwise Regulated of 15 mg/m3 - total

dust, 5 mg/m3 - respirable fraction; and ACGIH TWA for

NAUGARD® 412S



Version 1.4	Revision Date: 2022/03/25	-	OS Number: Country : US 0000003549 Language: Z8
			Particles (insoluble or poorly soluble) Not Otherwise Specified of 3 mg/m3 - respirable particles, 10 mg/m3 - inhalable particles.
			Use mechanical ventilation for general area control. Dust must be extracted directly at the point of origin. Ensure that extracted air cannot be returned to the workplace through the ventilation system.
Pers	onal protective equip	ment	
Resp	viratory protection	:	No personal respiratory protective equipment normally required.
Hand	d protection		
R	emarks	:	For prolonged or repeated contact use protective gloves.
Eye	orotection	:	Safety glasses
Skin	and body protection	:	Protective suit
Hygie	ene measures	:	General industrial hygiene practice.
-	antal avragura controla		
Environm	ental exposure controls		
Wate	·	:	Do not let product enter drains.
Wate	·	:	
Wate SECTION	Pr	:	
Wate SECTION	er I 9. PHYSICAL AND CI earance	:	CAL PROPERTIES
Wate SECTION Appe	er I 9. PHYSICAL AND CI earance r	:	CAL PROPERTIES solid, powder, pellets
Wate SECTION Appe Color Odor	er I 9. PHYSICAL AND CI earance r	:	CAL PROPERTIES solid, powder, pellets white
Wate SECTION Appe Color Odor	er I 9. PHYSICAL AND CI earance r	:	CAL PROPERTIES solid, powder, pellets white slight
Wate SECTION Appe Color Odor Odor pH	er I 9. PHYSICAL AND CI earance r	:	CAL PROPERTIES solid, powder, pellets white slight No data available
Wate SECTION Appe Color Odor Odor pH Melti	er I 9. PHYSICAL AND CI earance r Threshold	:	CAL PROPERTIES solid, powder, pellets white slight No data available No data available 50 - 51 °C Decomposition: yes
Wate SECTION Appe Color Odor Odor pH Melti Boilir	er I 9. PHYSICAL AND CI earance r Threshold ng point/range	:	CAL PROPERTIES solid, powder, pellets white slight No data available No data available 50 - 51 °C
Wate SECTION Appe Color Odor Odor pH Melti Boilir Flash	er I 9. PHYSICAL AND CI earance r Threshold ng point/range ng point/boiling range	:	CAL PROPERTIES solid, powder, pellets white slight No data available No data available 50 - 51 °C Decomposition: yes Decomposes
Wate SECTION Appe Color Odor Odor pH Melti Boilir Flash Evap	er I 9. PHYSICAL AND CI earance T Threshold ng point/range ng point/boiling range	:	CAL PROPERTIES solid, powder, pellets white slight No data available No data available 50 - 51 °C Decomposition: yes Decomposes 250 °C

NAUGARD® 412S



Ver 1.4	sion	Revision Date: 2022/03/25		S Number: 0000003549	Country : US Language: Z8
	Lower	explosion limit	:	No data available	
	Vapor pressure		:	Non Volatile	
	Relativ	e vapor density	:	No data available	9
	Relativ	e density	:	No data available)
	Density	/	:	0.89 g/cm3	
	Solubili Wat	ty(ies) er solubility	:	< 0.025 mg/l	
	Solu	ubility in other solvents	:	No data available)
	Partitio octanol	n coefficient: n- /water	:	log Pow: > 6.5	
	Autoigr	nition temperature	:	No data available	9
	Decom	position temperature	:	No data available)
	Viscosi Visc	ty cosity, dynamic	:	No data available	9
	Viso	cosity, kinematic	:	No data available	
	Explosi	ve properties	:	No data available)
	Oxidizi	ng properties	:	No data available	9
	Surface	e tension	:	No data available	
	Particle	e size	:	Not classified due insufficient for cla	e to data which are conclusive although assification.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Stable under recommended storage conditions.	
Chemical stability	: No decomposition if stored and applied as directed.	
Possibility of hazardous reactions	: No hazards to be specially mentioned.	
Conditions to avoid	: Heat, flames and sparks.	
Incompatible materials	: None known.	
Hazardous decomposition	: Carbon oxides	

SI Group, The Substance Inside and the SI Group logo are Reg. U.S. Pat. & Tm Off. and additional countries, to SI Group, Inc.

