1.1 09/13/2023 40 SECTION 1. IDENTIFICATION Product name	DS Number: 00000007335 Print Da	Date of last issue: Date of first issue: te 01/16/2024	
1.1 09/13/2023 40 SECTION 1. IDENTIFICATION Product name	0000007335 Print Da	Date of first issue:	Chemica Concept
Product name :		te 01/16/2024	Concept
Product name :			
	: ARALDITE® 202	3-10 RESIN	chemical-concepts.co
Manufacturer or supplier's details			410 Pike Road • Huntingdon Valley, PA 190
	 Huntsman Advan P.O. Box 4980 The Woodlands, TX 77387 United States of A 		ricas LLC
Telephone :	: Non-Emergency:	· · · ·	
E-mail address	: Global_Product_l	EHS_AdMat@hunt	sman.com
Emergency telephone number :	: Chemtrec: (800)	424-9300 or (703)	527-3887

Recommended use of the chemical and restrictions on use

Recommended use : R	esin

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) Flammable liquids : Category 2 Skin irritation : Category 2 Eye irritation : Category 2A Skin sensitisation Category 1 : Specific target organ toxicity : Category 3 (Respiratory system) - single exposure Short-term (acute) aquatic : Category 3 hazard **GHS** label elements Hazard pictograms 2 Signal word : Danger : H225 Highly flammable liquid and vapour. Hazard statements H315 Causes skin irritation.

H317 May cause an allergic skin reaction.



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Version 1.1 Revision Date: 09/13/2023 SDS Number: 40000007335 Date of list issue: 02/19/2019 Print Date 01/16/202 H335 May cause respiratory irritation. H402 Harmful to aquatic life. Print Date 01/16/202 H335 May cause respiratory irritation. H402 Harmful to aquatic life. Precautionary statements : Prevention: P210 Keep away from heat/ sparks/ open flames/ hot surfaces No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P261 Avoid breathing mist or vapours. P264 Wash skin throroughy after handing. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing must not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves/ eye protection/ face protection. Response: P303 + P361 + P353 IF ON SKIN (or hair): Take off immediate all contaminated clothing. Rinse skin with water/ shower. P304 + P340 + P312 IF INHALED. Remove person to fresh ai and keep comfortable for breathing. Call a POISON CENTER, doctor if you feel unwell. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and ee to do. Continue rinsing. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P337 + P313 If skin irritation persists: Get medical advice/ attention. P338 I P313 If skin irritation persists: Get medical advice/ attention. P338 I P313 If skin irritation persists: Get medical advice/ attention. P339 H P338 I no axee of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. Storage: P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P403 + P235 Stor	ARALD	ITE® 2023-10	RESIN	Enriching lives through innovation
H335 May cause respiratory irritation. H402 Harmful to aquatic life. Precautionary statements : Prevention: P210 Keep away from heat/ sparks/ open flames/ hot surfaces No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P261 Avoid breathing mist or vapours. P264 Wash skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing must not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves/ eye protection/ face protection. Response: P303 + P361 + P353 IF ON SKIN (or hair): Take off immediate all contaminated clothing. Rinse skin with water/ shower. P304 + P340 + P312 IF INHALED: Remove person to fresh ai and keep comfortable for breathing. Call a POISON CENTER. doctor if you feel unwell. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and ea to do. Continue rinsing. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P337 + P313 If eye irritation persists: Get medical advice/ attention. P337 + P313 If eye irritation persists: Get medical advice/ attention. P337 + P313 If eye irritation persists: Get medical advice/ attention. P362 Take off contaminated clothing and wash before reuse. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. Storage: P403 + P235 Store in a well-ventilated place. Keep cont. P403 + P235 Store in a well-ventilated place. Keep cont. P405 Store locked up. Dispose of contents/ container to an approved waste				
 P210 Keep away from heat/ sparks/ open flames/ hot surfaces No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P261 Avoid breathing mist or vapours. P264 Wash skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing must not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves/ eye protection/ face protection. Response: P303 + P361 + P353 IF ON SKIN (or hair): Take off immediate all contaminated clothing. Rinse skin with water/ shower. P304 + P340 + P312 IF INHALED: Remove person to fresh ai and keep comfortable for breathing. Call a POISON CENTER doctor if you feel unwell. P333 + P313 If skin irritation or rash occurs: Get medical advia attention. P333 + P313 If skin irritation or rash occurs: Get medical advia attention. P337 + P313 If eye irritation persists: Get medical advice/ attention. P362 Take off contaminated clothing and wash before reuse. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. Storage: P403 + P235 Store in a well-ventilated place. Keep container tightly closed. P403 + P235 Store in a well-ventilated place. Keep container tightly closed. P403 + P235 Store in a well-ventilated place. Keep cool. P403 + P235 Store in a well-ventilated place. Keep cool. P403 + P235 Store in a well-ventilated place. Keep cool. P403 + P235 Store in a well-ventilated place. Keep cool. P403 + P235 Store in a well-ventilated place. Keep cool. P403 + P235 Store in a well-ventilated place. 				
Other hazards			P210 Keep awa No smoking. P233 Keep cor P240 Ground/b P241 Use expla- equipment. P242 Use only P243 Take pre- P261 Avoid bre- P264 Wash ski P271 Use only P272 Contamir the workplace. P273 Avoid rela P280 Wear pro Response: P303 + P361 + all contaminate P304 + P340 + and keep comfa doctor if you fee P305 + P351 + for several min- to do. Continue P333 + P313 If attention. P337 + P313 If attention. P362 Take off a P370 + P378 Ir alcohol-resistar Storage: P403 + P233 S tightly closed. P403 + P235 S P405 Store loci Disposal: P501 Dispose of	 Attainer tightly closed. Attainer tightly closed. Attainer tightly closed. Attainer and receiving equipment. Attainer tightly closel. Attainer tightly close

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture

: Mixture

Chemical nature : Adhesives

Hazardous components

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Print Date 01/16/2024 Concentration (% w/w)

Chemical name	CAS-No.	Concentration (% w/w)
methyl methacrylate	80-62-6	30 - 50
titanium dioxide	13463-67-7	5 - 10
octadecyl methacrylate	32360-05-7	1 - 5
methacrylic acid	79-41-4	1 - 3
hexadecyl methacrylate	2495-27-4	1 - 5
2,2'-[(4-methylphenyl)imino]bisethanol	3077-12-1	0.1 - 1
Talc (Mg3H2(SiO3)4)	14807-96-6	0.1 - 1
2,6-di-tert-butyl-p-cresol	128-37-0	0.1 - 1

The specific chemical identity and/or exact percentage (concentration) of composition may be withheld as a trade secret.

SECTION 4. FIRST AID MEASURES

General advice	:	Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Treat symptomatically. Get medical attention if symptoms occur.
If inhaled	:	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
In case of skin contact	:	If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
In case of eye contact	:	Immediately flush eye(s) with plenty of water. Remove contact lenses. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	:	None known.
Protection of first-aiders	:	First Aid responders should pay attention to self-protection and use the recommended protective clothing If potential for exposure exists refer to Section 8 for specific personal protective equipment.



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		No action sha suitable traini It may be dar	Print Date 01/16/2024 ion, ingestion and contact with skin and eyes. all be taken involving any personal risk or without ing. ngerous to the person providing aid to give uth resuscitation.
Notes	s to physician	: Treat sympto	matically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media :	Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical	
Unsuitable extinguishing : media	Exercise caution when using a high volume water jet as scatter and spread fire	it may
Specific hazards during : firefighting	Do not allow run-off from fire fighting to enter drains or w courses.	vater
Hazardous combustion : products	Carbon oxides Metal oxides	
Specific extinguishing : methods	Use extinguishing measures that are appropriate to loca circumstances and the surrounding environment.	ıl
Further information :	Collect contaminated fire extinguishing water separately must not be discharged into drains. Fire residues and contaminated fire extinguishing water be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.	must
Special protective equipment : for firefighters	Wear self-contained breathing apparatus for firefighting necessary.	if

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Refer to protective measures listed in sections 7 and 8. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

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Methods and materials for containment and cleaning up	:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth,
		vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.
Advice on safe handling	:	Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitisation of susceptible persons. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage	:	No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Keep in properly labelled containers.
Materials to avoid	:	For incompatible materials please refer to Section 10 of this SDS.
Recommended storage temperature	:	36 - 46 °F / 2 - 8 °C
Further information on storage stability	:	Stable under normal conditions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type	Control	Basis
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		(Form of	parameters /	
		exposure)	Permissible	
		, ,	concentration	
methyl methacrylate	80-62-6	TWA	50 ppm	ACGIH
		STEL	100 ppm	ACGIH
		TWA	100 ppm 410 mg/m3	OSHA Z-1
		TWA	100 ppm 410 mg/m3	NIOSH REL
		TWA	100 ppm 410 mg/m3	OSHA P0
titanium dioxide	13463-67-7	TWA (total dust)	15 mg/m3	OSHA Z-1
		TWÁ (Total dust)	10 mg/m3	OSHA P0
		TWÁ (Respirable particulate matter)	0.2 mg/m3 (Titanium dioxide)	ACGIH
		TWA (Respirable particulate matter)	2.5 mg/m3 (Titanium dioxide)	ACGIH
methacrylic acid	79-41-4	TWA	20 ppm	ACGIH
		TWA	20 ppm 70 mg/m3	NIOSH REL
		TWA	20 ppm 70 mg/m3	OSHA P0
Talc (Mg3H2(SiO3)4)	14807-96-6	TWA (Dust)	20 Million particles per cubic foot	OSHA Z-3
		TWA (respirable dust fraction)	2 mg/m3	OSHA P0
		TWA (Respirable)	2 mg/m3	NIOSH REL
		TWA	0.1 fibres per cubic centimeter	ACGIH
		TWA (Respirable particulate matter)	2 mg/m3	ACGIH
		PEL (respirable)	0.05 mg/m3	OSHA CARC
2,6-di-tert-butyl-p-cresol	128-37-0	TWA (Inhalable fraction and vapor)	2 mg/m3	ACGIH
		TWA	10 mg/m3	NIOSH REL
		TWA	10 mg/m3	OSHA P0

Personal protective equipment

: General and local exhaust ventilation is recommended to

Respiratory protection

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		concentrations unknown, app Follow OSHA use NIOSH/M3 by air purifying hazardous che supplied respin release, expos	Print Date 01/16/2024 r exposures below recommended limits. Where a re above recommended limits or are ropriate respiratory protection should be worn. respirator regulations (29 CFR 1910.134) and SHA approved respirators. Protection provided prespirators against exposure to any emical is limited. Use a positive pressure air rator if there is any potential for uncontrolled sure levels are unknown, or any other where air purifying respirators may not provide ection.
Mate Mate		: butyl-rubber : Nitrile rubber : 10 - 480 min	
Mate Brea	erial k through time	: Ethyl Vinyl Alo : >8 h	cohol Laminate (EVAL)
Rema	arks	approved stan chemical produ necessary. The suitability with the produ Take note of th concerning pe	stant, impervious gloves complying with an dard should be worn at all times when handling ucts if a risk assessment indicates this is for a specific workplace should be discussed cers of the protective gloves. The information given by the producer rmeability and break through times, and of ace conditions (mechanical strain, duration of
Eye p	protection	Tightly fitting s	le with pure water afety goggles eld and protective suit for abnormal processing
Skin	and body protection		thing protection according to the amount and of the dangerous substance at the work place.
Hygie	ene measures	When using do	o not eat or drink. o not smoke. efore breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

: paste
: white
: No data is available on the product itself.
: No data is available on the product itself.

