

SAFETY DATA SHEET

F69 TUK PALE GREEN

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

1.1	Product	identifier
_	_	

Product name	: F69 TUK PALE GREEN
SDS code	: 21069500K

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

	Identified uses	
Paint. Professional u	se Industrial use	
	Uses advised against	
All other uses		
Product use	: Two component coating for interior use.	

1.3 Details of the supplier of the safety data sheet

MAPAERO SAS 10, Avenue de la Rijole CS30098 09103 PAMIERS Cedex France e-mail address of person : PSRA PAMIERS@akzonobel.com

1.4 Emergency telephone number

responsible for this SDS

National advisory body/P	<u>oison Center</u>
Talawhawa wuwahaw	

Telephone number	: +39 02 6610 1029
<u>Supplier</u>	
Telephone number	: +33 (0)5 34 01 34 01 +33 (0)5 61 60 23 30
Hours of operation	:

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]

Flam. Liq. 3, H226 Skin Corr. 1C, H314 Skin Sens. 1, H317 Muta. 2, H341 Repr. 1B, H360 Aquatic Chronic 2, H411

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.

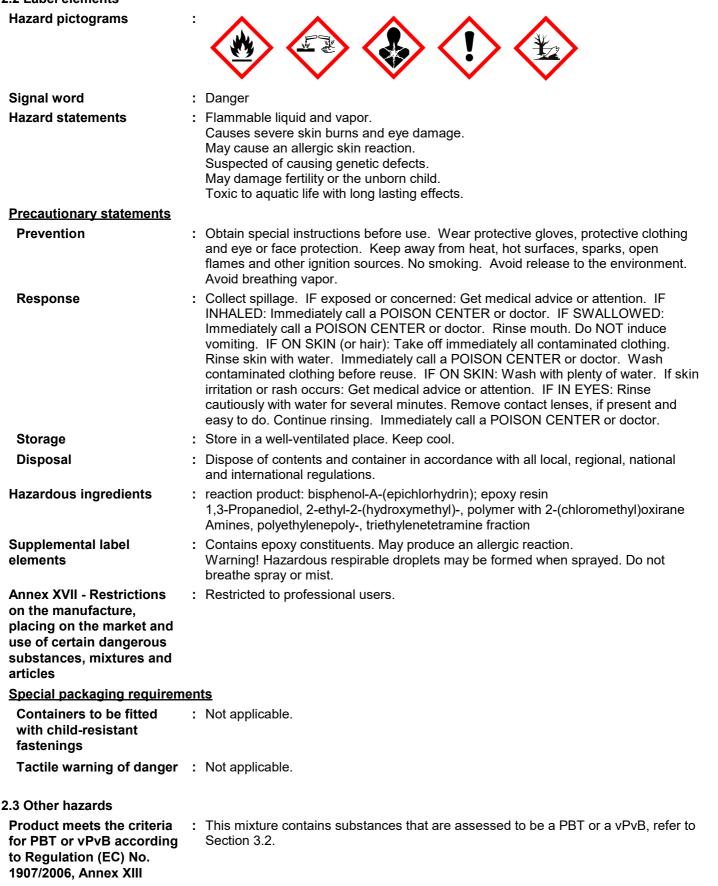
Date of issue/Date of revision	: 1-11-2022	Version : 2.02	
Date of previous issue	: 21-10-2022	1/20	AkzoNobel

SECTION 2: Hazards identification

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

2.2 Label elements

Hazard pictograms



SECTION 2: Hazards identification

Other hazards which do : None known.