NAUGARD® 412S



/ersion .4	Revision Date: 2022/03/25	SDS Number: 40000003549	Country : US Language: Z8
products Sulf		Sulfur oxides	
ECTION	11. TOXICOLOGIC	AL INFORMATION	
Acut	e toxicity		
Prod	uct:		
Acute oral toxicity			5,000 mg/kg lot classified due to data which are conclusive icient for classification.
Com	ponents:		
	is[[3-(dodecylthio)- ecylthio)propionate		propane-1,3-diyl bis[3-
Acute	e oral toxicity	: LD50 (Rat): > Method: OECE	5,000 mg/kg D Test Guideline 423
Skin	corrosion/irritation		
<u>Prod</u> Rema		not considered as being	a skin irritant.
Rema		not considered as being	a skin irritant.
Rema <u>Com</u> 2,2-b (dode Metho	arks: The product is r ponents:	1-oxopropoxy]methyl]]:	a skin irritant. propane-1,3-diyl bis[3-
Rema 2,2-b (dode Resu	arks: The product is r ponents: is[[3-(dodecylthio)- ecylthio)propionate od: OECD Test Guid	1-oxopropoxy]methyl] •]: •eline 439	
Rema <u>Com</u> 2,2-b (dode Methor Resu Serio	arks: The product is r ponents: is[[3-(dodecylthio)- ecylthio)propionate od: OECD Test Guid lt: No skin irritation	1-oxopropoxy]methyl] •]: •eline 439	
Rema 2,2-b (dode Resu Serio <u>Com</u> 2,2-b	arks: The product is r ponents: is[[3-(dodecylthio)- ecylthio)propionate od: OECD Test Guid lt: No skin irritation bus eye damage/eye ponents:	1-oxopropoxy]methyl] eline 439 irritation 1-oxopropoxy]methyl]	
Rema Com 2,2-b (dode Resu Serio Com 2,2-b (dode Resu	arks: The product is r ponents: is[[3-(dodecylthio)- ecylthio)propionate od: OECD Test Guid It: No skin irritation ous eye damage/eye ponents: is[[3-(dodecylthio)-	1-oxopropoxy]methyl] eline 439 irritation 1-oxopropoxy]methyl] :]:	propane-1,3-diyl bis[3-
Rema Com 2,2-b (dod Resu Serio Com 2,2-b (dod Resu Metho	arks: The product is r ponents: is[[3-(dodecylthio)- ecylthio)propionate od: OECD Test Guid lt: No skin irritation ous eye damage/eye ponents: is[[3-(dodecylthio)- ecylthio)propionate lt: No eye irritation	1-oxopropoxy]methyl] P]: Peline 439 Pe irritation 1-oxopropoxy]methyl] P]: Peline 437	propane-1,3-diyl bis[3-
Rema Com 2,2-b (dod Resu Serio Com 2,2-b (dod Resu Metho	arks: The product is n ponents: is[[3-(dodecylthio)- ecylthio)propionate od: OECD Test Guid It: No skin irritation ous eye damage/eye ponents: is[[3-(dodecylthio)- ecylthio)propionate It: No eye irritation od: OECD Test Guid biratory or skin sens	1-oxopropoxy]methyl] P]: Peline 439 Pe irritation 1-oxopropoxy]methyl] P]: Peline 437	propane-1,3-diyl bis[3-
Rema Com 2,2-b (dode Resu Serio Com 2,2-b (dode Resu Metho Resp Prod	arks: The product is n ponents: is[[3-(dodecylthio)- ecylthio)propionate od: OECD Test Guid It: No skin irritation ous eye damage/eye ponents: is[[3-(dodecylthio)- ecylthio)propionate It: No eye irritation od: OECD Test Guid biratory or skin sens	1-oxopropoxy]methyl] eline 439 irritation 1-oxopropoxy]methyl] eline 437 itization	propane-1,3-diyl bis[3-
Rema Com (dodd Metha Resu Serio Com (dodd Resu Metha Resp Prod Rema	arks: The product is r ponents: is[[3-(dodecylthio)- ecylthio)propionate od: OECD Test Guid lt: No skin irritation ous eye damage/eye ponents: is[[3-(dodecylthio)- ecylthio)propionate lt: No eye irritation od: OECD Test Guid viratory or skin sens uct:	1-oxopropoxy]methyl] eline 439 irritation 1-oxopropoxy]methyl] eline 437 itization	propane-1,3-diyl bis[3-
Rema Com 2,2-b (dodd Resu Serio 2,2-b (dodd Resu Metho Resu Metho Resp Prod Rema 2,2-b	arks: The product is n ponents: is[[3-(dodecylthio)- ecylthio)propionate od: OECD Test Guid It: No skin irritation ous eye damage/eye ponents: is[[3-(dodecylthio)- ecylthio)propionate It: No eye irritation od: OECD Test Guid biratory or skin sens uct: arks: No data availab ponents:	1-oxopropoxy]methyl] eline 439 irritation 1-oxopropoxy]methyl] eline 437 sitization ole 1-oxopropoxy]methyl]	propane-1,3-diyl bis[3-

