

Versi 13.2	-	Revision Date: 05/15/2023	-	0S Number: 621557-00012	Date of last issue: 11/21/2022 Date of first issue: 03/01/2010
SEC	TION 1	. IDENTIFICATION			
	Product name		:	BOND AND SEAI mL	., Elastic polyurethane adhesive, Black, 300
	Produc	t code	:	890.1003	
	Other r	neans of identification	:	No data available	
	Manufa	acturer or supplier's o	deta	iils	
	Compa	ny name of supplier	:	Würth Canada Lir	nited
	Addres	S	:	345 Hanlon Creek GUELPH, ON N1	
	Teleph	one	:	+1 (905) 564 622	5
	Telefax	(:	+1 (905) 564 367	1
	Emerge	ency telephone	:	CHEMTREC (24/ Transport related CANUTEC (24/7) Urgences implique exposition: CHEMTREC (24/ Urgences liées au	: 1-613-996-6666 or * 666 (cell) ant un déversement, incendie, explosion ou 7): 1-800-424-9300
	E-mail	address	:	prodsafe@wurth.	ca
		mended use of the c	hen		ons on use
	Recom	mended use	:	Adhesives Sealant	

SECTION 2. HAZARDS IDENTIFICATION

Flammable liquids	:	Category 4
Respiratory sensitization	:	Category 1
Skin sensitization	:	Category 1
Carcinogenicity	:	Category 2
Specific target organ toxicity - repeated exposure	:	Category 1 (Central nervous system)



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	ific target organ toxicity eated exposure	:	Category 2 (Audit	ory system)
	label elements and pictograms	:		
Signa	al Word	:	Danger	
Haza	Hazard Statements Precautionary Statements		H334 May cause culties if inhaled. H351 Suspected H372 Causes dar through prolonger	an allergic skin reaction. allergy or asthma symptoms or breathing diffi- of causing cancer. mage to organs (Central nervous system) d or repeated exposure. damage to organs (Auditory system) through
Preca			P202 Do not hand and understood. P210 Keep away and other ignition P260 Do not brea P264 Wash skin t P270 Do not eat, P272 Contaminat the workplace.	roughly after handling. ink or smoke when using this product. work clothing should not be allowed out of ve gloves, protective clothing, eye protection
			P304 + P340 IF II keep comfortable P308 + P313 IF ϵ P333 + P313 If sh tion. P342 + P311 If ϵ tor.	ON SKIN: Wash with plenty of water. NHALED: Remove person to fresh air and for breathing. exposed or concerned: Get medical attention. kin irritation or rash occurs: Get medical atten- kperiencing respiratory symptoms: Call a doc- te off contaminated clothing and wash it before
			Storage: P405 Store locke	d up.
			Disposal:	



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

Other hazards

Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome). Vapors may form explosive mixture with air.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
Limestone	Calcium car- bonate	1317-65-3	>= 10 - < 30 *
Polyvinyl chloride	Ethene, chloro-, homopolymer	9002-86-2	>= 5 - < 10 *
Carbon black	Lampblack	1333-86-4	>= 1 - < 5 *
Xylene	Benzene, dime- thyl-	1330-20-7	>= 1 - < 5 *
Hydrocarbons, C9- C12, n-alkanes, isoal- kanes, cyclics, aromat- ics (2-25%)	No data availa- ble	64742-82-1	>= 1 - < 5 *
Titanium dioxide; [in powder form containing 1 % or more of parti- cles with aerodynamic diameter \leq 10 µm]	Titanic anhy- dride	13463-67-7	>= 1 - < 5 *
4,4'-Diphenylmethane diisocyanate	Benzene, 1,1'- methylenebis[4- isocyanato-	101-68-8	>= 0.1 - < 1 *

^{*} Actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice	n the case of accident or if you feel unwell, seek r ice immediately. Vhen symptoms persist or in all cases of doubt se idvice.	
If inhaled	f inhaled, remove to fresh air. f not breathing, give artificial respiration. f breathing is difficult, give oxygen. Get medical attention.	
In case of skin contact	n case of contact, immediately flush skin with pler Remove contaminated clothing and shoes. Get medical attention.	nty of water.



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				Wash clothing bef Thoroughly clean	ore reuse. shoes before reuse.		
In	In case of eye contact		:	Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.			
lfs	If swallowed		:	If swallowed, DO Get medical atten Rinse mouth thore	· •		
ar		portant symptoms ects, both acute and	:	ties if inhaled. Suspected of caus Causes damage t exposure. Respiratory symp delayed. Excessive exposu	or asthma symptoms or breathing difficul- sing cancer. o organs through prolonged or repeated toms, including pulmonary edema, may be re may aggravate preexisting asthma and lisorders (e.g. emphysema, bronchitis, reac-		
Pr	rotectio	on of first-aiders	:	and use the recon	ers should pay attention to self-protection, nmended personal protective equipment I for exposure exists (see section 8).		
No	otes to	o physician	:	Treat symptomation	cally and supportively.		