not result in classification

The mixture may be a skin sensitizer. It may also be a skin irritant and repeated contact may increase this effect.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : N	lixture			
Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Туре
putan-2-ol	REACH #: 01-2119475146-36 EC: 201-158-5 CAS: 78-92-2	≥10 - <20	Flam. Liq. 3, H226 Eye Irrit. 2, H319 STOT SE 3, H335 STOT SE 3, H336	[1]
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	REACH #: 01-2119456619-26 EC: 500-033-5 CAS: 25068-38-6 Index: 603-074-00-8	≥10 - ≤25	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	[1]
nitroethane	REACH #: 01-2119966158-27 EC: 201-188-9 CAS: 79-24-3 Index: 609-035-00-1	≤10	Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 4, H332	[1] [2]
1,3-Propanediol, 2-ethyl-2- (hydroxymethyl)-, polymer with 2- (chloromethyl)oxirane	REACH #: 01-2120078341-60 CAS: 30499-70-8	≤10	Skin Corr. 1C, H314 Skin Sens. 1B, H317 Muta. 2, H341 (oral) Repr. 1B, H360 (oral) Aquatic Chronic 2, H411	[1]
Terphenyl, hydrogenated	REACH #: 01-2119488183-33 EC: 262-967-7 CAS: 61788-32-7	≤3	Aquatic Chronic 2, H411	[1] [2] [4
zinc oxide	REACH #: 01-2119463881-32 EC: 215-222-5 CAS: 1314-13-2 Index: 030-013-00-7	≤3	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
Amines, polyethylenepoly-, triethylenetetramine fraction	EC: 292-588-2 CAS: 90640-67-8	≤3	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Chronic 3, H412	[1]
[3-(2,3-epoxypropoxy)propyl] trimethoxysilane	REACH #: 01-2119513212-58 EC: 219-784-2 CAS: 2530-83-8	≤3	Eye Dam. 1, H318	[1]
			See Section 16 for the full text of the H statements declared above.	

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. <u>Type</u>

Date of issue/Date of revision	: 1-11-2022	Version : 2.02	
Date of previous issue	: 21-10-2022	3/20	AkzoNobel

SECTION 3: Composition/information on ingredients

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

[6] Additional disclosure due to company policy

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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with

Date of issue/Date of revision	: 1-11-2022	Version : 2.02	
Date of previous issue	: 21-10-2022	4/20	AkzoNobel

SECTION 4: First aid measures

the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Ingestion may cause nausea, diarrhea and vomiting.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Based on the properties of the epoxy constituent(s) and considering toxicological data on similar mixtures, this mixture may be a skin sensitizer and an irritant. It contains low-molecular weight epoxy constituents which are irritating to eyes, mucous membranes and skin. Repeated skin contact may lead to irritation and to sensitization, possibly with cross-sensitization to other epoxies. Skin contact with the mixture and exposure to spray, mist and vapors should be avoided.

Contains reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700), 1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with 2-(chloromethyl)oxirane, Amines, polyethylenepoly-, triethylenetetramine fraction. May produce an allergic reaction.

Over-exposure signs/symptoms

Eye contact	Adverse symptoms may include the following: pain watering redness
Inhalation	: Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
Skin contact	: Adverse symptoms may include the following: pain or irritation redness blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations
Ingestion	: Adverse symptoms may include the following: stomach pains reduced fetal weight increase in fetal deaths skeletal malformations

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments	: No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media	
Suitable extinguishing media	: Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the
substance or mixture: Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard.
In a fire or if heated, a pressure increase will occur and the container may burst, with
the risk of a subsequent explosion. This material is toxic 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.

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Date of previous issue	: 21-10-2022	5/20	AkzoNobel

SECTION 5: Firefighting measures					
: Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides halogenated compounds metal oxide/oxides					
: 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.					
: 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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	:	If specialized 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 spilled 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. Collect spillage.
6.3 Methods and materials for	. C	ontainment and cleaning up
Small spill	:	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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.
Large spill	:	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach 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 spilled 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. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. 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 a segregated and approved area. 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. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Danger criteria

	Notification and MAPP threshold	Safety report threshold
P5c	5000 tonne	50000 tonne
E2	200 tonne	500 tonne

7.3 Specific end use(s)

Recommendations	: Not available.
Industrial sector specific	: Not available.
solutions	

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		
nitroethane Terphenyl, hydrogenated	 EU OEL (Europe, 10/2019). Absorbed through skin. Notes: list of indicative occupational exposure limit values STEL: 100 ppm 15 minutes. STEL: 312 mg/m³ 15 minutes. TWA: 20 ppm 8 hours. TWA: 62 mg/m³ 8 hours. EU OEL (Europe, 10/2019). Notes: list of indicative occupational exposure limit values STEL: 5 ppm 15 minutes. STEL: 48 mg/m³ 15 minutes. TWA: 2 ppm 8 hours. 		
procedures atmosphere or of the ventilatio protective equip the following: E the assessmen limit values and atmospheres - of exposure to	ontains ingredients with exposure limits, personal, workplace biological monitoring may be required to determine the effectiveness n or other control measures and/or the necessity to use respiratory oment. Reference should be made to monitoring standards, such as European Standard EN 689 (Workplace atmospheres - Guidance for t of exposure by inhalation to chemical agents for comparison with I measurement strategy) European Standard EN 14042 (Workplace Guide for the application and use of procedures for the assessment chemical and biological agents) European Standard EN 482 nospheres - 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

SECTION 8: Exposure controls/personal protection

required.

