SAFETY DATA SHEET



UVILUX 1745-02 - RILLETOP GRAFIT TS 21082

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : UVILUX 1745-02 - RILLETOP GRAFIT TS 21082

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product use : Paint.

1.3 Details of the supplier of the safety data sheet

Teknos Group Oy, Takkatie 3, FI-00370 HELSINKI, FINLAND. Tel. +358 9 506 091.

e-mail address of person :

: Prod-safe@teknos.com

responsible for this SDS

National contact

Teknos Ireland Limited, 52 Ballymoughan Road, Magherafelt, BT45 6HN, UK. Tel. +44 (0) 2879 301 472.

1.4 Emergency telephone number

National advisory body/Poison Centre Telephone number : NHS: 111

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition: Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Kin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms





Signal word : Danger

Hazard statements: H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction. H318 - Causes serious eye damage.

H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention: P280 - Wear protective gloves. Wear eye or face protection.

P273 - Avoid release to the environment.

P261 - Avoid breathing vapour.

Response : P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several

minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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Immediately call a POISON CENTER or doctor.

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SECTION 2: Hazards identification

Storage

Disposal

: Not applicable.

: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients

: Contains: Dipropylenglycol diacrylate; 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid; Hexanedioic acid, polymer with (chloromethyl)oxirane, 2-ethyl-2-(hydroxymethyl) -1,3-propanediol, 4,4'-(1-methylethylidene)bis[phenol] and oxirane, 2-propenoate and pentaerythritol tetraacrylate

Supplemental label elements

: Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

: This mixture does not contain any substances that are assessed to be a PBT or a

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Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Dipropylenglycol diacrylate	REACH #: 01-2119484629-21 EC: 260-754-3 CAS: 57472-68-1	≥25 - ≤50	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317	-	[1]
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	REACH #: 01-2119490020-53 EC: 500-130-2 CAS: 55818-57-0	≥10 - ≤20	Skin Sens. 1, H317 Aquatic Chronic 2, H411	-	[1]
titanium dioxide	REACH #: 01-2119489379-17 EC: 236-675-5 CAS: 13463-67-7	≤10	Carc. 2, H351 (inhalation)	-	[1] [*]
Hexanedioic acid, polymer with (chloromethyl)oxirane, 2-ethyl-2-(hydroxymethyl) -1,3-propanediol, 4,4'- (1-methylethylidene)bis [phenol] and oxirane, 2-propenoate	CAS: 184181-05-3	≤10	Skin Sens. 1, H317	-	[1]
pentaerythritol tetraacrylate	CAS: 917379-62-5	≤4.5	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 2, H411	ATE [Oral] = 500 mg/kg	[1]

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SECTION 3: Composition/information on ingredients