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	: Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical Water spray in large fire situations
Unsuitable extinguishing media	: High volume water jet
Specific hazards during fire fighting	 Do not use a solid water stream as it may scatter and spread fire. Flash back possible over considerable distance. Vapors may form explosive mixtures with air. Exposure to combustion products may be a hazard to health. If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.
Hazardous combustion prod- ucts	: Carbon oxides Metal oxides Nitrogen oxides (NOx) Chlorine compounds
Specific extinguishing meth- ods	: Use extinguishing measures that are appropriate to local cir- cumstances and the surrounding environment.



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				o cool unopened containers. ged containers from fire area if it is safe to do
	cial protective equipment ire-fighters	:	In the event of fire Use personal prot	e, wear self-contained breathing apparatus. ective equipment.
SECTION	N 6. ACCIDENTAL RELE	ASE	E MEASURES	
tive	sonal precautions, protec- equipment and emer- cy procedures	:		
Envi	ronmental precautions	:	Prevent spreading oil barriers). Retain and dispos	akage or spillage if safe to do so. g over a wide area (e.g., by containment or e of contaminated wash water. should be advised if significant spillages
	nods and materials for ainment and cleaning up	:	Suppress (knock of jet. For large spills, pr ment to keep mate pumped, store red Clean up remainin bent. After approximate do not seal, due to Local or national r sal of this materia ployed in the clean which regulations Sections 13 and 1	absorbent material. down) gases/vapors/mists with a water spray ovide diking or other appropriate contain- erial from spreading. If diked material can be covered material in appropriate container. In a materials from spill with suitable absor- ly one hour, transfer to waste container and o evolution of carbon dioxide. egulations may apply to releases and dispo- l, as well as those materials and items em- mup of releases. You will need to determine

SECTION 7. HANDLING AND STORAGE

Technical measures	:	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation	:	If sufficient ventilation is unavailable, use with local exhaust ventilation.
Advice on safe handling	:	Do not get on skin or clothing. Do not breathe vapors. Do not swallow.



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		Handle in acc practice, base sessment Keep contain Keep away fr Protect from Already sens to asthma, al should consu- tory irritants of Keep away fr other ignition Take precaut Do not eat, d	oroughly after handling. cordance with good industrial hygiene and safety ed on the results of the workplace exposure as- er tightly closed. om water. moisture. itized individuals, and those susceptible lergies, chronic or recurrent respiratory disease, It their physician regarding working with respira- or sensitizers. om heat, hot surfaces, sparks, open flames and sources. No smoking. ionary measures against static discharges. rink or smoke when using this product. prevent spills, waste and minimize release to the	
Condi	tions for safe storage	 Keep in properly labeled containers. Store locked up. Protect from moisture. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations Keep away from heat and sources of ignition. 		
Mater	ials to avoid	Strong oxidiz	substances and mixtures	
Stora	ge period	: 12 Months		

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
Limestone	1317-65-3	TWA	10 mg/m ³	CA AB OEL
		TWAEV (to- tal dust)	10 mg/m³	CA QC OEL
		TWA (Total dust)	10 mg/m³	CA BC OEL
		TWA (respir- able dust fraction)	3 mg/m³	CA BC OEL
		STEL	20 mg/m ³	CA BC OEL
Polyvinyl chloride	9002-86-2	TWA (Res- pirable)	1 mg/m ³	CA BC OEL



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sion 2		DS Number: 0621557-00012		t issue: 11/21/2022 t issue: 03/01/2010	
			TWA (Respi- rable particu- late matter)	1 mg/m³	ACGIH
Carbo	on black	1333-86-4	TWA	3.5 mg/m ³	CA AB OE
			TWA (Inhal- able)	3 mg/m ³	CA BC OE
			TWAEV (in- halable dust)	3 mg/m³	CA QC OE
			TWA (Inha- lable particu- late matter)	3 mg/m³	ACGIH
Xylen	e	1330-20-7	TWA	100 ppm 434 mg/m³	CA AB OE
		STEL	150 ppm 651 mg/m³	CA AB OE	
			TWAEV	100 ppm 434 mg/m³	CA QC OE
			STEV	150 ppm 651 mg/m³	CA QC OE
			TWA	100 ppm	CA BC OE
			STEL	150 ppm	CA BC OE
			TWA	20 ppm	ACGIH
form of particl	um dioxide; [in powder containing 1 % or more of les with aerodynamic eter ≤ 10 µm]	13463-67-7	TWA	10 mg/m ³	CA AB OE
			TWA (Total dust)	10 mg/m³	CA BC OE
			TWA (respir- able dust fraction)	3 mg/m³	CA BC OE
			TWAEV (to- tal dust)	10 mg/m³	CA QC OE
			TWA (Respi- rable particu- late matter)	2.5 mg/m ³ (Titanium dioxide)	ACGIH
4,4'-D anate	iphenylmethane diisocy-	101-68-8	TWA	0.005 ppm	CA BC OE
			С	0.01 ppm	CA BC OE
			TWA	0.005 ppm	CA ON OE
			С	0.02 ppm	CA ON OE
			TWAEV	0.005 ppm 0.051 mg/m ³	CA QC OE
			TWA	0.005 ppm	ACGIH