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	рН		:	substance/mixtur	e is non-soluble (in wa	ter)
	Melting	point/freezing point	:	No data is availa	ble on the product itsel	f.
	Boiling	point	:	ca. > 212 °F / > 1 Method: estimate		
	Flash p	point	:	52 °F / 11 °C		
	Evapor	ration rate	:	No data is availa	ble on the product itsel	f.
	Flamm	ability (solid, gas)	:	No data is availa	ble on the product itsel	f.
	Flamm	ability (liquids)	:	No data is availa	ble on the product itsel	f.
		explosion limit / Upper ability limit	:	No data is availa	ble on the product itsel	f.
		explosion limit / Lower ability limit	:	No data is availa	ble on the product itsel	f.
	Vapou	r pressure	:	No data is availa	ble on the product itsel	f.
	Relativ	e vapour density	:	No data is availa	ble on the product itsel	f.
	Relativ	e density	:	No data is availa	ble on the product itsel	f.
	Density	<i>y</i>	:	1.07 g/cm3 Method: Calculat	ion method	
	Solubil Wate	ity(ies) er solubility	:	insoluble		
	Solu	bility in other solvents	:	No data is availa	ble on the product itsel	f.
	Partitio octano	n coefficient: n-	:	No data is availa	ble on the product itsel	f.
		inition temperature	:	> 752 °F / > 400 Method: estimate		
	Decom	position temperature	:	> 392 °F / > 200 Method: estimate		
		ccelerating position temperature)	:	No data is availa	ble on the product itsel	f.
	Viscosi Visc	ity osity, dynamic	:	180,000 - 200,00 Method: estimate		
	Explos	ive properties	:	No data is availa	ble on the product itsel	f.
	Oxidizi	ng properties	:	No data is availa	ble on the product itsel	f.





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Partic	cle size	: No data is ava	ailable on the product itself.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Vapours may form explosive mixture with air.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	None known.
Hazardous decomposition products	:	carbon dioxide carbon monoxide

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity	
Product:	
Acute oral toxicity	: Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity	 Acute toxicity estimate: 55.8 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
Acute dermal toxicity	: Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
<u>Components:</u>	
methyl methacrylate:	
Acute oral toxicity	: LD50 (Rat): 7,900 - 9,400 mg/kg
Acute inhalation toxicity	 LC50 (Rat, male and female): 29.8 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Directive 67/548/EEC, Annex V, B.2.
Acute dermal toxicity	: LD50 (Rabbit, male): > 5,000 mg/kg Method: OECD Test Guideline 402
titanium dioxide:	
Acute oral toxicity	 LD50 (Rat, female): > 5,000 mg/kg Method: OECD Test Guideline 425 Assessment: The substance or mixture has no acute oral toxicity

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Acute	inhalation toxicity	 LC50 (Rat, male and female): 3.43 - 5.09 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhalation toxicity 	
Acute	dermal toxicity	: LD50 Dermal (Rabbit): > 10,000 mg/kg	
octad	lecyl methacrylate:		
	oral toxicity	: LD50 (Rat, male and female): > 5,000 mg/kg Method: OECD Test Guideline 401	
Acute	dermal toxicity	 LD50 (Rabbit): > 3,000 mg/kg Assessment: The substance or mixture has no acute derm toxicity 	al
metha	acrylic acid:		
Acute	oral toxicity	 LD50 (Rat, male): 1,320 mg/kg Method: OECD Test Guideline 401 GLP: no Assessment: The component/mixture is moderately toxic a 	fter
		single ingestion.	
Acute	inhalation toxicity	 LC50 (Rat, male and female): 7.1 mg/l Exposure time: 4 h Test atmosphere: vapour Method: OECD Test Guideline 403 GLP: yes Assessment: The component/mixture is moderately toxic a short term inhalation. 	fter
Acute	dermal toxicity	: LD50 (Rabbit): 500 - 1,000 mg/kg GLP: no Assessment: The component/mixture is toxic after single contact with skin.	
	decyl methacrylate:		
Acute	oral toxicity	: LD50 (Rat, male and female): > 5,000 mg/kg Method: OECD Test Guideline 401	
Acute	dermal toxicity	 LD50 (Rabbit): > 3,000 mg/kg Assessment: The substance or mixture has no acute derm toxicity 	al
2,2'-[((4-methylphenyl)imir	b]bisethanol:	
Acute	oral toxicity	 LD50 (Rat, male and female): 959 mg/kg Method: OECD Test Guideline 401 GLP: no Assessment: The component/mixture is moderately toxic a single ingestion. 	fter



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Assessment: The substance or mixture has no acute dermal

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2,6-di-tert-butyl-p-cresol:		
Acute oral toxicity	:	LD50 (Rat, male and female): > 6,000 mg/kg Method: OECD Test Guideline 401 Assessment: The substance or mixture has no acute oral toxicity
Acute dermal toxicity	:	LD50 (Rat, male and female): > 2,000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal

toxicity

toxicity

Skin corrosion/irritation

Components:

methyl methacrylate:

Species	: Rabbit
Method	: OPPTS 870.2500
Result	: Skin irritation
titanium dioxide:	
Species	: Rabbit
Assessment	. No skin irritation

Assessment	•	NO SKIN IMIALION
Method	:	OECD Test Guideline 404
Result	:	Normally reversible injuries

octadecyl methacrylate:

Result

: Skin irritation

methacrylic acid:

Species :	Rabbit
Assessment :	Causes severe burns.
Method :	OECD Test Guideline 404
Result :	Extremely corrosive and destructive to tissue.
GLP :	yes

hexadecyl methacrylate:

Result

: Skin irritation

2,2'-[(4-methylphenyl)imino]bisethanol:

Species	:	Rabbit
Assessment	:	No skin irritation
Method	:	Other guidelines
Result	:	No skin irritation
GLP	:	no



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SAFET	Y DATA SHEET		HUNTS
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2.6.4	li-tert-butyl-p-cresol:		Print Da
Spec	ies ssment od	: Rabbit : No skin irritatio : OECD Test Gu : No skin irritatio	ideline 404
Serio	ous eye damage/eye	irritation	
<u>Com</u>	ponents:		
titani	ium dioxide:		
Spec Resu Asse Meth	lt ssment	: Rabbit : Normally revers : No eye irritation : OECD Test Gu	n
octa	decyl methacrylate:		
Resu	lt	: Eye irritation	
meth	acrylic acid:		
	lt ssment		ects on the eye damage to eyes.
Meth	oa	: Draize Test	

hexadecyl methacrylate:

Result

GLP

: Eye irritation

2,2'-[(4-methylphenyl)imino]bisethanol:

Species	:	Rabbit
Result	:	Risk of serious damage to eyes.
Assessment	:	Risk of serious damage to eyes.
Method	:	OECD Test Guideline 405
GLP	:	no

: no

2,6-di-tert-butyl-p-cresol:

Species	Rabbit
Result	No eye irritation
Assessment	No eye irritation
Method	OECD Test Guideline 405

Respiratory or skin sensitisation

Components:

methyl methacrylate:

Exposure routes	:	Skin
Species	:	Mouse
Assessment	:	May cause sensitisation by skin contact.
Method	:	OECD Test Guideline 429
Result	:	May cause sensitisation by skin contact.

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titani	um dioxide:		

titanium dioxide:	
Test Type :	Local lymph node assay (LLNA)
Exposure routes :	Skin
Species :	Mouse
Assessment :	Does not cause skin sensitisation.
Method :	OECD Test Guideline 429
Result :	Does not cause skin sensitisation.
Exposure routes :	Skin
Species	Guinea pig
Assessment	Does not cause skin sensitisation.
Method :	OECD Test Guideline 406
Result :	Does not cause skin sensitisation.
Assessment :	No skin irritation, No eye irritation Does not cause skin sensitisation., Does not cause respiratory
	sensitisation.
octadecyl methacrylate:	
	Skin
	Mouse
•	OECD Test Guideline 429
Result :	Does not cause skin sensitisation.
methacrylic acid:	
Test Type :	Buehler Test
Exposure routes :	Skin
Species :	Guinea pig
Assessment :	Did not cause sensitisation on laboratory animals.
Method :	OECD Test Guideline 406
Result :	Did not cause sensitisation on laboratory animals.
hexadecyl methacrylate:	
Exposure routes :	Skin
Species :	Mouse
Method :	OECD Test Guideline 429
Result :	Does not cause skin sensitisation.
2,2'-[(4-methylphenyl)imino]bis	sethanol:
Test Type :	Local lymph node assay (LLNA)
Species :	Mouse
Assessment :	May cause sensitisation by skin contact.
Method :	OECD Test Guideline 429
Result :	May cause sensitisation by skin contact.
GLP :	Ves
Remarks :	Information given is based on data obtained from similar
	substances.