SECTION 3. Compo	31tion/illionilati		greaterits		
2-hydroxy- 2-methylpropiophenone	REACH #: 01-2119472306-39 EC: 231-272-0 CAS: 7473-98-5	≤3	Acute Tox. 4, H302 Aquatic Chronic 3, H412	ATE [Oral] = 1694 mg/kg	[1]
Propylidynetrimethanol, ethoxylated, esters with acrylic acid	REACH #: 01-2119489900-30 EC: 500-066-5 CAS: 28961-43-5	≤3	Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412	-	[1]
Methylbenzoylformiat	REACH #: 01-2120101338-67 EC: 239-263-3 CAS: 15206-55-0	≤3	Skin Sens. 1, H317	-	[1]
Phosphine oxide, phenylbis (2,4,6-trimethylbenzoyl)-	REACH #: 01-2119489401-38 EC: 423-340-5 CAS: 162881-26-7 Index: 015-189-00-5	≤3	Skin Sens. 1A, H317 Aquatic Chronic 4, H413	-	[1]
Benzene, (1-methylethenyl)-, homopolymer, ar- (2-hydroxy-2-methyl- 1-oxopropyl) derivs.	CAS: 163702-01-0	<3	Repr. 2, H361f	-	[1]
2-Methoxy-1-methylethyl acetate	REACH #: 01-2119475791-29 EC: 203-603-9 CAS: 108-65-6 Index: 607-195-00-7	<1	Flam. Liq. 3, H226 STOT SE 3, H336	-	[1] [2]
ethyl phenyl (2,4,6-trimethylbenzoyl) phosphinate	REACH #: 01-2119987994-10 EC: 282-810-6 CAS: 84434-11-7	<1	Skin Sens. 1B, H317 Aquatic Chronic 2, H411	-	[1]
(1-methyl-1,2-ethanediyl)bis [oxy(methyl-2,1-ethanediyl)] diacrylate	REACH #: 01-2119484613-34 EC: 256-032-2 CAS: 42978-66-5 Index: 607-249-00-X	<1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Chronic 2, H411	STOT SE 3, H335: C ≥ 10%	[1]
2-Butoxyethanol	REACH #: 01-2119475108-36 EC: 203-905-0 CAS: 111-76-2 Index: 603-014-00-0	<1	Acute Tox. 4, H302 Acute Tox. 3, H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319	ATE [Oral] = 1200 mg/kg ATE [Inhalation (vapours)] = 3 mg/l	[1] [2]
2-ethylhexan-1-ol	REACH #: 01-2119487289-20 EC: 203-234-3 CAS: 104-76-7	≤0.3	Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	ATE [Inhalation (vapours)] = 11 mg/	[1] [2]
Toluene	REACH #: 01-2119471310-51 EC: 203-625-9 CAS: 108-88-3 Index: 601-021-00-3	≤0.1	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 See Section 16 for the full text of the H statements declared above.	-	[1] [2]

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SECTION 3: Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [*] The classification as a carcinogen by inhalation applies only to mixtures placed on the market in powder form containing 1% or more of titanium dioxide particles with aerodynamic diameter ≤ 10 µm not bound within a matrix.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact

: Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation

Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact

: Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders

: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:

pain watering redness

Inhalation

: No specific data.

Skin contact

: Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

Ingestion

: Adverse symptoms may include the following:

stomach pains

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SECTION 4: First aid measures

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

: Treat symptomatically. Contact poison treatment specialist immediately if large

quantities have been ingested or inhaled.

Specific treatments: No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media

: None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture

: In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products

: Decomposition products may include the following materials:

carbon dioxide carbon monoxide phosphorus oxides halogenated compounds metal oxide/oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters

: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders:

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

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SECTION 6: Accidental release measures

Large spill

: Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

6.4 Reference to other sections

: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures

: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

solutions

Recommendations : Not available.

Industrial sector specific : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
-Methoxy-1-methylethyl acetate	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 548 mg/m³ 15 minutes. TWA: 50 ppm 8 hours. TWA: 274 mg/m³ 8 hours. STEL: 100 ppm 15 minutes.
2-Butoxyethanol	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 50 ppm 15 minutes.

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SECTION 8: Exposure controls/personal protection

	TWA: 25 ppm 8 hours.
	STEL: 246 mg/m³ 15 minutes.
	TWA: 123 mg/m ³ 8 hours.
2-ethylhexan-1-ol	EH40/2005 WELs (United Kingdom (UK), 1/2020).
	TWA: 5.4 mg/m³ 8 hours.
	TWA: 1 ppm 8 hours.
Toluene	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed
	through skin.
	STEL: 384 mg/m³ 15 minutes.
	TWA: 191 mg/m³ 8 hours.
	TWA: 50 ppm 8 hours.
	STEL: 100 ppm 15 minutes.

Biological exposure indices

Product/ingredient name	Exposure indices
	EH40/2005 BMGVs (United Kingdom (UK), 8/2018) BGV: 240 mmol/mol creatinine, butoxyacetic acid [in urine]. Sampling time: post shift.