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sam- pling time	Permissible concentra- tion	Basis
Xylene	1330-20-7	Methyl- hippuric	Urine	End of shift (As	1.5 g/g cre- atinine	ACGIH BEI



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			acids	soon as possible after exposure ceases)	
Engir	neering measures	:	10). Ensure adequate	form hazardous compounds (see section e ventilation, especially in confined areas. ace exposure concentrations.	
Perso	onal protective equip	ment			
Respi	iratory protection	:	sure assessmen	exhaust ventilation is not available or expo- t demonstrates exposures outside the re- delines, use respiratory protection.	
Fil	ter type	:	Combined partic	ulates and organic vapor type	
Hand	protection				
Br	aterial eak through time ove thickness	:	Fluorinated rubb > 30 min 0.4 mm	er	
Re	emarks	:	on the concentra applications, we micals of the afo	o protect hands against chemicals depending tion specific to place of work. For special recommend clarifying the resistance to che- rementioned protective gloves with the glove ash hands before breaks and at the end of	
Eye p	protection	:	Wear the followin Safety glasses	ng personal protective equipment:	
Skin a	and body protection	:	resistance data a potential. Wear the followin If assessment de atmospheres or protective clothin Skin contact mus	st be avoided by using impervious protective	
Hygie	ne measures	:	clothing (gloves, aprons, boots, etc). If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the wor- king place. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before re-use.		

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES



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Арр	pearance	:	paste	
Col	or	:	black	
Odd	or	:	characteristic	
Odd	or Threshold	:	No data available	9
pН		:	substance/mixtur	re is non-soluble (in water)
Mel	ting point/freezing point	:	No data available	9
Initi ranț	al boiling point and boiling ge	:	No data available)
Flas	sh point	:	76 °C	
Eva	poration rate	:	No data available	9
Flar	mmability (solid, gas)	:	Not applicable	
Flar	mmability (liquids)	:	Ignitable (see flas	sh point)
	per explosion limit / Upper nmability limit	:	No data available)
	ver explosion limit / Lower nmability limit	:	No data available	9
Vap	oor pressure	:	No data available	9
Rela	ative vapor density	:	No data available	9
Rela	ative density	:	No data available	9
Der	nsity	:	ca. 1.26 g/cm³ (2	0 °C)
	ubility(ies) Water solubility	:	insoluble	
	tition coefficient: n- anol/water	:	Not applicable	
Aut	oignition temperature	:	No data available	2
Dec	composition temperature	:	No data available	9
Viso	cosity			



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V	iscosity, kinematic	:	> 20.5 mm²/s (4	0 °C)		
Expl	osive properties	:	Not explosive			
Oxid	izing properties	:	The substance o	r mixture is not classified as oxidizing.		
Parti	cle size	:	Not applicable			
SECTION	10. STABILITY AND RE	EAC	ΤΙVITY			
Read	ctivity	:	Not classified as	a reactivity hazard.		
Cher	nical stability	:	Stable if used as directed. Follow precautionary advice and avoid incompatible materials and conditions. Polymerizes at high temperatures with evolution of carbon dioxide.			
Poss	sibility of hazardous reac-	:	Combustible liquid. Vapors may form explosive mixture with air. Isocyanates react with many materials and the rate of reaction increases with temperature as well as increased contact; the se reactions can become violent. Contact is increased by stir ring or if the other material mixes with the isocyanate. Exothermic reaction with acids, amines and alcohols Reacts with water to form carbon dioxide and heat Isocyanates are not soluble in water and sink to the bottom, but react slowly at the interface. The reaction forms carbon dioxide gas and a layer of solid polyurea. Hazardous decomposition products will be formed upon con- tact with water or humid air.			
Cond	ditions to avoid	:	Exposure to mois Heat, flames and			
Incor	mpatible materials	:	Oxidizing agents Acids Bases Water Alcohols Amines Ammonia Aluminum Zinc Brass Tin Copper Galvanized metals Humid air			
Haza prod	ardous decomposition ucts	:	No hazardous de	composition products are known.		