2,6-di-tert-butyl-p-cresol:

Exposure routes	:	Skin
Species	:	Humans

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Result		: D	oes not cause s	kin sensitisation.	Print Date 01/16/2024
Germ	cell mutagenicity				
Comp	onents:				
methy	I methacrylate:				
Genoto	oxicity in vitro	Te M	est system: Salr	ial mutagenesis assa nonella typhimurium est Guideline 471	ay (Ames test)
titaniu	ım dioxide:				
Genoto	oxicity in vitro	C M M	etabolic activati	test 0 - 200 ug/plate on: with and without r est Guideline 471	netabolic activation
		C M M	oncentration: 31 etabolic activati	e mammalian cell gen - 500 μg/L on: with and without r est Guideline 476	
		C M M	oncentration: 12 etabolic activation	osome aberration tes 5 - 2500 μg/L on: with and without r est Guideline 473	
Genoto	oxicity in vivo	S A E: D M	ose: 0.8, 7.2, an	males) : Inhalation consecutive days	
		S A E2 D		e and female) : Oral	
Germ o Assess	cell mutagenicity - sment	m		or mammalian cell c ., Animal testing did r	ultures did not show not show any mutagenic
octade	ecyl methacrylate:				
	oxicity in vitro	Μ		- 1200 μg/L on: with and without r est Guideline 476	netabolic activation



ersion .1	Revision Date: 09/13/2023	SDS Number: 400000007335	Date of last issue: 02/19/2019 Date of first issue: 02/19/2019
		Result: negative	Print Date 01/16/2024
		Concentration: Metabolic active	33 - 5000 ug/plate ation: with and without metabolic activation Test Guideline 471
		Metabolic activa	14.5 - 2233 μg/L ation: with and without metabolic activation Test Guideline 473 e
Genoto	oxicity in vivo	: Application Rou Exposure time: Dose: 5000 mg Method: OECD Result: negative	72 h /kg Test Guideline 474
metha	crylic acid:		
Genoto	oxicity in vitro	Test system: Sa Metabolic activa	erse mutation assay almonella typhimurium ation: with and without metabolic activation Test Guideline 471 e
Genoto	oxicity in vivo	Method: OECD	nale) atic ite: Inhalation
		Species: Mouse Application Rou Exposure time: Dose: 0.405, 4.	ite: Inhalation 6 h 05 and 36.45 mg/L Test Guideline 478
hexad	ecyl methacrylate:		
	oxicity in vitro		ation: with and without metabolic activation Test Guideline 476
		Metabolic activa	33 - 5000 ug/plate ation: with and without metabolic activation Test Guideline 471 e

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/ersion 1.1	Revision Date: 09/13/2023	SDS Number: 400000007335	Date of last issue: 02/19/2019 Date of first issue: 02/19/2019				
		Metabolic ac	Print Date 01/16/2024 on: 14.5 - 2233 µg/L tivation: with and without metabolic activation CD Test Guideline 473 tive				
Genot	toxicity in vivo	Exposure tim Dose: 5000 r Method: OE0	: Application Route: Oral Exposure time: 72 h Dose: 5000 mg/kg Method: OECD Test Guideline 474 Result: negative				
2,2'-[((4-methylphenyl)imi	no]bisethanol:					
Genotoxicity in vitro		Test system: Metabolic ac	everse mutation assay : Salmonella typhimurium tivation: with and without metabolic activation CD Test Guideline 471 tive				
		Test system: Metabolic ac Method: OE0 Result: nega GLP: yes	formation given is based on data obtained from				
		Test system: Metabolic ac Method: OE0 Result: nega GLP: yes	formation given is based on data obtained from				
2,6-di	-tert-butyl-p-cresol:						
Genot	toxicity in vitro		everse mutation assay tivation: with and without metabolic activation tive				
			Chromosome aberration test in vitro tivation: with and without metabolic activation tive				
Genot	toxicity in vivo	: Application F Dose: 75 mg Result: nega					
		Application F Exposure tim Dose: ca 750 Result: nega	ne: 9 Months) mg/kg				

	ITE® 2023-10	RESIN	Enriching lives through innovation				
Version 1.1	Revision Date: 09/13/2023	SDS Number: 40000007335	Date of last issue: 02/19/2019 Date of first issue: 02/19/2019				
Carci	nogenicity		Print Date 01/16/202				
	oonents:						
methy	yl methacrylate:						
Expos Dose	cation Route sure time ency of Treatment EL	: Oral : 2 Years : 6, 60, 2000 ppr : once daily	 2 Years 6, 60, 2000 ppm once daily 90.3 mg/kg bw/day 				
titani	um dioxide:						
titanium dioxide: Species Application Route Exposure time Dose Frequency of Treatment NOAEL Method Remarks		studies (with p IARC has conc humans for the "There is suffici carcinogenicity was that "titaniu (Group 2B)." Huntsman has carcinogenicity epidemiology d weight of scient causative link b risk in humans with applicable	00 ppm				
	nogenicity - ssment	: Not classifiable	as a human carcinogen.				
metha	acrylic acid:						
Expos	cation Route sure time ency of Treatment EL	 Rat, male and f inhalation (vapolic 102 weeks 5 days/week >= 2.05 mg/kg OECD Test Gu 	bur) body weight				
Species Application Route Exposure time Dose		: Mouse, male ar : inhalation (vapo : 102 weeks : ca. 2.05 and 4.	our)				

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Frequ LOAE Metho		atment	:	5 days/week ca. 2.05 mg/l OECD Test Guide	line 451	Print Date 01/16/2024
Specie Applic	2,6-di-tert-butyl-p-cresol: Species Application Route Result		:	Rat, male and fem Oral negative	nale	
IARC	Ta Gi	alc (Mg3H2(SiO ssib	genic to humans 3)4) Iy carcinogenic to ł	numans	14807-96-6 13463-67-7
OSHA	Та	SHA specific alc (Mg3H2(rystalline sili	SiO		gen	14807-96-6
NTP	Та	alc (Mg3H2(SiO	an carcinogen 3)4) e (Respirable Size)))	14807-96-6
-	oductive tox ponents:	kicity				
Effect	/I methacry s on foetal opment	late:	:	Species: Rat Application Route Dose: 99, 304, 11 Teratogenicity: NO Embryo-foetal tox Method: OECD Te Result: No teratog	178 ppm DAEC F1: 8,300 i icity: NOAEC F1: est Guideline 414	8,300 mg/m ³
Effect	um dioxide: s on foetal opment		:		: Oral nd 1000 mg/kg b Treatment: 20 d atment: 7 days/we /aternal: NOAEL oxicity: NOAEL: 1 est Guideline 414	eek : 1,000 mg/kg body weight ,000 mg/kg body weight
	ductive toxic	city -	:	No evidence of ac or on developmen		sexual function and fertility, al experiments.
	ecyl methad s on fertility	crylate:	:	Species: Rat, mal Application Route Dose: >= 1000 mi Frequency of Trea	: Oral Iligram per kilogra	

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		Method: OEC Result: negat	Print Date 01/16/2024 D Test Guideline 422 ive
		Application R Dose: 400 m Frequency of	illigram per kilogram Treatment: 7 days/week CD Test Guideline 416
	Effects on foetal development		, male and female oute: Oral city Maternal: NOAEL: 1,000 mg/kg body weight CD Test Guideline 422 ratogenic effects
		General Toxi Method: OEC	, female oute: Inhalation city Maternal: NOAEL: 100 ppm CD Test Guideline 414 ratogenic effects
metha	acrylic acid:		
	s on fertility	Species: Rat Application R Dose: 0, 50, General Toxi Fertility: NOA Symptoms: F	wo-generation study , male and female oute: Oral 150, 450 mg/kg/day city - Parent: NOAEL: 50 mg/kg body weight EL F1: 400 mg/kg body weight Reduced body weight CD Test Guideline 416
	s on foetal opment	Dose: 0, 50, Duration of S Frequency of General Toxi Development Embryo-foeta Method: OEC Result: No ef	
		Application R Dose: 50, 15 Duration of S Frequency of General Toxi Development Result: No ef	bit, male and female

Version Revision Date: SDS N 1.1 09/13/2023 400000	0007335
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hexadecyl methacrylate:

Effects on fertility :	Species: Rat, male and female Application Route: Oral Dose: >=1000 milligram per kilogram Frequency of Treatment: 7 days/week Method: OECD Test Guideline 422 Result: negative
	Species: Rat, male and female Application Route: Oral Frequency of Treatment: 7 days/week Method: OECD Test Guideline 416 Result: negative
Effects on foetal : development	Species: Rat, male and female Application Route: Oral General Toxicity Maternal: NOAEL: 1,000 mg/kg body weight Method: OECD Test Guideline 422 Result: No teratogenic effects
	Species: Rat, female Application Route: Inhalation General Toxicity Maternal: NOAEL: 100 ppm Method: OECD Test Guideline 414 Result: No teratogenic effects
2,2'-[(4-methylphenyl)imino]bis	ethanol:
Effects on foetal : development	Test Type: Pre-natal Species: Rat, females Application Route: Oral Dose: 60/200/600 milligram per kilogram Duration of Single Treatment: 15 d General Toxicity Maternal: NOAEL: 200 mg/kg body weight Developmental Toxicity: NOAEL: >= 600 mg/kg body weight Method: OECD Test Guideline 414 GLP: yes Remarks: Information given is based on data obtained from similar substances.
2,6-di-tert-butyl-p-cresol:	
Effects on fertility :	Test Type: Two-generation study Species: Rat, male and female Application Route: Oral Dose: 25/100/500 mg/kg bw/day General Toxicity - Parent: NOAEL: 100 mg/kg body weight General Toxicity F1: NOAEL: 25 mg/kg body weight Result: negative
Effects on foetal : development	Test Type: Pre-natal Species: Mouse, female Application Route: Oral Duration of Single Treatment: 7 d General Toxicity Maternal: NOAEL: 240 mg/kg body weight