DNELs/DMELs

Product/ingredient name	Туре	Exposure	Value	Population	Effects
butan-2-ol	DNEL	Long term Oral	15 mg/kg	General	Systemic
		-	bw/day	population	
	DNEL	Long term	52 mg/m ³	General	Systemic
		Inhalation	-	population	
	DNEL	Long term Dermal	203 mg/kg	General	Systemic
		-	bw/day	population	
	DNEL	Long term	212 mg/m ³	Workers	Systemic
		Inhalation	_		
	DNEL	Long term Dermal	405 mg/kg	Workers	Systemic
			bw/day		
reaction product: bisphenol-A-	DNEL	Short term	0.75 mg/	General	Systemic
(epichlorhydrin); epoxy resin		Inhalation	kg bw/day	population	
(number average molecular weight ≤ 700)				[Consumers]	
,	DNEL	Long term	0.75 mg/m³	General	Systemic
		Inhalation	Ū	population	
				[Consumers]	
	DNEL	Short term Oral	0.75 mg/	General	Systemic
			kg bw/day	population	
	DNEL	Long term Oral	0.75 mg/	General	Systemic
			kg bw/day	population	
	DNEL	Short term Dermal	3.571 mg/	General	Systemic
			kg bw/day	population	
	DNEL	Long term Dermal	3.571 mg/	General	Systemic
		-	kg bw/day	population	
	DNEL	Short term Dermal	8.33 mg/	Workers	Systemic
			kg bw/day		
	DNEL	Long term Dermal	8.33 mg/	Workers	Systemic
			kg bw/day		
	DNEL	Short term	12.25 mg/	Workers	Systemic
e of issue/Date of revision : 1-1	1-2022	I	Version	: 2.02	
	10-2022		8/20		AkzoNob

zinc oxide	DNEL	Long term Inhalation Long term Oral	0.5 mg/m³ 0.83 mg/	Workers General	Local Systemic
	DNEL	Long term Inhalation	kg bw/day 83.8 mg/m³	Workers	Local
	DNEL	Long term Dermal	kg bw/day 46.3 mg/	population Workers	Systemic
	DNEL	Inhalation Long term Dermal	27.8 mg/	population General	Systemic
	DNEL	Inhalation Long term	25 mg/m³	General	Local
	DNEL	Inhalation Long term	8.38 mg/m ³	population Workers	Systemic
	DNEL	Long term	bw/day 2.5 mg/m ³	population General	Systemic
	DNEL	Long term Oral	kg bw/day 0.3 mg/kg	population [Consumers] General	Systemic
	DNEL	Long term Oral	kg bw/day 0.074 mg/	General	Systemic
	DNEL	Long term Dermal	0.222 mg/	[Consumers] Workers	Systemic
	DNEL	Long term Inhalation	kg bw/day 0.358 mg/ m³	General population	Systemic
	DNEL	Inhalation Long term Dermal	0.622 mg/	Workers	Systemic
Terphenyl, hydrogenated	DNEL	Long term	kg bw/day 2.01 mg/m³	Workers	Systemic
	DNEL	Short term Dermal	kg bw/day 2100 mg/	population Workers	Systemic
	DNEL	Short term Dermal	bw/day 1250 mg/	General	Systemic
	DNEL	Long term Dermal	bw/day 350 mg/kg	population Workers	Systemic
	DNEL	Short term Inhalation Long term Dermal	50 mg/m ³ 210 mg/kg	Workers General	Local Systemic
	DNEL	Long term Inhalation	25 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	17 mg/m³	Workers	Systemic
	DNEL	Inhalation Short term Inhalation	15 mg/m³	General population	Local
	DNEL	Inhalation Long term	8.4 mg/m³	population Workers	Systemic
	DNEL	Inhalation Short term	5 mg/m³	population General	Systemic
	DNEL	Inhalation Long term	5 mg/m³	population General	Local
nitroethane	DNEL	Inhalation Long term	m³ 2 mg/m³	General	Systemic
	DNEL	Inhalation Long term	m³ 12.25 mg/	Workers	Systemic