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SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely route Inhalation Skin contact Ingestion Eye contact	es of	exposure
Acute toxicity Not classified based on avai	lable	information.
Product:		
Acute oral toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: > 20 mg/l Exposure time: 4 h Test atmosphere: vapor Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method
Components:		
Limestone:		
Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 420 Assessment: The substance or mixture has no acute oral tox- icity Remarks: Based on data from similar materials
Acute inhalation toxicity	:	LC50 (Rat): > 3 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhala- tion toxicity Remarks: Based on data from similar materials
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal toxicity Remarks: Based on data from similar materials
Carbon black:		
Acute oral toxicity	:	LD50 (Rat): > 10,000 mg/kg
Xylene:		
Acute oral toxicity	:	LD50 (Rat): 3,523 mg/kg
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			Method: Directiv	ve 67/548/EEC, Annex V, B.1.	
Acute	inhalation toxicity	:	LC50 (Rat): 27. Exposure time: Test atmospher	4 h	
Acute	e dermal toxicity	:	LD50 (Rabbit): :	> 4,200 mg/kg	
Hydro	ocarbons, C9-C12, n	-alkan	es, isoalkanes,	cyclics, aromatics (2-25%):	
Acute	oral toxicity	:	LD50 (Rat): > 1	5,000 mg/kg	
Acute	inhalation toxicity	:	LC50 (Rat): > 13 Exposure time: Test atmospher	4 h	
Acute	e dermal toxicity	:	LD50 (Rat): > 3	,400 mg/kg	
	ium dioxide; [in pow eter ≤ 10 μm]:	der fo	rm containing 1	% or more of particles with aerodynamic	
Acute	oral toxicity	:	LD50 (Rat): > 5	,000 mg/kg	
Acute	inhalation toxicity	:	 LC50 (Rat): > 6.82 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: The substance or mixture has no acute inhala- tion toxicity 		
4,4'-D	Diphenylmethane diis	socyai	nate:		
Acute	oral toxicity	:	icity	,000 mg/kg ne substance or mixture has no acute oral tox- d on data from similar materials	
Acute	inhalation toxicity	:	LC50 (Rat): > 2 Exposure time: Test atmospher Method: OECD	1 h	
Acute	dermal toxicity	:	LD50 (Rabbit): : Remarks: Base	> 5,000 mg/kg d on data from similar materials	
Skin	corrosion/irritation				
Not cl	assified based on ava	ailable	information.		
<u>Com</u>	<u>oonents:</u>				
Lime	stone:				
Speci Moth		:	Rabbit	deline 404	

Species :	Rabbit
Method :	OECD Test Guideline 404
Result :	No skin irritation
Remarks :	Based on data from similar materials



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Carb	on black:		
Spec	ies	: Rabbit	
Resu		: No skin irritatio	n
Xyleı	ne:		
Spec	ies	: Rabbit	
Resu	ilt	: Skin irritation	
Hydr	ocarbons, C9-C12, n	-alkanes, isoalkanes	, cyclics, aromatics (2-25%):
Spec		: Rabbit	
Meth		: OECD Test G	
Resu	llt	: No skin irritatio	on
Asse	ssment	: Repeated exp	osure may cause skin dryness or cracking.
	nium dioxide; [in pow neter ≤ 10 μm]:	vder form containing	1 % or more of particles with aerodynamic
Spec	ies	: Rabbit	
Resu	llt	: No skin irritatio	on
4.4'-[Diphenylmethane dii	socvanate:	
Spec		: Rabbit	
Meth		: OECD Test G	uideline 404
Resu		: Skin irritation	
Rema			from similar materials
Serio	ous eye damage/eye	irritation	
	lassified based on av		
<u>Com</u>	ponents:		
Lime	estone:		
Spec	ies	: Rabbit	
Resu		: No eye irritatio	
Meth	od	: OECD Test G	
Rema	arks	: Based on data	from similar materials
Carb	on black:		
Spec		: Rabbit	
Resu		: No eye irritatio	
Meth	od	: OECD Test G	uideline 405
Xyleı	ne:		
Spec		: Rabbit	
Resu	llt	: Irritation to eye	es, reversing within 21 days



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S F	Hydroc Species Result Method		lkar : :	anes, isoalkanes, cyclics, aromatics (2-25%): : Rabbit : No eye irritation : OECD Test Guideline 405					
1	Titaniur	n dioxide; [in powde er ≤ 10 μm]:	er fo		% or more of particles with aerodynamic				
	Species Result		:	Rabbit No eye irritation					
4	4,4'-Dip	henylmethane diiso	суа	nate:					
	Result Remark	S	:		reversing within 7 days I or regional regulation.				
F	Respira	tory or skin sensitiz	atic	on					
		nsitization							
		use an allergic skin rea	actio	on.					
	-	tory sensitization use allergy or asthma	sym	ptoms or breathing	difficulties if inhaled.				
<u>(</u>	Compo	nents:							
I	Limesto	one:							
F S F F	Test Typ Routes Species Method Result Remark	of exposure		Local lymph node Skin contact Mouse OECD Test Guide negative Based on data fro					
(Carbon	black:							
F S N	Test Typ Routes Species Method Result	of exposure		Buehler Test Skin contact Guinea pig OECD Test Guide negative	eline 406				
3	Xylene:								
F	Test Typ Routes Species Result	of exposure	:	Local lymph node Skin contact Mouse negative	assay (LLNA)				
I	Hydroca	arbons, C9-C12, n-al	kar	ies, isoalkanes, cy	clics, aromatics (2-25%):				
F	Test Typ Routes Species Method	of exposure	:	Maximization Tes Skin contact Guinea pig OECD Test Guide					
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Resu	llt	: n	egative	
	nium dioxide; [in pow eter ≤ 10 μm]:	der form	containing 1	% or more of particles with aerodynamic
Test		: Lo	ocal lymph noc	le assay (LLNA)
	es of exposure		kin contact	
Spec		: N	ouse	
Resu	llt	: n	egative	
4,4'-[Diphenylmethane dii	socyanat	e:	
Test	Туре	: B	uehler Test	
Route	es of exposure	: S	kin contact	
Spec			uinea pig	
Resu	llt	: p	ositive	
Asse	ssment	: P	robability or ev	idence of skin sensitization in humans
Route	es of exposure	: Ir	halation	
Spec			at	
Resu		: p	ositive	
Rem	arks	: B	ased on data f	rom similar materials
Asse	ssment		robability of rea	spiratory sensitization in humans based on
Not c	n cell mutagenicity classified based on ava	ailable inf	ormation.	
<u>Com</u>	ponents:			
Lime	estone:			
Genc	otoxicity in vitro	N R	ethod: OECD esult: negative	erial reverse mutation assay (AMES) Test Guideline 471 d on data from similar materials
		N		mosome aberration test in vitro Test Guideline 473
		R	emarks: Based	d on data from similar materials
		N R	ethod: OECD esult: negative	
		R	emarks. Dase	d on data from similar materials
Carb	on black:			
Genc	otoxicity in vitro	N		erial reverse mutation assay (AMES) Test Guideline 471