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	03/13/2023	-0000007333	Print Date 01/16/2			
			Toxicity: NOAEL: 800 mg/kg body weight spleen, Kidney			
sтот	- single exposure					
Comp	oonents:					
methy	/I methacrylate:					
	sure routes	: Inhalation				
	t Organs sment	: Respiratory Tra				
Asses	sment	: May cause resp	piratory irritation.			
octad	ecyl methacrylate:					
	sure routes	: Inhalation	-4			
	t Organs sment	: Respiratory Tra	ct biratory irritation.			
//0000	Smont	. May badde roop				
	acrylic acid:					
	sure routes t Organs	: Inhalation : Respiratory Tra	ct			
	sment		or mixture is classified as specific target orga			
		toxicant, single exposure, category 3 with respiratory tract irritation.				
hexad	lecyl methacrylate:					
	sure routes	: Inhalation				
Target Organs		: Respiratory Tra				
Asses	sment	: May cause resp	piratory irritation.			
sтот	- repeated exposure					
No da	ta available					
Repe	ated dose toxicity					
	oonents:					
-	/I methacrylate:	.				
Speci NOAE		: Rat, male and f : 124.1 mg/kg	emale			
	ation Route	: oral (drinking w	ater)			
Expos	sure time	: 2 years	<i>.</i>			
Numb Dose	er of exposures	: daily : 6, 60, 2000 ppn	0			
0026		. 0, 00, 2000 pph				
	um dioxide:					
Species		: Rat, male and f	emale			
NOEC : 3500 mg/m3 Application Route : Ingestion						
Test atmosphere : dust/mist						
	sure time	: 2 yr				
Numb Metho	er of exposures od	: 5 d : Chronic toxicity				
		,				

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Expo Num Meth	cation Route sure time ber of exposures	 10 - 50 mg/m3 Inhalation 2 yr 6 hours/day, 5 day Chronic toxicity No skin irritation 	
Asse	ssment	No adverse effect	ct has been observed in chronic toxicity tests.
octa	decyl methacrylate:		
Spec	ies	: Rat, male and fe	male
NOA		: 1000 mg/kg	
	cation Route	: Ingestion	
	ber of exposures	: 7 d	
Meth	od	: Subchronic toxic	ity
Spec	ies	: Rat, male and fe	male
NOA	EL	: 120 mg/kg	
	cation Route	: Ingestion	
	sure time	: 2,160 h	
Num	ber of exposures	: 7 d	
Meth	od	: Subchronic toxic	ity
meth	acrylic acid:		
Spec	ies	: Rat, male and fe	male
NOE	С	: 352 - 1232 mg/m	13
Appli	cation Route	: inhalation (vapou	Jr)
Test	atmosphere	: vapour	
Expo	sure time	: 90 d	
	ber of exposures	: 6 h	
Dose	-	: 70/352/1232 mg	/m3
Subs perio	equent observation d	: 5 days/week	
Meth	od	: OECD Test Guid	leline 413
GLP		: yes	
hexa	decyl methacrylate:		
Spec	ies	: Rat, male and fe	male
NOA		: 1000 mg/kg	
Appli	cation Route	: Ingestion	
Num	ber of exposures	: 7 d	
Meth	od	: Subchronic toxic	ity
Spec	ies	: Rat, male and fe	male
NOA	EL	: 120 mg/kg	
Appli	cation Route	: Ingestion	
	sure time	: 2,160 h	
Num	ber of exposures	: 7 d	
Meth	od	: Subchronic toxic	ity
2,2'-[(4-methylphenyl)imin	o]bisethanol:	
Spec		: Rat, male and fe	male
NOA		: 100 mg/kg	
NOA			



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ersion 1	Revision Date: 09/13/2023	SDS Number: 400000007335	Date of last issue: 02/19/2019 Date of first issue: 02/19/2019
Expos		: OECD Test G : yes	Print Date 01/16/20 000 mg/kg bw/day uideline 407 ven is based on data obtained from similar
2,6-di	i-tert-butyl-p-cresol:		
	EL cation Route sure time	: Pig, male and : >= 61 mg/kg : oral (feed) : daily : Chronic toxicit	
•	ration toxicity ata available		
-	rience with human e ata available	exposure	
	cology, Metabolism, ata available	Distribution	
	ological effects ata available		
Furth	er information		
Prod	uct:		
Rema	arks	: Solvents may	degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION

Components:

methyl methacrylate:

Toxicity to fish	:	LC50 : 191 mg/l Exposure time: 96 h
		LC50 (Oncorhynchus mykiss (rainbow trout)): > 79 mg/l Exposure time: 96 h Test Type: flow-through test Method: Fish Early-life Stage Toxicity Test
Toxicity to daphnia and other aquatic invertebrates	:	EC50: 69 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50: > 110 mg/l Exposure time: 72 h
Toxicity to daphnia and other	:	NOEC (Daphnia magna (Water flea)): 37 mg/l

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	aquatic invertebrates (Chronic toxicity)		Print Date 01/16/2024 Exposure time: 21 d Test Type: flow-through test Method: OECD Test Guideline 211				
	ium dioxide: city to fish		LC50 (Cyprinodor	n variegatus (sheepshead minnow)): >			
TOXIC		·	10,000 mg/l Exposure time: 96 Test Type: semi-s Test substance: M Method: OECD Te	h tatic test larine water			
Plant	t toxicity	:	NOEC: 100,000 n Exposure time: 48				
Sedir	Sediment toxicity		(Gammarus pule: Study: Acute Test Type: semi-s Water: Fresh wate Exposure duration Method: ASTM M	er i: 28 d			
			(Gammarus pule: Study: Chronic Test Type: semi-s Water: Fresh wate Exposure duration Method: ASTM M	er 1: 28 d			
			(Gammarus pule: Study: Acute Test Type: semi-s Water: Marine wa Exposure duratior	ter			
	city to terrestrial nisms	:	NOEC: 10,000 mg Exposure time: 67				
meth	acrylic acid:						
	city to fish	:	End point: mortali Exposure time: 96 Test Type: flow-th Test substance: F Method: Fish Acu GLP: yes	h rough test resh water			
	city to daphnia and other tic invertebrates	:	End point: Immob Exposure time: 48 Test Type: flow-th Analytical monitor Test substance: F	h rough test ing: yes			

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ersion I	Revision Date: 09/13/2023	SDS Numb 400000007	
		Daphni GLP: ye	
Toxicity to algae/aquatic plants		Exposu Test Ty Analytic Test su	elenastrum capricornutum (green algae)): 45 mg/l e time: 72 h e: static test I monitoring: yes stance: Fresh water OECD Test Guideline 201
		Exposu Test Ty Analytic Test su	elenastrum capricornutum (green algae)): 8.2 mg/l e time: 72 h e: static test I monitoring: yes stance: Fresh water OECD Test Guideline 201
Toxicit toxicity	y to fish (Chronic /)	Exposu Test Ty Analytic Test su	arachydanio rerio (zebrafish)): 10 mg/l e time: 35 d e: flow-through test I monitoring: yes stance: Fresh water DECD Test Guideline 210
aquati	ty to daphnia and other c invertebrates nic toxicity)	Exposu Test Ty Analytic Test su	Paphnia magna (Water flea)): 53 mg/l e time: 21 d e: flow-through test I monitoring: yes stance: Fresh water DECD Test Guideline 211
Toxicit	y to microorganisms	Exposu Test Ty Analytic Test su	seudomonas putida): 270 mg/l e time: 16.5 h e: static test I monitoring: no stance: Fresh water DIN 38 412 Part 8
2,2'-[(4	4-methylphenyl)imino]	bisethanol:	
	ry to fish	: LC50 (0 End poi Exposu Test Ty Analytic Test su Method GLP: ye	rprinus carpio (Carp)): > 100 mg/l t: mortality e time: 96 h e: static test I monitoring: yes stance: Fresh water OECD Test Guideline 203 : Based on data from similar materials
	y to daphnia and other cinvertebrates		aphnia magna (Water flea)): 48 mg/l t: Immobilization

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			Exposure time: 48 Test Type: static to Analytical monitor Test substance: F Method: OECD To GLP: yes Remarks: Informa similar substance	est ing: yes resh water est Guideline 202 tion given is based on data obtained from
Toxic plant	sity to algae/aquatic s	:	mg/l Exposure time: 72 Test Type: static to Analytical monitor Test substance: F Method: OECD To GLP: yes Remarks: Based	est ing: yes resh water est Guideline 201 on data from similar materials
			mg/l Exposure time: 72 Test Type: static t Analytical monitor Test substance: F Method: OECD T GLP: yes	est ing: yes resh water
Toxic	to microorganisms	:	Exposure time: 3 Test Type: static to Analytical monitor Test substance: F Method: OECD To GLP: yes	est ing: no resh water est Guideline 209 tion given is based on data obtained from
Talc	(Mg3H2(SiO3)4):			
Toxic	bity to fish	:	LC50 (Brachydan Exposure time: 24	io rerio (zebrafish)): > 100 mg/l l h
2,6-d	li-tert-butyl-p-cresol:			
Toxic	sity to fish	:	LC50 (Fish): 0.19 Exposure time: 96 Test substance: F Method: QSAR	3 h
	tity to daphnia and other tic invertebrates	:	EC50 (Daphnia m End point: Immob Exposure time: 48 Test Type: static Test substance: F Method: OECD Te	3 h est resh water

Version

plants

toxicity)

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Toxicity to algae/aquatic

M-Factor (Acute aquatic

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NOEC (Pseudokirchneriella subcapitata (green algae)): 0.24 mg/l Exposure time: 72 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 201

Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity)	:	NOEC (Oryzias latipes (Orange-red killifish)): 0.053 mg/l Exposure time: 30 d Test substance: Fresh water Method: OECD Test Guideline 210
		NOEC (Fish): >= 23.8 mg/l Exposure time: 70 d Test substance: Fresh water

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 0.096 mg/l aquatic invertebrates Exposure time: 21 d (Chronic toxicity) Test substance: Fresh water Method: OECD Test Guideline 211

NOEC (Daphnia magna (Water flea)): 0.069 mg/l Exposure time: 21 d Test substance: Fresh water Method: OECD Test Guideline 211

M-Factor (Chronic aquatic : 1 toxicity) Toxicity to microorganisms ErC50 (activated sludge): 1.7 mg/l : Exposure time: 24 h Test Type: static test

: 1

Persistence and degradability

Components: methyl methacrylate: Result: Readily biodegradable. Biodegradability Biodegradation: > 60 % Exposure time: 28 d methacrylic acid: Biodegradability aerobic :