Recommended monitoring procedures

: Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
p ipropylenglycol diacrylate	DNEL	Long term Dermal	1.66 mg/	General	Systemic
			kg bw/day	population	
	DNEL	Long term Oral	2.08 mg/	General	Systemic
			kg bw/day	population	
	DNEL	Long term Dermal	2.77 mg/	Workers	Systemic
			kg bw/day		
	DNEL	Long term	7.24 mg/m ³	General	Systemic
	5.151	Inhalation	04.40 /	population	
	DNEL	Long term	24.48 mg/	Workers	Systemic
	DATE	Inhalation	m³	1 1 1	
4,4'-Isopropylidenediphenol,	DNEL	Long term	1.17 mg/m ³	Workers	Systemic
oligomeric reaction products with		Inhalation			
1-chloro-2,3-epoxypropane, esters					
with acrylic acid	DNEL	Long term Dermal	33 mg/kg	Workers	Systemic
	DIVLL	Long term Dermai	bw/day	VVOIKCIS	Systernic
2-hydroxy-2-methylpropiophenone	DNEL	Long term Dermal	1 mg/kg	Workers	Systemic
2 Hydroxy 2 moury propropriencine	DIVLE	Long term Derma	bw/day	VVOINGIS	C yololillo
	DNEL	Long term Oral	0.4 mg/kg	General	Systemic
		201.9 101 01	bw/day	population	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	DNEL	Long term Dermal	0.5 mg/kg	General	Systemic
			bw/day	population	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	DNEL	Long term	0.9 mg/m ³	General	Systemic
		Inhalation	3	population	,
	DNEL	Long term	3.5 mg/m ³	Workers	Systemic
		Inhalation	J		
Propylidynetrimethanol, ethoxylated,	DNEL	Long term Dermal	10.5 mg/	Workers	Systemic
esters with acrylic acid			kg bw/day		
	DNEL	Long term	37 mg/m ³	Workers	Systemic
		Inhalation			
Methylbenzoylformiat	DNEL	Long term Oral	1.67 mg/	General	Systemic
			kg bw/day	population	
	DNEL	Long term Dermal	1.67 mg/	General	Systemic

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SECTION 8: Exposure controls/personal protection

		. О.О. Р	ordonar proto			
				kg bw/day	population	
		DNEL	Long term Dermal	3.33 mg/	Workers	Systemic
				kg bw/day		
	Phosphine oxide, phenylbis	DNEL	Long term	21 mg/m³	Workers	Systemic
	(2,4,6-trimethylbenzoyl)-		Inhalation	g		-,
	(2,+,0 timietryiberizeyi)	DNEL	Short term	21 mg/m ³	Workers	Systemic
		DIVLL	Inhalation	Z i ilig/ili	WOIKEIS	Cysternic
		DNE		0.0	\^/	Customia
		DNEL	Long term Dermal	3.3 mg/kg	Workers	Systemic
		DNEL	Short term Dermal	3.3 mg/kg	Workers	Systemic
		DNEL	Long term	5.2 mg/m ³	General	Systemic
			Inhalation		population	
					[Consumers]	
		DNEL	Long term Dermal	1.5 mg/kg	General	Systemic
					population	
					[Consumers]	
		DNEL	Long term Oral	1.5 mg/kg	General	Systemic
			•	3 3	population	,
					[Consumers]	
		DNEL	Short term Oral	1.67 ng/kg	General	Systemic
		DIVLL	Onort term Oral	bw/day	population	Cyclerino
		DNEI	Long torm Oral		General	Systemis
		DNEL	Long term Oral	1.5 mg/kg		Systemic
		חאורי	Long town Dame	bw/day	population	Cyntonsia
		DNEL	Long term Dermal	1.5 mg/kg	General	Systemic
		B		bw/day	population	
		DNEL	Short term Dermal	1.67 mg/	General	Systemic
				kg bw/day	population	
		DNEL	Short term	1.93 mg/m ³	General	Systemic
			Inhalation		population	
		DNEL	Long term	1.93 mg/m ³		Systemic
			Inhalation	g,	population	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
		DNEL	Long term Dermal	3 mg/kg	Workers	Systemic
		DIVLL	Long term berman	bw/day	WORKEIS	Cystonic
		DNEL	Short term Dermal		Workers	Systemia
		DINEL	Short term Dermai	3.33 mg/	Workers	Systemic
		DATE	01 11	kg bw/day	\A	
		DNEL	Short term	7.84 mg/m ³	vvorkers	Systemic
			Inhalation			
		DNEL	Long term	7.84 mg/m ³	Workers	Systemic
			Inhalation			
	Benzene, (1-methylethenyl)-,	DNEL	Long term Oral	5.28 µg/kg	General	Systemic
	homopolymer, ar-(2-hydroxy-			bw/day	population	
	2-methyl-1-oxopropyl) derivs.			-		
	, , , , ,	DNEL	Long term Dermal	5.28 µg/kg	General	Systemic
			3	bw/day	population	,
		DNEL	Long term	9.18 µg/m³	General	Systemic
		DIVLL	Inhalation	σ. το μg/π	population	Cystoniio
		DNEL	Long term Dermal	1/1 9 110/120	Workers	Systemic
		DINCL	Long term Dermal	14.8 μg/kg	MOIVEIS	Cystellic
		חאורי	long to	bw/day	Morke ==	Cuatamia
		DNEL	Long term	52.1 μg/m³	Workers	Systemic
		B	Inhalation			
	ethyl phenyl(2,4,6-trimethylbenzoyl)	DNEL	Long term Oral	0.5 mg/kg	General	Systemic
	phosphinate			bw/day	population	
		DNEL	Long term Dermal	0.5 mg/kg	General	Systemic
				bw/day	population	
		DNEL	Long term	0.87 mg/m ³		Systemic
			Inhalation	5	population	*
		DNEL	Long term Dermal	1.4 mg/kg	Workers	Systemic
				bw/day		,
		DNEL	Long term	4.93 mg/m ³	Workers	Systemic
		DINCL	Inhalation	-1.00 mg/m	W OINGIO	Cystoffile
	(1 mothyl 1.2 othonodiyl\history	DNE		17 ma/ka	Morkoro	Systemis
	(1-methyl-1,2-ethanediyl)bis[oxy	DNEL	Long term Dermal	1.7 mg/kg	Workers	Systemic
	(methyl-2,1-ethanediyl)] diacrylate	האירי	1 4	bw/day	\\/ = \\\ - \\ - \\	O. and a mark a
		DNEL	Long term	2.35 mg/m ³	Workers	Systemic
			Inhalation			_
	2-Butoxyethanol	DNEL	Long term Oral	6.3 mg/kg	General	Systemic
				bw/day	population	
_			<u> </u>	<u> </u>	<u> </u>	