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			Test Type: In vitro Method: OECD To Result: negative	o mammalian cell gene mutation test est Guideline 476
			Test Type: In vitro malian cells Method: OECD To Result: negative	o sister chromatid exchange assay in mam- est Guideline 479
			Test Type: in vitro Method: OECD To Result: negative	o micronucleus test est Guideline 487
Genc	otoxicity in vivo	:	anogaster (in vivo	ila melanogaster (vinegar fly) : Ingestion
Xylei	ne:			
-	otoxicity in vitro	:	Test Type: Bacter Result: negative	rial reverse mutation assay (AMES)
			Test Type: Chrom Result: negative	nosome aberration test in vitro
			Test Type: In vitro Result: negative	o mammalian cell gene mutation test
			Test Type: In vitro malian cells Result: negative	o sister chromatid exchange assay in mam-
Genc	otoxicity in vivo	:	Test Type: Roder Species: Mouse Application Route Result: negative	nt dominant lethal test (germ cell) (in vivo) n: Skin contact
Hydr	ocarbons, C9-C12, n-a	alkan	es, isoalkanes, cy	/clics, aromatics (2-25%):
-	otoxicity in vitro	:	-	nosome aberration test in vitro
			Test Type: Bacter Result: negative	rial reverse mutation assay (AMES)
Gend	otoxicity in vivo	:	cytogenetic assay Species: Mouse Application Route Result: negative	,



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	ium dioxide; [in pow ∍ter ≤ 10 μm]:	der form containin	g 1 % or more of particles with aerodynamic				
Geno	toxicity in vitro	: Test Type: B Result: nega	acterial reverse mutation assay (AMES) tive				
Genotoxicity in vivo		Species: Mo	: Test Type: In vivo micronucleus test Species: Mouse Result: negative				
4,4'-D	piphenylmethane dii	socyanate:					
	toxicity in vitro	-	acterial reverse mutation assay (AMES) tive				
Geno	toxicity in vivo	cytogenetic a Species: Rat Application F	Route: inhalation (dust/mist/fume) CD Test Guideline 474				
Carci	nogenicity						
	ected of causing cand	er.					
Comp	oonents:						
Carbo	on black:						
Speci Applic	es cation Route sure time	: Rat : Inhalation : 24 Months : positive					
Speci Applic Expos Resul	es cation Route sure time t	: Inhalation : 24 Months					
Speci Applic Expos Resul Speci Applic	es cation Route sure time t es cation Route	: Inhalation : 24 Months : positive : Rat : Ingestion					
Speci Applic Expos Resul Speci Applic Expos	es cation Route sure time t es cation Route sure time	: Inhalation : 24 Months : positive : Rat : Ingestion : 2 Years					
Speci Applic Expos Resul Speci Applic Expos Resul	es cation Route sure time t es cation Route sure time t	 Inhalation 24 Months positive Rat Ingestion 2 Years negative 					
Speci Applic Expos Resul Speci Applic Expos Resul	es cation Route sure time t es cation Route sure time	 Inhalation 24 Months positive Rat Ingestion 2 Years negative 	idence does not support classification as a car-				
Speci Applic Expos Resul Speci Applic Expos Resul Carcir	es cation Route sure time t es cation Route sure time t nogenicity - Assess-	 Inhalation 24 Months positive Rat Ingestion 2 Years negative Weight of ev 	idence does not support classification as a car-				
Speci Applic Expos Resul Speci Applic Expos Resul Carcin ment Xylen Speci	es cation Route sure time t es cation Route sure time t nogenicity - Assess- es	 Inhalation 24 Months positive Rat Ingestion 2 Years negative Weight of ev cinogen Rat 	idence does not support classification as a car-				
Speci Applic Expos Resul Speci Applic Expos Resul Carcin ment Xylen Speci Applic	es cation Route sure time t es cation Route sure time t nogenicity - Assess- es cation Route	 Inhalation 24 Months positive Rat Ingestion 2 Years negative Weight of ev cinogen Rat Ingestion 	idence does not support classification as a car-				
Speci Applic Expos Resul Speci Applic Expos Resul Carcin ment Xylen Speci Applic	es cation Route sure time t es cation Route sure time t nogenicity - Assess- es cation Route sure time	 Inhalation 24 Months positive Rat Ingestion 2 Years negative Weight of ev cinogen Rat 	idence does not support classification as a car-				
Speci Applic Expos Resul Speci Applic Expos Resul Carcin ment Speci Applic Expos Resul	es cation Route sure time t es cation Route sure time t nogenicity - Assess- es cation Route sure time t	 Inhalation 24 Months positive Rat Ingestion 2 Years negative Weight of ev cinogen Rat Ingestion 103 weeks negative 					
Speci Applic Expos Resul Speci Applic Expos Resul Carcin ment Speci Applic Expos Resul Hydro	es cation Route sure time t es cation Route sure time t nogenicity - Assess- es cation Route sure time t t bcarbons, C9-C12, n	 Inhalation 24 Months positive Rat Ingestion 2 Years negative Weight of ev cinogen Rat Ingestion 103 weeks negative 	idence does not support classification as a car-				
Speci Applic Expos Resul Speci Applic Expos Resul Carcin ment Speci Applic Expos Resul Hydro Speci	es cation Route sure time t es cation Route sure time t nogenicity - Assess- es cation Route sure time t t bcarbons, C9-C12, n	 Inhalation 24 Months positive Rat Ingestion 2 Years negative Weight of ev cinogen Rat Ingestion 103 weeks negative 	es, cyclics, aromatics (2-25%):				