Inoculum: activated sludge



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		Biodegradation Exposure time:	v biodegradable. i: 86 %
2,2'-[(4-methylphenyl)imi	no]bisethanol:	
	gradability	: aerobic Inoculum: activ Concentration: Result: Not bio Biodegradation Exposure time: Method: OECD GLP: yes	degradable i: 1.5 %
	i -tert-butyl-p-cresol: gradability	: Result: Not bio	degradable
<u>Comp</u> methy Bioac	cumulative potentia <u>conents:</u> yl methacrylate: cumulation		on factor (BCF): 3
	on coefficient: n- ol/water	: log Pow: 1.38	
	um dioxide: cumulation	Bioconcentration Exposure time: Test substance Method: semi-s	e: Fresh water
metha	acrylic acid:		
	on coefficient: n- ol/water	: log Pow: 0.93 (pH: 2.2	(72 °F / 22 °C)
hexad	decyl methacrylate:		
	on coefficient: n- ol/water	: log Pow: 8.64 Method: QSAR GLP: no	
2,2'-[((4-methylphenyl)imi	no]bisethanol:	
	on coefficient: n- ol/water	: log Pow: 2 (95 pH: 7 Method: OECD	°F / 35 °C)) Test Guideline 117

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		tert-butyl-p-cresol: umulation	:	Species: Cyprinus Bioconcentration Exposure time: 28 Method: flow-thro	factor (BCF): 330 - 1,800 3 d
	Partitio octano	n coefficient: n- /water	:	log Pow: 5.2	
	Mobilit	y in soil			
	Compo	onents:			
	Distribu	tert-butyl-p-cresol: ution among mental compartments	:	Koc: 8183	
	Other a	adverse effects			
	Produc	<u>st:</u>			
	Ozone	Depletion Potential	:	Protection of Stra Substances Remarks: This pro manufactured with	R Protection of Environment; Part 82 tospheric Ozone - CAA Section 602 Class I oduct neither contains, nor was n a Class I or Class II ODS as defined by the t Section 602 (40 CFR 82, Subpt. A, App.A +
	Additio informa	nal ecological ation	:		hazard cannot be excluded in the event of ndling or disposal. c life.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods		
Waste from residues	:	Dispose of contents and container in accordance with all local, regional, national and international regulations. Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR UN/ID No.

: UN 1133

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_			Print Date 01/16/2024
	er shipping name	: Adhesives	
Class		: 3	
	ing group	: 11	
Label	-	: Flammable Li	quids
Packi aircra	ing instruction (cargo	: 364	
	ing instruction enger aircraft)	: 353	
IMDG	G-Code		
UN n	umber	: UN 1133	
Prope	er shipping name	: ADHESIVES	
Class	;	: 3	
Packi	ing group	: 11	
Label		: 3	
EmS	Code	: F-E, S-D	
Marin	e pollutant	: no	
	sport in bulk accordin pplicable for product as	-	ARPOL 73/78 and the IBC Code

National Regulations

49 CFR UN/ID/NA number Proper shipping name	-	UN 1133 Adhesives
Class	:	3
Packing group	:	II
Labels	:	FLAMMABLE LIQUID
ERG Code	:	128
Marine pollutant	:	no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
methyl methacrylate	80-62-6	1000	2085
SARA 311/312 Hazards :	 Flammable (gases, aerosols, liquids, or solids) Respiratory or skin sensitisation Skin corrosion or irritation Serious eye damage or eye irritation Specific target organ toxicity (single or repeated exposure) 		
CARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:			

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			lata 00.00.0	Print Date 01/16/2024
		methyl methacry	ylate 80-62-6	>= 30 - < 50 %
	bllowing chemical(s), > FR 61):	= 0.1%, are listed as I	HAP under the U.S. Cle	an Air Act, Section 112
,	methyl methacry	late 80-62-6		

California Prop. 65

WARNING: This product can expose you to chemicals including ethylene oxide, which is/are known to the State of California to cause cancer, and

methanol, Ethylene glycol, ethylene oxide, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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

DSL	: This product contains one or several components listed in Canadian NDSL.	the
AIIC	: On the inventory, or in compliance with the inventory	
ENCS	: Not in compliance with the inventory	
KECI	: On the inventory, or in compliance with the inventory	
PICCS	: Not 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	: All substances listed as active on the TSCA inventory	

Inventories

AIIC (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TECI (Thailand), TSCA (USA)

TSCA - 5(a) Significant New Use Rule List of Chemicals

No substances are subject to a Significant New Use Rule.

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

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



ARALDITE® 2023-10 RESIN

Version	Revision Date:	S
1.1	09/13/2023	4

SDS Number: 40000007335

Date of last issue: 02/19/2019 Date of first issue: 02/19/2019

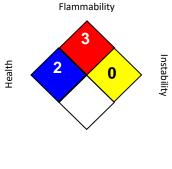
Print Date 01/16/2024

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SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



Special hazard

HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*' represents a chronic hazard, while the "/" represents the absence of a chronic hazard

Revision Date	: 09/13/2023
ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	: USA. NIOSH Recommended Exposure Limits
OSHA CARC	: OSHA Specifically Regulated Chemicals/Carcinogens
OSHA PO	: USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
OSHA Z-1	 USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-3	: USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
ACGIH / TWA	: 8-hour, time-weighted average
ACGIH / STEL	: Short-term exposure limit
NIOSH REL / TWA	 Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
OSHA CARC / PEL	: Permissible exposure limit (PEL)
OSHA P0 / TWA	: 8-hour time weighted average
OSHA Z-1 / TWA	: 8-hour time weighted average
OSHA Z-3 / TWA	: 8-hour time weighted average

The information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

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Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE.



HARDENER 2023 B

Version 1.1	Revision Date: 03/21/2023	SDS Number: 400000012364	Date of last issue: 03/15/2023 Date of first issue: 03/15/2023
SECTIO	N 1. IDENTIFICATION	Print Da	te 01/16/2024 Chemical TM Concepts Our expertise is your solution.
	duct name sufacturer or supplier's o	: HARDENER 2	2023 B chemical-concepts.com 800.220.1966 410 Pike Road • Huntingdon Valley, PA 19006
Com Add	npany name of supplier ress	: Huntsman Ad : P.O. Box 4980 The Woodland TX 77387 United States	ds, of America (USA)
	phone ail address	Ū	cy: (800) 257-5547 ct_EHS_AdMat@huntsman.com
Eme	ergency telephone numbe	r : Chemtrec: (80	00) 424-9300 or (703) 527-3887

Recommended use of the chemical and restrictions on use

Recommended use	:	Hardener

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) Organic peroxides : Type E

6 1	
Eye irritation	: Category 2A
Skin sensitisation	: Category 1
Short-term (acute) aquatic hazard	: Category 1
Long-term (chronic) aquatic hazard	: Category 1
GHS label elements Hazard pictograms	
Signal word	: Warning
Hazard statements	 H242 Heating may cause a fire. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements	: Prevention:



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No smoking. P220 Keep/ Sto P234 Keep only P261 Avoid brea P264 Wash skir P272 Contamina the workplace. P273 Avoid rele P280 Wear prot Response: P302 + P352 IF P305 + P351 + for several minut to do. Continue P333 + P313 If attention. P363 Wash con P391 Collect sp Storage: P410 Protect fro P411 + P235 St Keep cool. P420 Store awa Disposal:	n thoroughly after handling. ated work clothing must not be allowed out of ease to the environment. tective gloves/ eye protection/ face protection. TON SKIN: Wash with plenty of soap and water P338 IF IN EYES: Rinse cautiously with water utes. Remove contact lenses, if present and eas rinsing. skin irritation or rash occurs: Get medical advice eye irritation persists: Get medical advice/ ntaminated clothing before reuse. billage.

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
dibenzoyl peroxide	94-36-0	20 - 30
silicon dioxide	7631-86-9	1 - 5
2,2'-[(1-methylethylidene)bis(4,1- phenyleneoxymethylene)]bisoxirane	1675-54-3	1 - 5
carbon black	1333-86-4	0.1 - 1

The specific chemical identity and/or exact percentage (concentration) of composition may be withheld as a trade secret.

Both 25068-38-6 and 1675-54-3 can be used to describe the epoxy resin which is produced through the reaction of bisphenol A and epichlorohydrin

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SECTION 4. FIRST AID MEASURES General advice Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Treat symptomatically. Get medical attention if symptoms occur. If inhaled If inhaled, remove to fresh air. 5 Get medical attention if symptoms occur. In case of skin contact If skin irritation persists, call a physician. : If on skin, rinse well with water. If on clothes, remove clothes. In case of eye contact : Immediately flush eye(s) with plenty of water. Remove contact lenses. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist. If swallowed Keep respiratory tract clear. ÷ Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Most important symptoms None known. : and effects, both acute and delayed Protection of first-aiders First Aid responders should pay attention to self-protection 1 and use the recommended protective clothing If potential for exposure exists refer to Section 8 for specific personal protective equipment. Avoid inhalation, ingestion and contact with skin and eyes. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Notes to physician Treat symptomatically. 2

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	Exercise caution when using a high volume water jet as it may scatter and spread fire
Specific hazards during	:	Do not allow run-off from fire fighting to enter drains or water

Ver 1.1	sion	Revision Date: 03/21/2023		0S Number: 0000012364	Date of last issue: 03/15/2023 Date of first issue: 03/15/2023
firefighting			courses.	Print Date 01/16/2024	
Hazardous combustion products		:	Carbon oxides Halogenated com	pounds	
Specific extinguishing methods		:	5 5	measures that are appropriate to local d the surrounding environment.	
	Further	information	must n Fire re be disp For sa separa		ted fire extinguishing water separately. This arged into drains. contaminated fire extinguishing water must accordance with local regulations. s in case of fire, cans should be stored ed containments. y to cool fully closed containers.
	Special for firefi	protective equipment ighters	:	Wear self-contain necessary.	ed breathing apparatus for firefighting if

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, : protective equipment and emergency procedures	Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Remove all sources of ignition. Refer to protective measures listed in sections 7 and 8.
Environmental precautions :	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for : containment and cleaning up	Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from open flames, hot surfaces and sources of ignition.
Advice on safe handling	:	Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitisation of susceptible persons. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. Avoid formation of respirable particles. Do not breathe vapours/dust.