NAUGARD® 412S



Vers 1.4	sion	Revision Date: 2022/03/25	SDS Numb 400000003		Country : US Language: Z8
		d: OECD Test Guidelin negative	e 429		
	Germ	cell mutagenicity			
	Produ	ct:			
	Genoto	oxicity in vitro		vpe: Ames negative	test
	<u>Comp</u>	onents:			
		s[[3-(dodecylthio)-1-o cylthio)propionate]:	xopropoxy]	methyl]pr	opane-1,3-diyl bis[3-
	Genoto	oxicity in vitro	Metabo Methoo assay)	l: Mutager negative	test ion: with and without metabolic activation hicity (Escherichia coli - reverse mutation
	Germ o Assess	cell mutagenicity - sment	: In vitro	tests did r	not show mutagenic effects
	Repro	ductive toxicity			
	<u>Comp</u>	onents:			
		s[[3-(dodecylthio)-1-o cylthio)propionate]:	xopropoxy]	methyl]pr	opane-1,3-diyl bis[3-
	•		: No toxi		
	Assess	sment	No effe	cts on or v	via lactation
	STOT-	repeated exposure			
	Target	of exposure:Oral Organs:Kidney, Liver	age to organ	s through	prolonged or repeated exposure.
	<u>Comp</u>	onents:			
		:[[3-(dodecylthio)-1-o cylthio)propionate]:	xopropoxy]	methyl]pr	opane-1,3-diyl bis[3-
		s of exposure:Oral sment:May cause dam	age to organ	s through	prolonged or repeated exposure.
	Aspira	tion toxicity			

Product: No aspiration toxicity classification

NAUGARD® 412S



Version	Revision Date:	SDS Number:	Country : US
1.4	2022/03/25	400000003549	Language: Z8
			0 0

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:	

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 0.037 mg/l Exposure time: 48 h Remarks: No toxicity at the limit of solubility.
Toxicity to algae	:	EC50 (Green algae (Scenedesmus subspicatus)): > 0.025 mg/IExposure time: 72 h Remarks: No toxicity at the limit of solubility.

Components:

2,2-bis[[3-(dodecylthio)-1-oxopropoxy]methyl]propane-1,3-diyl bis[3-(dodecylthio)propionate]:

Toxicity to daphnia and other aquatic invertebrates	:	 > 0.037 mg/l Method: OECD Test Guideline 202 Remarks: Aquatic toxicity is unlikely due to low solubility.
Toxicity to algae	:	> 0.025 mg/l End point: Growth inhibition Method: OECD Test Guideline 201 Remarks: No toxicity at the limit of solubility.

Persistence and degradability

Product:

Biodegradability :		Remarks: Not readily biodegradable.
--------------------	--	-------------------------------------

Bioaccumulative potential

Product:

Bioaccumulation	Bioconcentration factor (BCF): < 84
	Remarks: Does not accumulate in organisms.

Components:

2,2-bis[[3-(dodecylthio)-1-oxopropoxy]methyl]propane-1,3-diyl bis[3-(dodecylthio)propionate]:

Bioaccumulation	:	Bioconcentration factor (BCF): < 84
		Remarks: Bioaccumulation is unlikely.

NAUGARD® 412S



Versi 1.4		Revision Date: 2022/03/25		9S Number: 0000003549	Country : US Language: Z8
	Mobility	r in soil			
	Product	<u>t:</u>			
	Mobility		:	Remarks: No data	available
	Stability	in soil	:	Remarks: Adsorb	s on soil.
	Other a	dverse effects			
	Product	<u>t:</u>			
	Results assessn	of PBT and vPvB nent	:	bioaccumulating a	not considered to be persistent, and toxic (PBT). This substance is not very persistent and very bioaccumulating
	Ozone-I	Depletion Potential	:	Protection of Strat Substances Remarks: This pro manufactured with	R Protection of Environment; Part 82 cospheric Ozone - CAA Section 602 Class I oduct neither contains, nor was a Class I or Class II ODS as defined by the t Section 602 (40 CFR 82, Subpt. A, App.A +
	Addition informat	al ecological ion	:	There is no data a	vailable for this product.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods		
Waste from residues		fer surplus and non-recyclable solutions to a licensed sposal company.
Contaminated packaging	Er	npty remaining contents. npty containers should be taken to an approved waste ndling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

Domestic regulation

NAUGARD® 412S



Version	Revision Date:	SDS Number:	Country : US
1.4	2022/03/25	40000003549	Language: Z8

49 CFR

Not regulated as a dangerous good

Special precautions for user

Not applicable

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 311/312 Hazards	:	No SARA Hazards
SARA 302	:	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
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.