ECTION 8: Exposure controls/personal protection					
			bw/day	population	
	DNEL	Long term Dermal	83 mg/kg	Workers	Systemic
		-	bw/day		
Amines, polyethylenepoly-,	DNEL	Long term Dermal	0.25 mg/	General	Systemic
triethylenetetramine fraction			kg bw/day	population	
	DNEL	Long term	0.29 mg/m ³	General	Systemic
		Inhalation		population	
	DNEL	Long term Oral	0.41 mg/	General	Systemic
			kg bw/day	population	
	DNEL	Long term Dermal	0.57 mg/	Workers	Systemic
			kg bw/day		
	DNEL	Long term	1 mg/m³	Workers	Systemic
		Inhalation			
	DNEL	Short term Dermal	8 mg/kg	General	Systemic
			bw/day	population	
	DNEL	Short term Oral	20 mg/kg	General	Systemic
			bw/day	population	
	DNEL	Short term	1600 mg/	General	Systemic
		Inhalation	m ³	population	
	DNEL	Short term	5380 mg/	Workers	Systemic
	DUE	Inhalation	m ³		O t
[3-(2,3-epoxypropoxy)propyl]	DNEL	Long term Oral	12.5 mg/	General	Systemic
trimethoxysilane			kg bw/day	population	Ou un tra una line
	DNEL	Long term Dermal	12.5 mg/	General	Systemic
		Long torm Dormal	kg bw/day	population	Svotomio
	DNEL	Long term Dermal	21 mg/kg	Workers	Systemic
		Long torm	bw/day	Workere	Svotomio
	DNEL	Long term Inhalation	147 mg/m ³	Workers	Systemic
		Innalation			

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	Fresh water	3 µg/l	-
	Marine water	0.3 µg/l	-
	Sewage Treatment Plant	10 mg/l	-
	Fresh water sediment	0.5 mg/kg dwt	-
	Marine water sediment	0.5 mg/kg dwt	-
	Sediment	0.05 mg/kg dwt	-
Terphenyl, hydrogenated	Fresh water	2 µg/l	Assessment Factors
	Marine water	0.2 µg/l	Assessment Factors
	Sewage Treatment Plant	10.3 mg/l	Assessment Factors
	Fresh water sediment	63.2 mg/kg dwt	Equilibrium Partitioning
	Marine water sediment	6.32 mg/kg dwt	Equilibrium Partitioning
	Soil	12.6 mg/kg dwt	Equilibrium Partitioning
	Secondary Poisoning	2.22 mg/kg	Assessment Factors

8.2 Exposure controls

Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures



SECTION 8: Exposure controls/personal protection **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. : Safety eyewear complying with an approved standard should be used when a risk Eye/face protection 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. When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time >480 minutes according to EN374) is recommended. Recommended gloves: Viton B or Nitrile, thickness ≥ 0.38 mm. When only brief contact is expected, a glove with protection class of 2 or higher (breakthrough time >30 minutes according to EN374) is recommended. Recommended gloves: Nitrile, thickness ≥ 0.12 mm. Gloves should be replaced regularly and if there is any sign of damage to the glove material. The performance or effectiveness of the glove may be reduced by physical/ chemical damage and poor maintenance. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment. **Body protection** 2 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods. : Appropriate footwear and any additional skin protection measures should be Other skin protection 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. : Emissions from ventilation or work process equipment should be checked to **Environmental exposure** ensure they comply with the requirements of environmental protection legislation. controls 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