Version 1.1	Revision Date: 03/21/2023		DS Number: 00000012364	Date of last issue: 03/15/2023 Date of first issue: 03/15/2023		
			Print Date 01/16/2024 Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.			
Conditions for safe storage		:	Store in cool place. Keep in a well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Keep in properly labelled containers.			
Materials to avoid		:	For incompatible materials please refer to Section 10 of this SDS.			
Recommended storage temperature		:	36 - 46 °F / 2 - 8 °C			
Further information on storage stability			Stable under norr	nal conditions.		
				and the set of the set		

Stable under normal conditions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
dibenzoyl peroxide	94-36-0	TWA	5 mg/m3	ACGIH
		TWA	5 mg/m3	OSHA Z-1
		TWA	5 mg/m3	NIOSH REL
		TWA	5 mg/m3	OSHA P0
silicon dioxide	7631-86-9	TWA (Dust)	20 Million particles per cubic foot (Silica)	OSHA Z-3
		TWA (Dust)	80 mg/m3 / %SiO2 (Silica)	OSHA Z-3
		TWA (Respirable dust)	0.05 mg/m3 (Silica)	NIOSH REL
		TWÁ	6 mg/m3 (Silica)	NIOSH REL
		PEL (respirable)	0.05 mg/m3	OSHA CARC





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carbo	n black	1333-86-4	TWA (Inhalable particulate matter)	Print D 3 mg/m3	ate 01/16/2024 ACGIH
			TWA	3.5 mg/m3	OSHA Z-1
			TWA	3.5 mg/m3	NIOSH RE
			TWA	3.5 mg/m3	OSHA P0
			TWA	0.1 mg/m3 (PAHs)	NIOSH RE
Perso	onal protective equi	oment	·		·
itespi	iratory protection	maintain va concentratic unknown, a Follow OSH use NIOSH by air purify hazardous c supplied res release, exp	por exposures b ons are above re ppropriate respin A respirator reg (MSHA approve- ing respirators a chemical is limite spirator if there is posure levels are the where air puri	ventilation is recommended ecommended limits of ratory protection shorulations (29 CFR 19 d respirators. Protect against exposure to a ed. Use a positive pre- s any potential for un e unknown, or any ot fying respirators may	limits. Where r are uld be worn. 10.134) and tion provided iny essure air icontrolled her
Hand	protection				
Rema	arks	approved st chemical pr necessary. The suitabili	andard should b oducts if a risk a	bus gloves complying be worn at all times w issessment indicates workplace should be otective gloves.	hen handling this is
Еуе р	protection	Tightly fitting	ottle with pure w g safety goggles shield and protec		al processing
Skin a	and body protection			cording to the amoun ous substance at the	
Hygie	ene measures	When using	do not eat or di do not smoke. s before breaks	ink. and at the end of wo	rkday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	paste
Colour	:	black
Odour	:	slight
Odour Threshold	:	No data is available on the product itself.

SAFETY DATA SHEET

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pН		:	substance/mixtu	re is non-soluble (in water)
Melti	ing point/freezing point	:	No data is availa	ble on the product itself.
Boilir	ng point	:	No data is availa	ble on the product itself.
Flas	h point	:	No data is availa	ble on the product itself.
Evap	poration rate	:	No data is availa	ble on the product itself.
Flam	nmability (solid, gas)	:	No data is availa	ble on the product itself.
Flam	nmability (liquids)	:	No data is availa	ble on the product itself.
	er explosion limit / Upper mability limit	:	No data is availa	ble on the product itself.
	er explosion limit / Lower mability limit	:	No data is availa	ble on the product itself.
Vapo	our pressure	:	No data is availa	ble on the product itself.
Rela	tive vapour density	:	No data is availa	ble on the product itself.
Rela	tive density	:	No data is availa	ble on the product itself.
Dens	sity	:	1.1 g/cm3 (77 °F	/ 25 °C)
	bility(ies) ′ater solubility	:	insoluble	
Sc	olubility in other solvents	:	No data is availa	ble on the product itself.
	tion coefficient: n- nol/water	:	No data is availa	ble on the product itself.
	-ignition temperature	:	No data is availa	ble on the product itself.
Deco	omposition temperature	:	Decomposition e	nergy (mass): 281 KJ/kg
	Accelerating mposition temperature DT)	:	122 °F / 50 °C	
Visco Vi	osity scosity, dynamic	:	60,000 - 80,000	mPa.s (77 °F / 25 °C)
Expl	osive properties	:	No data is availa	ble on the product itself.
Oxid	izing properties	:	No data is availa	ble on the product itself.
Parti	cle size	:	No data is availa	ble on the product itself.

SECTION 10. STABILITY AND REACTIVITY





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Reactivity		: No	dangerous re	Print Date 01/16/2024 action known under conditions of normal use.		
Chemical stability		: Sta	Stable under normal conditions.			
Possibility of hazardous reactions		: Du	st may form e	xplosive mixture in air.		
Conditions to avoid		: He	at, flames and	sparks.		
Inco	Incompatible materials		ne known.			
	ardous decomposition ucts	: No	decompositio	n if stored and applied as directed.		
Haz	ardous decomposition lucts	car	rbon dioxide rbon monoxide logenated cor			

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity						
Components:						
dibenzoyl peroxide:						
Acute oral toxicity	:	LD50 (Mouse, male and female): > 2,000 mg/kg Method: OECD Test Guideline 401 Assessment: The substance or mixture has no acute oral toxicity				
Acute inhalation toxicity	:	LC50 (Rat, male): > 24.3 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhalation toxicity				
silicon dioxide:						
Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 401				
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 58.8 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403				
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg				
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:						
Acute oral toxicity	:	LD50 (Rat, female): > 2,000 mg/kg Method: OECD Test Guideline 420 Assessment: The substance or mixture has no acute oral toxicity Remarks: No mortality observed at this dose.				

sion	Revision Date: 03/21/2023	SDS Number: 400000012364	Date of last issue: 03/15/2023 Date of first issue: 03/15/2023					
Acute	dermal toxicity	Method: OECI	Print Date 01/16/2024 ale and female): > 2,000 mg/kg D Test Guideline 402 The substance or mixture has no acute dermal					
carbo	on black:							
Acute oral toxicity Acute inhalation toxicity		Method: OECI	ale and female): > 8,000 mg/kg D Test Guideline 401 Fhe substance or mixture has no acute oral					
		: LC50 (Rat): > Exposure time Test atmosphe	:: 4 h					
Skin	corrosion/irritation							
Comp	oonents:							
diben	zoyl peroxide:							
Speci Metho Resul	bd	: Rabbit : OECD Test G : No skin irritatio						
silico	n dioxide:							
Speci		: Rabbit						
	ssment od	 No skin irritatio OECD Test Go No skin irritatio 	uideline 404					
2.2'-[(2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:							
Speci		: Rabbit	,,,					
•	sure time	: 4 h						
Asses	sment	: Irritating to ski	n.					
Metho		: OECD Test G						
Resul	t	: Irritating to ski	n.					
carbo	on black:							
Speci		: Rabbit						
	sure time	: 4 h						
Asses Metho	ssment	: No skin irritatio : OECD Test G						
Resul		: No skin irritatio						
	us eye damage/eye i oonents:	ritation						
	onents:							
	zoyl peroxide:							
Speci		: Rabbit						
Resul		: Irritating to eye						
IVIATOC	1/1							

: OECD Test Guideline 405

Method



ersion Revision Date: 1 03/21/2023	SDS Number: 400000012364	Date of last issue: 03/15/2023 Date of first issue: 03/15/2023							
silicon dioxide:		Print Date 01/16/202							
Species	: Rabbit								
Result	: No eye irritation								
Assessment	: No eye irritation								
Method	: OECD Test Gui								
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:									
Species									
Result	: Irritating to eyes	8.							
Assessment	: Irritating to eyes								
Method	: OECD Test Gui	deline 405							
carbon black:									
Species	: Rabbit								
Result	: No eye irritation								
Assessment	: No eye irritation								
Method	: OECD Test Gui	deline 405							
Respiratory or skin sens	sitisation								
Components:									
dibenzoyl peroxide:									
Exposure routes	: Skin								
Species	: Mouse								
Assessment		sitisation by skin contact.							
Method	: OECD Test Gui								
Result	: Causes sensitis	ation.							
2,2'-[(1-methylethylidene	e)bis(4,1-phenyleneoxy	methylene)]bisoxirane:							
Test Type	: Local lymph noo	de assay (LLNA)							
Exposure routes	: Skin								
Species	: Mouse								
Method	: OECD Test Gui	deline 429							
Result	: The product is a	a skin sensitiser, sub-category 1B.							
carbon black:									
Test Type	: Buehler Test								
Exposure routes	: Skin								
Species	: Guinea pig								
Assessment		skin sensitisation.							
Method	: OECD Test Gui								
Result	: Does not cause	skin sensitisation.							
Exposure routes	: Respiratory Tra	ct							
Species	: Mouse								
Assessment Result		respiratory sensitisation. skin sensitisation.							
Germ cell mutagenicity									
<u>Components:</u>									
dibenzoyl peroxide:									
	10004	10 / 1							

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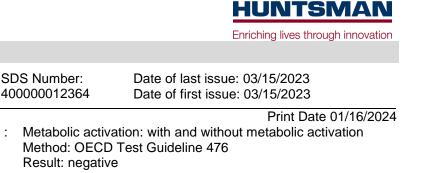
Genotoxicity in vitro

Revision Date:

03/21/2023

Version

1.1



Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative

Genotoxicity in vivo Cell type: Somatic : Application Route: Intraperitoneal injection Dose: 0, 50, 100, 200 mg/kg b.w. Method: OECD Test Guideline 474 Result: negative

:

silicon dioxide:

Genotoxicity in vitro	:	Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative
		Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative

- Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative
- Genotoxicity in vivo **Application Route: Inhalation** : Dose: 50 mg/m3 **Result: negative**

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:

Genotoxicity in vitro :	Test Type: In vitro mammalian cell gene mutation test Test system: mouse lymphoma cells Metabolic activation: without metabolic activation Result: positive			
	Test Type: reverse mutation assay Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay) Result: negative			
Genotoxicity in vivo :	Test Type: in vivo assay Species: Mouse (male) Cell type: Germ Application Route: Oral Dose: 3333, 10000 mg/kg Result: negative			
	Test Type: gene mutation test Species: Rat (male) Cell type: Somatic Application Route: Oral			