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SECTION 8: Exposure controls/personal protection DNEL Short term Oral 26.7 mg/ General Systemic kg bw/day population **DNEL** Long term 59 mg/m³ General Systemic Inhalation population **DNEL** Long term 98 mg/m³ Workers Systemic Inhalation **DNEL** Short term 147 mg/m³ General Local Inhalation population **DNEL** Short term 246 mg/m³ Workers Local Inhalation **DNEL** 426 mg/m³ Short term General Systemic Inhalation population **DNEL** Short term 1091 mg/ Workers Systemic Inhalation

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls

: If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Recommendations: Wear suitable gloves tested to EN374.

< 1 hour (breakthrough time): Nitrile gloves. thickness > 0.3 mm

1 - 4 hours (breakthrough time): 4H / Silver Shield® gloves.

Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Filter type:

Filter type (spray application): A P

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SECTION 8: Exposure controls/personal protection

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid. Colour White. Odour Slight

Odour threshold : Not available. Melting point/freezing point : Not available.

Initial boiling point and

Ingredient name

boiling range

acrylic acid

°C ٥F Method ropylidynetrimethanol, ethoxylated, esters with >391 >735.8 **OECD 103**

Flammability : Not available.

Lower and upper explosion

limit

: Lower: Not applicable. Upper: Not applicable.

Flash point Closed cup: >100°C (>212°F)

Auto-ignition temperature

Ingredient name	°C	°F	Method
propylenglycol diacrylate	240	464	DIN 51794
4,4'-lsopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	465	869	EU A.15

: Not available. **Decomposition temperature** рΗ Not applicable.

Viscosity Not available.

Solubility(ies)

Not available.

: Not available. Solubility in water Partition coefficient: n-octanol/ : Not applicable.

water

Vapour pressure

	Vapour Pressure at 20°C			Va	oour pressure at 50°C	
Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
propylenglycol diacrylate	0.00064	0.000085	OECD 104			
Propylidynetrimethanol, ethoxylated, esters with acrylic acid	0.000024	0.0000032	OECD 104			

: Not available. **Relative density** : 1.3 g/cm³ **Density** : Not available. Vapour density : Not available. **Explosive properties Oxidising properties** : Not available.