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Resu Rema		: negative : Based on dat	a from similar materials
	nium dioxide; [in powde neter ≤ 10 μm]:	er form containing	1 % or more of particles with aerodynamic
	cation Route sure time od It	 Rat inhalation (du 2 Years OECD Test G positive The mechanismans. 	
Carci ment	inogenicity - Assess-	: Limited evide animals.	nce of carcinogenicity in inhalation studies with
4,4'-[Diphenylmethane diiso	cyanate:	
	cation Route sure time Ilt	: Rat : inhalation (du : 2 Years : positive : Based on dat	st/mist/fume) a from similar materials
Carci ment	inogenicity - Assess-	: Limited evide	nce of carcinogenicity in animal studies
-	oductive toxicity classified based on availa	able information.	
	ponents:		
	e stone: ets on fertility	reproduction/ Species: Rat Application R Method: OEC Result: negat	ombined repeated dose toxicity study with the developmental toxicity screening test oute: Ingestion D Test Guideline 422 ive sed on data from similar materials
Effec	ts on fetal development	reproduction/ Species: Rat Application R Method: OEC Result: negat	ombined repeated dose toxicity study with the developmental toxicity screening test oute: Ingestion D Test Guideline 422 ive sed on data from similar materials
Carb	on black:		
Effec	ts on fetal development	: Test Type: Er Species: Rat	nbryo-fetal development



sion 2	Revision Date: 05/15/2023	-	0S Number: 621557-00012	Date of last issue: 11/21/2022 Date of first issue: 03/01/2010
			Application Route Method: OECD T Result: negative	e: Ingestion est Guideline 414
			Species: Mouse	/o-fetal development e: inhalation (dust/mist/fume)
Xylen	e:			
-	s on fertility	:	Species: Rat	eneration reproduction toxicity study e: inhalation (vapor)
Effect	s on fetal development	:	Species: Rat	yo-fetal development e: inhalation (vapor)
Hydro	ocarbons, C9-C12, n-al	kan	es, isoalkanes, cy	yclics, aromatics (2-25%):
	s on fertility	:	Test Type: One-g Species: Rat Application Route Result: negative	peneration reproduction toxicity study e: inhalation (vapor) on data from similar materials
Effect	s on fetal development	:	Species: Rat	yo-fetal development e: inhalation (vapor)
ם-'4 4	piphenylmethane diisoo	cva	nate:	
•	s on fetal development		Test Type: Embry Species: Rat Application Route Result: negative	yo-fetal development e: inhalation (dust/mist/fume) on data from similar materials
	-single exposure assified based on availa	ıble	information.	
<u>Comp</u>	oonents:			
Xylen	e:			
A a a a	sment	:	May cause respire	atory irritation.
Asses				
	ocarbons, C9-C12. n-al	kan	es, isoalkanes, cv	yclics, aromatics (2-25%):



se respiratory irritation. s system) through prolonged or repeated exposure. stem) through prolonged or repeated exposure. n (vapor) system o produce significant health effects in animals at cor ns of >0.2 to 1 mg/l/6h/d. canes, cyclics, aromatics (2-25%): n				
s system) through prolonged or repeated exposure. stem) through prolonged or repeated exposure. n (vapor) system o produce significant health effects in animals at cor ns of >0.2 to 1 mg/l/6h/d. canes, cyclics, aromatics (2-25%):				
stem) through prolonged or repeated exposure. n (vapor) system o produce significant health effects in animals at cor ns of >0.2 to 1 mg/l/6h/d. canes, cyclics, aromatics (2-25%):				
stem) through prolonged or repeated exposure. n (vapor) system o produce significant health effects in animals at cor ns of >0.2 to 1 mg/l/6h/d. canes, cyclics, aromatics (2-25%):				
system o produce significant health effects in animals at cor ns of >0.2 to 1 mg/l/6h/d. canes, cyclics, aromatics (2-25%):				
system o produce significant health effects in animals at cor ns of >0.2 to 1 mg/l/6h/d. canes, cyclics, aromatics (2-25%):				
system o produce significant health effects in animals at cor ns of >0.2 to 1 mg/l/6h/d. canes, cyclics, aromatics (2-25%):				
n				
 Central nervous system Causes damage to organs through prolonged or repeated exposure. 				
n (dust/mist/fume)				
ory Tract o produce significant health effects in animals at co ns of >0.02 to 0.2 mg/l/6h/d.				
. 0				
g/kg				
est Guideline 422 n data from similar materials				
mg/l				
: > 0.2 - 1 mg/l : inhalation (vapor)				
n data from similar materials				
(S				
(S				