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	evision Date: 2/21/2023	SDS Number: 400000012364	Date of last issue: 03/15/2023 Date of first issue: 03/15/2023
			Print Date 01/16/202 00,1000 mg/kg bw/day Test Guideline 488
carbon bla	ack:		
Genotoxicity in vitro		Test system: Ch Concentration: C Metabolic activa	tion: with and without metabolic activation Test Guideline 479
		Test system: mo Metabolic activa	ro mammalian cell gene mutation test buse lymphoma cells tion: with and without metabolic activation Test Guideline 476
		Metabolic activa	Imonella typhimurium tion: with and without metabolic activation Test Guideline 471
Genotoxicity in vivo		: Test Type: in viv Species: Rat (fe Cell type: Soma Application Rout Dose: 10 - 100 r Result: positive	males) tic te: Inhalation
		Test Type: in viv Species: Rat (fe Application Rout Exposure time: 7 Dose: 1 - 50 mg Result: negative	males) te: Inhalation 13 Weeks /m3
		Test Type: in viv Application Rout Exposure time: (Dose: 1% Method: OECD Result: negative	te: Oral 5 h Test Guideline 477
Germ cell ı Assessme	mutagenicity - nt	: Contains no ingr	redient listed as a mutagen
Carcinoge	enicity		
<u>Compone</u>	<u>nts:</u>		
dibenzoyl	peroxide:		
Species Applicatior Exposure t		: Mouse, male an : Dermal : 104 weeks	d female

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	Result		:	negative		Print Date 01/16/2024
	silicon	dioxide:				
	Specie			Rat, male and fe	molo	
		ation Route	:	Oral	IIdle	
		ure time	:	103 weeks		
	Dose		:	1800 - 3200 mg/l	a	
		ency of Treatment	:	7 daily	^v g	
	Method		:	OECD Test Guid	eline 453	
	Result	~	:	negative		
	2,2'-[(1	-methylethylidene)b	is(4,	1-phenyleneoxyn	nethylene)]bisoxiran	e:
	Specie	S	:	Rat, male		
	•	ation Route	:	Oral		
		ure time	:	24 month(s)		
	Dose		:	0, 2, 15, or 100 n	ng/kg bw/day	
	Freque	ency of Treatment	:	7 days/week	00,00	
	NOÁEL		:	15 mg/kg bw/day		
	Method	Ł	:	OECD Test Guid	eline 453	
	Result		:	negative		
	Target	Organs	:	Digestive organs		
	Specie		:	Mouse, male		
		ation Route	:	Dermal		
	•	ure time	:	24 month(s)		
	Dose	· - · · ·	:	0, 0.1, 10, 100 m	g/kg bw/day	
		ency of Treatment	:	3 days/week		
	NOEL	1	:	0.1 mg/kg body v		
	Methoo Result	2	÷	OECD Test Guid	eline 453	
		Organs	:	negative Digestive organs		
	Specie	e		Rat, female		
		ation Route	:	Dermal		
		ure time	:	24 month(s)		
	Dose		:	0.1, 100, 1000 m	g/kg bw/day	
		ency of Treatment	÷	5 days/week	ging on day	
	NOEL		÷	100 mg/kg body	weight	
	Method	k	:	OECD Test Guid		
	Result		:	negative		
	Specie		:	Rat, female		
		ation Route	:	Oral		
	•	ure time	:	24 month(s)		
	Dose	· -	:	0, 2, 15, or 100 n	ng/kg bw/day	
		ency of Treatment	:	7 days/week		
	NOAEL		:	100 mg/kg bw/da		
	Method	1	:	OECD Test Guid	eline 453	
	Result	Organs	:	negative Digestive organs		
	-	-	•			
	Specie		:	Rat, females		
		ation Route	:	Oral		
		ure time	:	24 month(s)	// / !	
	Dose		:	0, 2, 15, or 100 n	ng/kg bw/day	





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_	····	7 4 4 4	Print Date 01/16/2024
	Frequency of Treatment	: 7 days/week	
	NOEL	: 2 mg/kg bw/day	
	/lethod	: OECD Test Guid	leline 453
	Result	: negative	
I	arget Organs	: Digestive organs	
С	arbon black:		
S	Species	: Mouse, female	
	Application Route	: Inhalation	
	Exposure time	: 13.5 month(s)	
	Dose	: 7.5 - 12 mg/m ³	
_	Frequency of Treatment	: 5 daily	
	Aethod	: OECD Test Guid	Jeline 151
	Result	: negative	
9	Species	· Mouse male an	t female
	Application Route	: Mouse, male and : Dermal	
	xposure time	: 18 month(s)	
	Frequency of Treatment Result	: 3 daily : negative	
	nanina.	-	
	Species	: Rat, female	
	Application Route	: Oral	
	Exposure time	: 24 month(s)	
	Dose	: 52 mg/kg	
	requency of Treatment	: 7 daily	
R	Result	: negative	
	Species	: Rat, male and fe	male
	Application Route	: Inhalation	
	Exposure time	: 24 month(s)	
	Dose	: 7,5 - 12,2 mg/m ³	
F	Frequency of Treatment	: 5 daily	
N	/lethod	: OECD Test Guid	leline 451
R	Result	: positive	
Т	arget Organs	: Lungs	
	Species	: Mouse	
	Application Route	: Dermal	
E	Exposure time	: 9 - 24 month(s)	
C	Dose	: 6 - 60%	
F	Frequency of Treatment	: 2 daily	
	/lethod	: OECD Test Guid	leline 451
R	Result	: negative	
S	Species	: Mouse, male and	d female
	Application Route	: Oral	
	Exposure time	: 12 - 18 month(s)	
	Dose	: 10%	
	Frequency of Treatment	: 7 daily	
	Result	: negative	
S	Species	: Rat, male and fe	male
	Application Route	: Inhalation	
A			
	Exposure time	: 24 month(s)	

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Metho Result	-	: 16 hr/day, 5 d : OECD Test G : positive : Lungs	
Carcin Asses	ogenicity - sment	carcinogen, T high concentr	dence does not support classification as a umours produced in rats on inhalation of very ations are believed to be the result of prolonged d" and are not considered relevant to man.
IARC	silicon diox	Carcinogenic to humar kide t, crystalline)	ns 7631-86-9
OSHA	OSHA spe silicon diox (crystalline		cinogen 7631-86-9
NTP	silicon dio	be human carcinogen kide /stalline (Respirable S	ize))
-	ductive toxicity		
<u>Comp</u>	onents:		
	zoyl peroxide: s on fertility	Application R Dose: 0, 250, General Toxic General Toxic	male and female oute: Oral 500, 1,000 mg/kg b.w/ city - Parent: NOAEL: 500 mg/kg body weight city F1: NOAEL: 500 mg/kg body weight D Test Guideline 422
	s on foetal pment	General Toxic Development	00 or 1000 mg/kg/day city Maternal: NOAEL: 300 mg/kg body weight al Toxicity: NOAEL: 300 mg/kg body weight D Test Guideline 414
Effects	n dioxide: s on foetal opment	Method: OEC	
		Method: OEC	
		Species: Rat Application Re	oute: Oral



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ersion 1	Revision Date: 03/21/2023	SDS Number: 400000012364	Date of last issue: 03/15/2023 Date of first issue: 03/15/2023
			Print Date 01/16/202 y Maternal: NOAEL: 1,350 mg/kg body weight Test Guideline 414 togenic effects
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy	/methylene)]bisoxirane:
Effect	s on fertility	Species: Rat, r Application Roy Dose: 0, 50, 18 Duration of Sin Frequency of T General Toxicit General Toxicit Symptoms: No Method: OECD	30, 540 or 750 milligram per kilogram gle Treatment: 238 d reatment: 1 daily cy - Parent: NOEL: 540 mg/kg body weight cy F1: NOEL: 750 mg/kg body weight adverse effects Test Guideline 416 cts on fertility and early embryonic
Effects on foetal development		Duration of Sin Frequency of T General Toxicit	ute: Dermal 00 or 300 milligram per kilogram gle Treatment: 28 d reatment: 1 daily y Maternal: NOAEL: 30 mg/kg body weight Toxicity: NOAEL: 300 mg/kg body weight guidelines
		Duration of Sin Frequency of T General Toxicit Developmental Method: OECD Result: No tera Test Type: Pre Species: Rat, fr Application Rot Dose: 0, 60, 18 Duration of Sin Frequency of T	it, female ute: Oral 0 or 180 milligram per kilogram gle Treatment: 13 d reatment: 1 daily by Maternal: NOAEL: 60 mg/kg body weight Toxicity: NOAEL: 180 mg/kg body weight Test Guideline 414 togenic effects -natal emale
		Developmental Method: OECD	Toxicity: NOAEL: > 540 mg/kg body weight Test Guideline 414 togenic effects

No data available



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STO	OT - repeated exposure		Print Date 01/16/2024
	nponents:		
	oon black:		
	essment	: The substance	or mixture is not classified as specific target
A226	essment		or mixture is not classified as specific target repeated exposure.
Rep	eated dose toxicity		
Con	nponents:		
dibe	enzoyl peroxide:		
Spe	cies	: Rat, male and f	emale
NOA		: > 100 mg/kg	
	lication Route	: Skin contact	
	nber of exposures	: 2 years	
Met	hod	: OECD Test Gu	ideline 451
silic	on dioxide:		
Spe		: Rat, male and f	
NOE		: 4000 - 4500 mg	g/m3
	lication Route	: Ingestion	
	t atmosphere	: dust/mist	
	osure time	: 13 Weeks	
	nber of exposures	: 7 d	
Met	nod	: OECD Test Gu	Ideline 413
2,2'-	-[(1-methylethylidene)b	is(4,1-phenyleneoxy	/methylene)]bisoxirane:
Spe		: Rat, male and f	emale
NOA		: 50 mg/kg	
	lication Route	: oral (gavage)	
	osure time	: 14 Weeks	
	nber of exposures	: 7 d	
Dos		: 0, 50, 250, 100	
Met	nod	: OECD Test Gu	Ideline 408
Spe		: Rat, male and f	emale
NOA		: >= 10 mg/kg	
	lication Route	: Skin contact	
	osure time	: 13 Weeks	
	nber of exposures	: 5 d	
Dos Meti		: 0, 10, 100, 100 : OECD Test Gu	
Spe	cies	: Mouse, male	
NO/		: 100 mg/kg	
-	lication Route	: Skin contact	
	osure time	: 13 Weeks	
	nber of exposures	: 3 d	
Dos	•	: 0, 1, 10, 100 m	a/ka/dav
Met		: OECD Test Gu	
carb	oon black:		
Spe		: Mouse, male a	nd female
500			