9.1 Information on basic physical and chemical properties

<u>Appearance</u>		
Physical state	id.	
Color	en.	
Odor	racteristic.	
Odor threshold	available.	
рН	available.	
Melting point/freezing point	available.	
Initial boiling point and	available.	
boiling range		
Flash point	ed cup: 25°C	
Evaporation rate	available.	
Flammability (solid, gas)	available.	
Upper/lower flammability or explosive limits	available.	
Vapor pressure	available.	
Vapor density	nest known value: 7.95 (Air = 1) (Terphenyl, hy rage: 2.82 (Air = 1)	drogenated). Weighted
Density	5 g/cm³	
Solubility(ies)	luble in the following materials: cold water.	
Partition coefficient: n-octanol/ water	available.	
Auto-ignition temperature	available.	
Decomposition temperature	available.	
Viscosity	ematic (room temperature): 4.03 cm²/s ematic (40°C): 1.01 cm²/s	

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	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
10.5 Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials
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 toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
butan-2-ol	LC50 Inhalation Gas.	Rat	8000 ppm	4 hours
	LC50 Inhalation Vapor	Rat	48500 mg/m ³	4 hours
	LD50 Intraperitoneal	Guinea pig	1067 mg/kg	-
	LD50 Intraperitoneal	Mouse	771 mg/kg	-
	LD50 Intraperitoneal	Rabbit	277 mg/kg	-
	LD50 Intraperitoneal	Rat	1193 mg/kg	-
	LD50 Intravenous	Mouse	764 mg/kg	-
	LD50 Intravenous	Rat	138 mg/kg	-
	LD50 Oral	Rabbit	4893 mg/kg	-
	LD50 Oral	Rabbit	4890 mg/kg	-
	LD50 Oral	Rat	2193 mg/kg	-
	LD50 Oral	Rat	2054 mg/kg	-
nitroethane	LD50 Intraperitoneal	Mouse	310 mg/kg	-
	LD50 Oral	Mouse	860 mg/kg	-
	LD50 Oral	Rat	1100 mg/kg	-
Terphenyl, hydrogenated	LD50 Oral	Mouse	12500 mg/kg	-
	LD50 Oral	Rat	17500 mg/kg	-
	LD50 Oral	Rat	>24000 mg/kg	-
	LD50 Oral	Rat	>10000 mg/kg	-
zinc oxide	LD50 Intraperitoneal	Rat	240 mg/kg	-
	LD50 Oral	Mouse	7950 mg/kg	-
[3-(2,3-epoxypropoxy)propyl] trimethoxysilane	LD50 Dermal	Rabbit	3970 uĽ/kg	-
5	LD50 Oral	Rat	7.01 g/kg	-
	LD50 Oral	Rat	22600 uL/kg	-

Conclusion/Summary

: Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
butan-2-ol	Eyes - Severe irritant	Rabbit	-	0.1 MI	-
reaction product: bisphenol- A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	Eyes - Mild irritant	Rabbit	-	100 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 Ul	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 mg	-
zinc oxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500	-
[3-(2,3-epoxypropoxy)propyl] trimethoxysilane	Eyes - Mild irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
Conclusion/Summary	: Not available.				
<u>Sensitization</u>					
Conclusion/Summary	: Not available.				
Mutagenicity					

Conclusion/Summary : Not available.

Reproductive toxicity



SECTION 11: Toxicological information

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
butan-2-ol	Category 3		Respiratory tract irritation
	Category 3		Narcotic effects

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely	: Not available.
routes of exposure	

Potential acute health effects

Eye contact	: Causes serious eye damage.	
Inhalation	: No known significant effects or critical hazards.	
Skin contact	: Causes severe burns. 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	: Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
Skin contact	: Adverse symptoms may include the following: pain or irritation redness blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations
Ingestion	: Adverse symptoms may include the following: stomach pains reduced fetal weight increase in fetal deaths skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

<u>Short term exposure</u>	
Potential immediate effects	: Not available.
Potential delayed effects	: Not available.
Long term exposure	

Date of issue/Date of revision
Date of previous issue



SECTION 11: Toxicological information			
Potential immediate effects	: Not available.		
Potential delayed effects	: Not available.		
Potential chronic health eff	ects		
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	: Suspected of causing genetic defects.		
Reproductive toxicity	: May damage fertility or the unborn child.		

Other information

: Not available.

SECTION 12: Ecological information

12.1 Toxicity

There are no data available on the mixture itself. Do not allow to enter drains or watercourses.