BOND AND SEAL, Elastic polyurethane adhesive, Black, 300 mL

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Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Species NOAEL Application Route Exposure time	:	Rat 1,056 mg/kg Ingestion 90 Days
Species NOAEL LOAEL Application Route Exposure time		Rat 3.950 mg/l 7.400 mg/l Inhalation 90 Days

Titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter \leq 10 µm]:

Species NOAEL Application Route Exposure time	:	Rat 24,000 mg/kg Ingestion 28 Days
Species NOAEL Application Route Exposure time		Rat 10 mg/m ³ inhalation (dust/mist/fume) 2 y

4,4'-Diphenylmethane diisocyanate:

Species :	Rat
NOAEL :	0,2 mg/m3
LOAEL :	1 mg/m3
Application Route :	inhalation (dust/mist/fume)
Exposure time :	2 у
Remarks :	Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

Components:

Xylene:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.



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	Experi	ence with human exp	osu	re				
	Components:							
	Hydro Inhalat		kan :	· · · · ·	yclics, aromatics (2-25%): al nervous system effects			
SEC	TION 1	2. ECOLOGICAL INFO	DRN	IATION				
	Ecoto	xicity						
	Comp	onents:						
	Limes Toxicit	tone: y to fish	:	Exposure time: 96 Test substance: V Method: OECD T	hus mykiss (rainbow trout)): > 100 mg/l 6 h Vater Accommodated Fraction est Guideline 203 on data from similar materials			
		y to daphnia and other c invertebrates	:	Exposure time: 48 Test substance: V Method: OECD T	agna (Water flea)): > 100 mg/l 8 h Vater Accommodated Fraction est Guideline 202 on data from similar materials			
	Toxicit <u>y</u> plants	y to algae/aquatic	:	Exposure time: 72 Test substance: W Method: OECD T Remarks: No toxi	Vater Accommodated Fraction			
				Exposure time: 72 Test substance: W Method: OECD T Remarks: No toxi	Vater Accommodated Fraction			
	Toxicit	y to microorganisms	:					
	Carbo	n black:						
	Toxicit	y to fish	:	Exposure time: 96	(zebra fish)): > 1,000 mg/l 6 h est Guideline 203			
		y to daphnia and other c invertebrates	:	EL50 (Daphnia m Exposure time: 24	agna (Water flea)): > 5,600 mg/l 4 h			



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			Test substance: V Method: OECD Te	Vater Accommodated Fraction est Guideline 202
Toxic plant	sity to algae/aquatic s	:	mg/l Exposure time: 72	Vater Accommodated Fraction
	mg/l Exposure tim Test substan		mg/l Exposure time: 72	Vater Accommodated Fraction
Xylei	no.			
-	sity to fish	:	LC50 (Oncorhync Exposure time: 96	hus mykiss (rainbow trout)): 13.5 mg/l እ h
	tity to daphnia and other tic invertebrates	:	Exposure time: 24 Method: OECD Te	
Toxic plant	sity to algae/aquatic s	:	EC50 (Skeletoner Exposure time: 72	na costatum (marine diatom)): 10 mg/l ? h
Toxic icity)	sity to fish (Chronic tox-	:	Exposure time: 35 Method: OECD Te	
	city to daphnia and other tic invertebrates (Chron- cicity)	:	Exposure time: 21 Method: OECD Te	
Τοχία	sity to microorganisms	:	NOEC: > 100 mg/ Exposure time: 3 Method: OECD To Remarks: Based of	h
Hydr	ocarbons, C9-C12, n-al	kan	es, isoalkanes, cy	vclics, aromatics (2-25%):
-	sity to fish	:	LL50 (Oncorhyncl Exposure time: 96	hus mykiss (rainbow trout)): > 10 - 30 mg/l 5 h Vater Accommodated Fraction
	city to daphnia and other tic invertebrates	:	Exposure time: 48	Vater Accommodated Fraction