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rsion	Revision Date: 03/21/2023	SDS Number: 400000012364	Date of last issue: 03/15/2023 Date of first issue: 03/15/2023
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NOEL	-	: > 1000000 mg/l	<g< td=""></g<>
	cation Route	: oral (feed)	
	sure time	: 12 - 18 months	
Numb	per of exposures	: continuously	
Speci	es	: Rat, females	
NOEL	-	: 52 mg/kg	
Applic	cation Route	: oral (feed)	
	sure time	: 52 Weeks	
Numb	per of exposures	: Continously	
Dose		: 2.05 g/kg	
Speci	es	: Mouse, females	6
NOEL	_	: 137 mg/kg	
Applic	cation Route	: oral (feed)	
Expos	sure time	: 52 Weeks	
Numb	per of exposures	: Continously	
Dose	·	: 2.05 g/kg	
Metho	bd	: OECD Test Gui	deline 413
Speci	es	: Rat, male and f	emale
LOEC)	: 2.5 mg/m3	
	cation Route	: inhalation (dust	/mist/fume)
	sure time	: 24 Months	
Numb	per of exposures	: 16 h/day, 5 day	
Dose		: 2.5 or 6.5 mg/m	
Metho		: OECD Test Gui	deline 452
Targe	et Organs	: Lungs	
Speci		: Mouse, male ar	nd female
	cation Route	: Dermal	
Numb	per of exposures	: 3 times/week	
Dose		: 20%	
Symp	otoms	: see user define	d free text
Asnir	ation toxicity		
-	ata available		
Expe	rience with human e	exposure	
No da	ata available		
Toxic	ology, Metabolism,	Distribution	
No da	ata available		
Neuro	ological effects		
	ata available		
Furth	er information		
N.a.da	ata available		

Ecotoxicity

Components:

dibenzoyl peroxide:

SAFETY DATA SHEET

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Toxic	Toxicity to fish		Print Date 01/16/202 : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.0602 mg/l Exposure time: 96 h Test Type: semi-static test Test substance: Fresh water Method: OECD Test Guideline 203			
	ity to daphnia and other ic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.11 mg/l Exposure time: 48 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 202			
Toxic plants	ity to algae/aquatic	:	EbC50 (Selenastr mg/l Exposure time: 72 Test Type: static t Test substance: F Method: OECD Te	est resh water		
M-Factoricit	ctor (Acute aquatic y)	:	10			
aquat	ity to daphnia and other ic invertebrates nic toxicity)	:	EC10 (Daphnia m Exposure time: 21 Test Type: semi-s Method: OECD Te	tatic test		
M-Fac toxicit	ctor (Chronic aquatic y)	:	10			
Toxic	ity to microorganisms	:	: EC50 (activated sludge): 35 mg/l Exposure time: 0.5 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 209			
silico	n dioxide:					
	ity to fish	:	LL50 (Brachydani Exposure time: 96 Test Type: static t Test substance: F Method: OECD Te	est resh water		
	ity to daphnia and other ic invertebrates	:	EL50 (Daphnia m Exposure time: 24 Test Type: static t Test substance: F Method: OECD Te	est resh water		
Toxic plants	ity to algae/aquatic	:	EL50 (Desmodesi mg/l Exposure time: 72 Test Type: static t Test substance: F Method: OECD Te	est resh water		

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2,2'-[((1-methylethylidene)bi	s(4.	1-phenyleneoxy	Print Date 01/16/2024 methylene)]bisoxirane:
	ity to fish		LC50 (Oncorhy Exposure time:	nchus mykiss (rainbow trout)): 2 mg/l
	ity to daphnia and other tic invertebrates	:	Exposure time: Test Type: static Test substance:	c test
Toxic plants	ity to algae/aquatic	:	EC50: 11 mg/l Exposure time: Test Type: static Test substance: Method: EPA-6	c test Fresh water
			NOEC: 4.2 mg/l Exposure time: Test Type: static Test substance: Method: EPA-66	72 h c test Fresh water
aquat	ity to daphnia and other tic invertebrates onic toxicity)	:	Exposure time: Test Type: sem Test substance:	i-static test
Toxic	ity to microorganisms	:	IC50 (activated Exposure time: Test Type: station Test substance:	c test
Ecoto	oxicology Assessment			
	nic aquatic toxicity	:	Toxic to aquatic	life with long lasting effects.
	on black: ity to fish	:	LC50 : > 1,000 Exposure time: Method: OECD	
	ity to daphnia and other tic invertebrates	:	Exposure time:	magna (Water flea)): > 5,600 mg/l 24 h Test Guideline 202
Toxic plants	ity to algae/aquatic	:	ErC50: > 10,000 Exposure time:	
Toxic	ity to microorganisms	:	IC0: > 800 mg/l Exposure time:	3 h

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Persi	stence and degrada	bility	Print Date 01/16/202
	ponents:		
	zoyl peroxide:		
	gradability	Concentra Result: Re Biodegrad Exposure	activated sludge tion: 4 mg/l adily biodegradable. ation: 68 % time: 28 d ECD Test Guideline 301D
2,2'-[((1-methylethylidene)	bis(4,1-phenylen	eoxymethylene)]bisoxirane:
	gradability	: aerobic Inoculum: Concentra Result: No Biodegrad Exposure	activated sludge, non-adapted tion: 20 mg/l t readily biodegradable. ation: 5%
Stabil	ity in water	Method: O	on half life (DT50): 4.83 d (25 °C) pH: 4 ECD Test Guideline 111 Fresh water
		Method: O	on half life (DT50): 7.1 d (25 °C) pH: 9 ECD Test Guideline 111 Fresh water
		Method: O	on half life (DT50): 3.58 d (25 °C) pH: 7 ECD Test Guideline 111 Fresh water
carbo	on black:		
	gradability		t readily biodegradable. ation: < 60 % time: 28 d
Bioad	cumulative potentia	ıl	
	oonents:		
	zoyl peroxide:		
Partiti	on coefficient: n- ol/water	pH: 7.02	.2 (72 °F / 22 °C) ECD Test Guideline 117
2,2'-[((1-methylethylidene)	bis(4,1-phenvlen	eoxymethylene)]bisoxirane:
	cumulation	: Bioconcen	tration factor (BCF): 31 Does not bioaccumulate.
	on coefficient: n- ol/water	pH: 7.1	.242 (77 °F / 25 °C) ECD Test Guideline 117

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	arbon black:			Print Date 01/16/2024
	ioaccumulation	:	Bioconcentration f	actor (BCF): 1
М	obility in soil			
<u>C</u>	omponents:			
di	ibenzoyl peroxide:			
	istribution among nvironmental compartments		Koc: 6309.57 Method: OECD Te	est Guideline 121
2,	,2'-[(1-methylethylidene)bis	s(4, ⁻	1-phenyleneoxym	ethylene)]bisoxirane:
	istribution among nvironmental compartments	:	Koc: 445	
о	ther adverse effects			
P	roduct:			
0	zone-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 n a Class I or Class II ODS as defined by the t Section 602 (40 CFR 82, Subpt. A, App.A +
	dditional ecological formation	:	unprofessional ha	hazard cannot be excluded in the event of ndling or disposal. tic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods		
Waste from residues	:	Dispose of contents and container in accordance with all local, regional, national and international regulations. Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No.	:	UN 3108
Proper shipping name	:	Organic peroxide type E, solid
Class	:	5.2





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Labe Packi aircra Packi	ing instruction (cargo	: Not assigned : Organic Perox : 570 : 570	Print Date 01/16/2024 by regulation kides, Keep Away From Heat
UN n	G-Code umber er shipping name	: UN 3108 : ORGANIC PE	ROXIDE TYPE E, SOLID
Label EmS	ing group	: 5.2 : Not assigned : 5.2 : F-J, S-R : yes(DIBENZC	by regulation DYL PEROXIDE)
Not a	sport in bulk accordin pplicable for product as onal Regulations	-	ARPOL 73/78 and the IBC Code
49 CI	FR		

UN/ID/NA number Proper shipping name	-	UN 3108 Organic peroxide type E, solid
Class Packing group Labels ERG Code Marine pollutant	:	5.2 Not assigned by regulation ORGANIC PEROXIDE 145 yes(DIBENZOYL PEROXIDE)

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 311/312 Hazards	Organic peroxides Respiratory or skin sensitisa Serious eye damage or eye		
SARA 313 :	The following components are subject to reporting levels established by SARA Title III, Section 313:		rting levels
	dibenzoyl peroxide	94-36-0	>= 20 - < 30 %
	zinc distearate	557-05-1	>= 1 - < 5 %

This product does not contain any hazardous air pollutants (HAP) >=0.1%, as defined by the U.S. Clean Air Act Section 112 (40 CFR 61

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California Prop. 65

WARNING: This product can expose you to chemicals including 4,4'-isopropylidenediphenol, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

The components of this product are reported in the follow	ving inventories:
---	-------------------

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DSL	: This product contains one or several components that are not on the Canadian DSL nor NDSL.
AIIC	: All components are listed on the inventory, regulatory obligations/restrictions apply. Please contact your sales representative for more information before import into Australia
ENCS	: On the inventory, or in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: Not 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 compliance with the active portion of the TSCA inventory

Inventories

AIIC (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIOC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TECI (Thailand), TSCA (USA)

TSCA - 5(a) Significant New Use Rule List of Chemicals

No substances are subject to a Significant New Use Rule.

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

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

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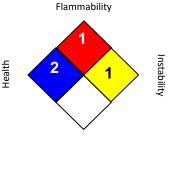
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SECTION 16. OTHER INFORMATION

Further information



Revision Date



Special hazard

HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA CARC	:	OSHA Specifically Regulated Chemicals/Carcinogens
OSHA P0	:	USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
OSHA Z-1		USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-3		USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
ACGIH / TWA	:	8-hour, time-weighted average
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
OSHA CARC / PEL	:	Permissible exposure limit (PEL)
OSHA P0 / TWA	:	8-hour time weighted average
OSHA Z-1 / TWA	:	8-hour time weighted average
OSHA Z-3 / TWA	:	8-hour time weighted average

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The information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

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Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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