The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

Product/ingredient name	Result	Species	Exposure
butan-2-ol	Acute EC50 4227 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 3670000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
zinc oxide	Acute EC50 1 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute EC50 0.622 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute EC50 0.481 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 1.25 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 98 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 2246000 µg/l Fresh water	Fish - Pimephales promelas - Neonate	96 hours
	Acute LC50 1.1 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute LC50 3.969 mg/l Fresh water	Fish - Danio rerio - Adult	96 hours
	Acute LC50 2.525 mg/l Fresh water	Fish - Danio rerio - Adult	96 hours

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Date of issue/Date of revision	
Date of previous issue	



SECTION 12: Ecological information

Product/ingredient name	LogPow	BCF	Potential
butan-2-ol	0.61	-	low
reaction product: bisphenol- A-(epichlorhydrin); epoxy	2.64 to 3.78	31	low
resin			
nitroethane	0.18	-	low
Terphenyl, hydrogenated	-	5200	high
zinc oxide	-	28960	high
Amines, polyethylenepoly-, triethylenetetramine fraction	-2.65	-	low

12.4 Mobility in soil	
Soil/water partition coefficient (Koc)	: Not available.
Mobility	: Not available.

12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	Р	В	Т	vPvB	vP	vB
butan-2-ol	No	N/A	N/A	No	N/A	N/A	N/A
reaction product: bisphenol- A-(epichlorhydrin); epoxy resin	No	N/A	No	No	No	N/A	No
nitroethane	No	N/A	N/A	No	N/A	N/A	N/A
Terphenyl, hydrogenated	No	N/A	Yes	No	SVHC (Candidate)	Specified	Specified
Amines, polyethylenepoly-, triethylenetetramine fraction	No	N/A	N/A	No	N/A	N/A	N/A
[3-(2,3-epoxypropoxy)propyl] trimethoxysilane	No	N/A	N/A	No	N/A	N/A	N/A

12.6 Other adverse effects

: No known significant effects or critical hazards.

SECTION 13: Disposal considerations

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).

13.1 Waste treatment methods

<u>Product</u>	
Methods of disposal	: The generation of waste should be avoided or minimized 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	: The classification of the product may meet the criteria for a hazardous waste.
Disposal considerations	: Do not allow to enter drains or watercourses. Dispose of according to all federal, state and local applicable regulations. If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

European waste catalogue (EWC)

The European Waste Catalogue classification of this product, when disposed of as waste, is:

Date of issue/Date of revision	: 1-11-2022	Version : 2.02	
Date of previous issue	: 21-10-2022	16/20	AkzoNobel

SECTION 13: Disposal considerations

Waste code	Waste designation
EWC 08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances
Packaging	
Methods of disposal	The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
Disposal considerations	 Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Dispose of containers contaminated by the product in accordance with local or national legal provisions.
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. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

			1
	ADR/RID	IMDG	IATA
14.1 UN number	UN3469	UN3469	UN3469
14.2 UN proper shipping name	PAINT, FLAMMABLE, CORROSIVE	PAINT, FLAMMABLE, CORROSIVE	PAINT, FLAMMABLE, CORROSIVE
14.3 Transport hazard class(es)	3 (8)	3 (8)	3 (8)
14.4 Packing group	111	111	111
14.5 Environmental hazards	Yes.	Marine Pollutant(s): reaction product: bisphenol-A- (epichlorhydrin); epoxy resin, 1,3-Propanediol, 2-ethyl-2- (hydroxymethyl)-, polymer with 2-(chloromethyl)oxirane	Yes. The environmentally hazardous substance mark is not required.

Additional information

ADR/RID	 The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. <u>Tunnel code</u> (D/E)
IMDG	: <u>Emergency schedules</u> F-E, S-C The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
ΙΑΤΑ	: The environmentally hazardous substance mark may appear if required by other transportation regulations.
14.6 Special precautions for user	: 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.

Date of issue/Date of revision	: 1-11-2022	Version : 2.02	
Date of previous issue	: 21-10-2022	17/20	AkzoNobel

SECTION 14: Transport information

14.7 Transport in bulk according to IMO instruments

: Not applicable.

SECTION 15: Regulatory information

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

Annex XIV - List of substances subject to authorization

<u>Annex XIV</u>

Date of previous issue

None of the components are listed.