Version 13.2	Revision Date: 05/15/2023		0S Number: 621557-00012	Date of last issue: 11/21/2022 Date of first issue: 03/01/2010
	Toxicity to algae/aquatic plants		mg/l Exposure time: 72	Vater Accommodated Fraction
			mg/l Exposure time: 72	Vater Accommodated Fraction
aquat	Toxicity to daphnia and other aquatic invertebrates (Chron- ic toxicity)		NOEC (Daphnia magna (Water flea)): 0.097 mg/l Exposure time: 21 d Test substance: Water Accommodated Fraction Method: OECD Test Guideline 211 Remarks: Based on data from similar materials	
	ium dioxide; [in powde eter ≤ 10 μm]:	r fo	rm containing 1 %	6 or more of particles with aerodynamic
Toxic	ity to fish	•	LC50 (Oncorhync Exposure time: 96 Method: OECD To	
	ity to daphnia and other tic invertebrates	:	EC50 (Daphnia m Exposure time: 48	agna (Water flea)): > 100 mg/l 3 h
Toxic plants	ity to algae/aquatic s	:	EC50 (Skeletoner Exposure time: 72	ma costatum (marine diatom)): > 10,000 mg/l 2 h
Toxic	ity to microorganisms	:	EC50: > 1,000 mg Exposure time: 3 Method: OECD To	h
4,4'-0	Diphenylmethane diisoo	cya	nate:	
Toxic	ity to fish	:	Exposure time: 96	ipes (Orange-red killifish)): > 3,000 mg/l 5 h on data from similar materials
	ity to daphnia and other tic invertebrates	:	: EC50 (Daphnia magna (Water flea)): 129.7 mg/l Exposure time: 24 h Method: OECD Test Guideline 202	
Toxic plants	ity to algae/aquatic s	:	mg/l Exposure time: 72 Method: OECD To	
			NOEC (Desmode Exposure time: 72	smus subspicatus (green algae)): 1,640 mg/l 2 h



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			Method: OECD Te Remarks: Based o	est Guideline 201 on data from similar materials
	ty to daphnia and other ic invertebrates (Chron- city)	:	Exposure time: 21 Method: OECD Te	
Toxici	ty to microorganisms	:	Exposure time: 3 Method: OECD Te	
Persis	stence and degradabili	ty		
<u>Comp</u>	oonents:			
Xylen	e:			
Biode	gradability	:	Biodegradation: > Exposure time: 28 Method: OECD Te	· 70 %
Hydro	ocarbons, C9-C12, n-all	kan	es, isoalkanes, cy	clics, aromatics (2-25%):
Biode	gradability	:		75.9 %
4.4'-D	iphenylmethane diisoo	vai	nate:	
	gradability	:	Result: Not readily Biodegradation: 0 Exposure time: 28 Method: OECD Te	9 % 9 d
Bioac	cumulative potential			
<u>Comp</u>	oonents:			
Xylen	e:			
	on coefficient: n- ol/water	:	log Pow: 3.16 Remarks: Calcula	tion
Hydro	ocarbons, C9-C12, n-al	kan	es, isoalkanes, cy	clics, aromatics (2-25%):
	on coefficient: n- ol/water	:	Pow: > 4	



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4,4'-C	Diphenylmethane dii	socyanate:				
Bioac	ccumulation		: Species: Cyprinus carpio (Carp) Bioconcentration factor (BCF): 200			
	ion coefficient: n- ol/water	: log Pow: 4.5	1			
Mobi	lity in soil					
No da	ata available					
Othe	r adverse effects					
No da	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 handling site for recycling or disposal. Empty containers retain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or ex- pose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

Domestic regulation

TDG

Not regulated as a dangerous good

Special precautions for user

Not applicable

SECTION 15. REGULATORY INFORMATION



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Volatile organic compounds (VOC) content		Guidelines for VC	CANADIAN ENVIRONMENTAL PROTECTION ACT, 1999 - Guidelines for VOC in Consumer Products VOC content: 3.83 % / 48.3 g/l		
The in	gredients of this proc	luct are reported in t	he following inventories:		
DSL		1999 and NSNR	stances in this product comply with the CEPA and are on or exempt from listing on the stic Substances List (DSL).		

SECTION 16. OTHER INFORMATION

Full text of other abbreviations				
ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)		
ACGIH BEI	:	ACGIH - Biological Exposure Indices (BEI)		
CA AB OEL	:	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)		
CA BC OEL	:	Canada. British Columbia OEL		
CA ON OEL	:	Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.		
CA QC OEL	:	Québec. Regulation respecting occupational health and safe- ty, Schedule 1, Part 1: Permissible exposure values for air- borne contaminants		
ACGIH / TWA	:	8-hour, time-weighted average		
CA AB OEL / TWA	:	8-hour Occupational exposure limit		
CA AB OEL / STEL	:	15-minute occupational exposure limit		
CA BC OEL / TWA	:	8-hour time weighted average		
CA BC OEL / STEL	:	short-term exposure limit		
CA BC OEL / C	:	ceiling limit		
CA ON OEL / C	:	Ceiling Limit (C)		
CA ON OEL / TWA	:	Time-Weighted Average Limit (TWA)		
CA QC OEL / TWAEV	:	Time-weighted average exposure value		
CA QC OEL / STEV	:	Short-term exposure value		

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



BOND AND SEAL, Elastic polyurethane adhesive, Black, 300 mL

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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, Bioaccumulative 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

Sources of key data used to compile the Material Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen- cy, http://echa.europa.eu/
Revision Date Date format	:	05/15/2023 mm/dd/yyyy

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.

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