Particle characteristics

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SECTION 9: Physical and chemical properties

Median particle size : Not applicable.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : No specific data.

10.6 Hazardous decomposition products

: Under normal conditions of storage and use, hazardous decomposition products

should not be produced.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
propylenglycol diacrylate	LD50 Oral	Rat	4600 mg/kg	-
2-hydroxy-	LD50 Dermal	Rat	6929 mg/kg	-
2-methylpropiophenone				
	LD50 Oral	Rat	1694 mg/kg	-
Propylidynetrimethanol, ethoxylated, esters with acrylic acid	LD50 Dermal	Rabbit	>13 g/kg	-
Phosphine oxide, phenylbis (2,4,6-trimethylbenzoyl)-	LD50 Oral	Rat	>2000 mg/kg	-
(1-methyl-1,2-ethanediyl)bis [oxy(methyl-2,1-ethanediyl)] diacrylate	LD50 Oral	Rat	6200 mg/kg	-

Conclusion/Summary

: Based on available data, the classification criteria are not met.

Acute toxicity estimates

Route	ATE value
	12108.52 mg/kg 805.94 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
propylenglycol diacrylate	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Skin - Severe irritant	Rabbit	-	500 mg	-
titanium dioxide	Skin - Mild irritant	Human	-	72 hours 300 ug I	-
Propylidynetrimethanol, ethoxylated, esters with acrylic acid	Eyes - Moderate irritant	Rabbit	-	100 mg	-
	Skin - Moderate irritant	Rabbit	-	500 mg	-
(1-methyl-1,2-ethanediyl)bis [oxy(methyl-2,1-ethanediyl)] diacrylate	Eyes - Severe irritant	Rabbit	-	24 hours 100 uL	-
	Skin - Moderate irritant	Rabbit	_	500 mg	-
2-Butoxyethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Severe irritant	Rabbit	-	100 mg	-

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SECTION 11: Toxicological information

Skin - Mild irritant Rabbit - 500 mg -

Conclusion/Summary

Sensitisation

: Causes skin irritation.

Product/ingredient name	Route of exposure	Species	Result
Phosphine oxide, phenylbis (2,4,6-trimethylbenzoyl)-	skin	Guinea pig	Sensitising

Conclusion/Summary: May cause an allergic skin reaction.

Mutagenicity

Product/ingredient name	Test	Experiment	Result
Phosphine oxide, phenylbis (2,4,6-trimethylbenzoyl)-	-	Subject: Bacteria	Negative

Conclusion/Summary: Based on available data, the classification criteria are not met.

Carcinogenicity

It has been observed that the carcinogenic hazard of this product arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung.

Conclusion/Summary: Based on available data, the classification criteria are not met.

Reproductive toxicity

Conclusion/Summary: Based on available data, the classification criteria are not met.

Teratogenicity

Conclusion/Summary: Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes

of exposure

: Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : No known significant effects or critical hazards.

Skin contact: Causes skin irritation. May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:

pain watering redness

Inhalation : No specific data.

Skin contact: Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

Ingestion : Adverse symptoms may include the following:

stomach pains

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SECTION 11: Toxicological information

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate

effects

: Not available.

Potential delayed effects

: Not available.

Long term exposure

Potential immediate

: Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary

: Not available.

General

Once sensitized, a severe allergic reaction may occur when subsequently exposed

to very low levels.

Carcinogenicity : No known significant effects or critical hazards. Mutagenicity : No known significant effects or critical hazards. **Reproductive toxicity** : No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
manium dioxide	Acute LC50 3 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 6.5 mg/l Fresh water	Daphnia - <i>Daphnia pulex</i> - Neonate	48 hours
	Acute LC50 >1000000 μg/l Marine water	Fish - Fundulus heteroclitus	96 hours
Phosphine oxide, phenylbis (2,4,6-trimethylbenzoyl)-	EC50 ≥0.26 mg/l	Aquatic plants - Desmodesmus subspicatus	72 hours
	NOEC ≥0.008 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Acute EC50 >1.175 mg/l Acute LC50 >0.09 mg/l	Daphnia - <i>Daphnia magna</i> Fish - <i>Brachydanio rerio</i>	48 hours 96 hours
2-Butoxyethanol	Acute EC50 >1000 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 800000 µg/l Marine water Acute LC50 1250000 µg/l Marine water	Crustaceans - Crangon crangon Fish - Menidia beryllina	48 hours 96 hours