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.

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

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

2,2-bis[[3-(dodecylthio)-1-oxopropoxy]methyl]propane-1,3-diyl 29598-76-3 bis[3-(dodecylthio)propionate]

New Jersey Right To Know

2,2-bis[[3-(dodecylthio)-1-oxopropoxy]methyl]propane-1,3-diyl 29598-76-3 bis[3-(dodecylthio)propionate]

NAUGARD® 412S



Vers 1.4	sion	Revision Date: 2022/03/25		9S Number: 0000003549	Country : US Language: Z8
	Califor	nia Prop 65	:		not contain any chemicals known to the to cause cancer, birth, or any other cts.
	The ing	gredients of this prod	uct	are reported in th	e following inventories:
	DSL		:	All components of	this product are on the Canadian DSL
	AICS		:	On the inventory,	or in compliance with the inventory
	NZIoC		:	On the inventory,	or in compliance with the inventory
	ENCS		:	On the inventory,	or in compliance with the inventory
	ISHL		:	On the inventory,	or in compliance with the inventory
	KECI		:	On the inventory,	or in compliance with the inventory
	PICCS		:	On the inventory,	or in compliance with the inventory
	IECSC		:	On the inventory,	or in compliance with the inventory
	TCSI		:	On the inventory,	or in compliance with the inventory
	TSCA		:	On or in complian inventory	ce with the active portion of the TSCA

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

Full text of other abbreviations

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

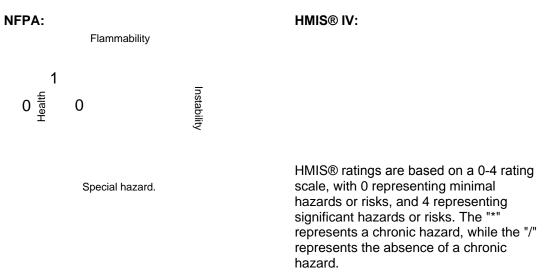


NAUGARD® 412S

Version	Revision Date: 2022/03/25	SDS Number:	Country : US
1.4		400000003549	Language: Z8

population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; 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**

Further information



Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

Revision Date : 2022/03/25

The information and recommendations contained in this safety data sheet are, to the best of SI Group's knowledge, belief and experience, accurate and reliable as of the date of its publication and describe the product only with regard to safety requirements. It is the user's responsibility to confirm that it is using the most current available version of this safety data sheet. The information and recommendations herein are offered for the user's consideration and examination. Identified uses in this safety data sheet do neither represent an agreement on the quality of the Product nor a designated use. For the avoidance of doubt, nothing herein shall be construed as relieving the user of its responsibility to ensure that the product is suitable for the intended use and that any proprietary rights, existing laws and legislation are observed. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING THE PRODUCT DESCRIPTIONS, DATA OR INFORMATIN HEREIN. This safety



NAUGARD® 412S

Version	Revision Date:	SDS Number:	Country : US
1.4	2022/03/25	40000003549	Language: Z8

data sheet is neither a Certificate of Analysis (CoA) nor a technical data sheet and shall not be mistaken for a description of the product's specifications. If user repackages this product, it is the user's responsibility to insure proper health, safety and other necessary information is included with and/or on the packaging. Appropriate warnings and safe-handling procedures should be provided to handlers and further users of the product. Alteration of this document is strictly prohibited. Except to the extent required by law, re-publication or retransmission of this document, in whole or in part, is not permitted.

US / Z8

Carechem24 International Worldwide Coverage

Emergency Phone Numbers:

Europe:	All European Countries	+44 (0) 1235 239 670
Asia Pacific:	East / South East Asia	Regional Number : +65 3158 1074
	Australia	+61 2801 44558
	New Zealand	+64 9929 1483
	China Taiwan	+86 10 5100 3039
	Japan	+81 345 789 341
	Indonesia	00780 3011 0293
	:Malaysia	+60 3 6207 4347
	Thailand	001800 1 2066 6751
	Korea	+65 3158 1285
	Vietnam	+65 3158 1255
	India	+65 3158 1198
	Pakistan	+65 3158 1329
	Philippines	+65 31581203
	Sri Lanka	+65 3158 1195
	Bangladesh	+65 3158 1200
Middle East / Africa:	Arabic speaking countries	+44 (0) 1235 239 671
	All other countries	+44 (0) 1235 239 670
<u>America</u>	United States / Canada	001866 928 0789
Latin America:	Brazil	+55 113 711 9144
	All other countries	+44 (0) 1235 239 670
	Mexico	+52 555 004 8763