Substances of very high concern

Ingredient name			Intrinsic property	Status	Reference number	Date of revision
Terphenyl, hydrogenated			vPvB	Candidate	ED/61/2018	6/27/2018
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	:	Restricted to p	rofessional users.			
<u> Ther EU regulations</u>						
VOC	:		of Directive 2004/42/E nd/or technical data sh			lefer to the
VOC for Ready-for-Use Mixture	:	Not applicable.				
Industrial emissions (integrated pollution prevention and control) - Air	:	Not listed				
Industrial emissions (integrated pollution prevention and control) - Water	:	Not listed				
Ozone depleting substanc Not listed.	es	(1005/2009/EU))			
Prior Informed Consent (P Not listed.	<u>IC)</u>	<u>(649/2012/EU)</u>				
Seveso Directive						
This product is controlled un	der	the Seveso Dir	ective.			
Danger criteria						
Category						
P5c E2						
lational regulations						
Industrial use	:	The informatio	n contained in this safe	ety data sheet do	es not constitute	he user's

D.Lgs. 152/06 International regulations		kplace risks, as required by other health and safety ns of the national health and safety at work regulations apply of at work.	
Date of issue/Date of revision	: 1-11-2022	Version : 2.02	-

18/20

:21-10-2022

AkzoNobel

SECTION 15: Regulatory information				
Chemical Weapon Conve	ntion List Schedules I, II & III Chemicals			
Not listed.				
Montreal Protocol				
Not listed.				
Stockholm Convention o	n Persistent Organic Pollutants			
Not listed.				
Rotterdam Convention or	n Prior Informed Consent (PIC)			
Not listed.				
UNECE Aarhus Protocol	on POPs and Heavy Metals			
Not listed.				
Inventory list				
Europe	: Not determined.			
15.2 Chemical Safety Assessment	: No Chemical Safety Assessment has been carried out.			

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	
Flam. Liq. 3, H226	On basis of test data	
Skin Corr. 1C, H314	Calculation method	
Skin Sens. 1, H317	Calculation method	
Muta. 2, H341	Calculation method	
Repr. 1B, H360	Calculation method	
Aquatic Chronic 2, H411	Calculation method	

Full text of abbreviated H statements

H226 H302 H312 H314 H315 H317 H318 H319 H332 H335 H336 H341 H360		Flammable liquid and vapor. Harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness. Suspected of causing genetic defects. May damage fertility or the unborn child.	
Date of issue/Date of revision	: 1-11-2022	Version : 2.02	
Date of previous issue	:21-10-2022	19/20	AkzoNobel

	Fo	59 TUK PALE GREEN	
SECTION 16: Othe	r information		
H400		Very toxic to aquatic life.	
H410		Very toxic to aquatic life with long lasting effects.	
H411		Toxic to aquatic life with long lasting effects.	
H412		Harmful to aquatic life with long lasting effects.	
Full text of classifications	[CLP/GHS]		
Acute Tox. 4		ACUTE TOXICITY - Category 4	
Aquatic Acute 1		AQUATIC HAZARD (ACUTE) - Category 1	
Aquatic Chronic 1		AQUATIC HAZARD (LONG-TERM) - Category 1	
Aquatic Chronic 2		AQUATIC HAZARD (LONG-TERM) - Category 2	
Aquatic Chronic 3		AQUATIC HAZARD (LONG-TERM) - Category 3	
Eye Dam. 1		SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1	
Eye Irrit. 2	:	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2	
Flam. Liq. 3		FLAMMABLE LIQUIDS - Category 3	
Muta. 2		GERM CELL MUTAGENICITY - Category 2	
Repr. 1B		TOXIC TO REPRODUCTION - Category 1B	
Skin Corr. 1B	:	SKIN CORROSION/IRRITATION - Category 1B	
Skin Corr. 1C	:	SKIN CORROSION/IRRITATION - Category 1C	
Skin Irrit. 2	:	SKIN CORROSION/IRRITATION - Category 2	
Skin Sens. 1	:	SKIN SENSITIZATION - Category 1	
Skin Sens. 1B	:	SKIN SENSITIZATION - Category 1B	
STOT SE 3	:	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) -	
		Category 3	
Date of printing	: 1 November 2022		
Date of issue/ Date of	: 1 November 2022		
revision			
Date of previous issue	: 21 October 2022		
Version	: 2.02		

Unique ID

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2

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