Conclusion/Summary : Harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Conclusion/Summary : This product has not been tested for biodegradation.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Propylidynetrimethanol, ethoxylated, esters with acrylic acid Phosphine oxide, phenylbis	-	-	Readily Not readily
(2,4,6-trimethylbenzoyl)-			

12.3 Bioaccumulative potential

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SECTION 12: Ecological information

Product/ingredient name	LogPow	BCF	Potential
万 ipropylenglycol diacrylate	0.01 to 0.39	-	Low
4,4'-Isopropylidenediphenol,	1.6 to 3	-	Low
oligomeric reaction products			
with 1-chloro-			
2,3-epoxypropane, esters			
with acrylic acid	4.60		Law
2-hydroxy-	1.62	-	Low
2-methylpropiophenone Propylidynetrimethanol,	2.89	_	Low
ethoxylated, esters with	2.03		LOW
acrylic acid			
Phosphine oxide, phenylbis	5.77	<5	Low
(2,4,6-trimethylbenzoyl)-			
(1-methyl-1,2-ethanediyl)bis	2	-	Low
[oxy(methyl-2,1-ethanediyl)]			
diacrylate			
2-Butoxyethanol	0.81	-	Low

12.4 Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal

The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste European waste catalogue (EWC)

Yes. : 080111*

Packaging

Methods of disposal

: The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions

: This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

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SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

user

14.6 Special precautions for : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments

: Not relevant/applicable due to nature of the product.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	%	Designation [Usage]
☑ VILUX 1745-02	≥90	3

Labelling

Other EU regulations

Industrial emissions : Not listed (integrated pollution

prevention and control) -

Air

Industrial emissions : Not listed

(integrated pollution prevention and control) -

Water

: Not applicable. **Explosive precursors** Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

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SECTION 15: Regulatory information

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

15.2 Chemical safety

assessment

: This product contains substances for which Chemical Safety Assessments are still

required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and

acronyms

: ATE = Acute Toxicity Estimate

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No.

1272/2008]

DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement

N/A = Not available

PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number

SGG = Segregation Group

vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Skin Irrit. 2, H315	Calculation method
Eye Dam. 1, H318	Calculation method
Skin Sens. 1, H317	Calculation method
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements

H225 H226 H302 H304 H315 H317 H318	Highly flammable liquid and vapour. Flammable liquid and vapour. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage.
H319	Causes serious eye damage. Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H361f	Suspected of damaging fertility.

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SECTION 16: Other information

H373	May cause damage to organs through prolonged or repeated exposure.	
H411	Toxic to aquatic life with long lasting effects.	
H412	Harmful to aquatic life with long lasting effects.	
H413	May cause long lasting harmful effects to aquatic life.	

Full text of classifications [CLP/GHS]

Acute Tox. 3 **ACUTE TOXICITY - Category 3** Acute Tox. 4 **ACUTE TOXICITY - Category 4**

Aquatic Chronic 2 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 Aquatic Chronic 3 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 4 Aquatic Chronic 4

ASPIRATION HAZARD - Category 1 Asp. Tox. 1 Carc. 2 **CARCINOGENICITY - Category 2**

Eye Dam. 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 Eye Irrit. 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2

Flam. Liq. 2 FLAMMABLE LIQUIDS - Category 2 Flam. Liq. 3 FLAMMABLE LIQUIDS - Category 3 Repr. 2 REPRODUCTIVE TOXICITY - Category 2 Skin Irrit. 2 SKIN CORROSION/IRRITATION - Category 2

Skin Sens. 1 SKIN SENSITISATION - Category 1 Skin Sens. 1A SKIN SENSITISATION - Category 1A Skin Sens. 1B SKIN SENSITISATION - Category 1B

STOT RE 2 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2 STOT SE 3 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.

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