

SAFETY DATA SHEET



Cover PE (TGIC) (B009)

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

1.1 Product identifier

Product name : Cover PE (TGIC) (B009)
Product code : 30982
Product type : Powder coating.
Other means of identification : Not available.

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

Use in coatings - Industrial use

1.3 Details of the supplier of the safety data sheet

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1.4 Emergency telephone number

Norwegian National Poison Centre: +47 22 59 13 00

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]

Acute Tox. 4, H302
Eye Dam. 1, H318
Skin Sens. 1, H317
Muta. 1B, H340
Repr. 1B, H360
STOT RE 2, H373
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.

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

2.2 Label elements

Hazard pictograms :



Cover PE (TGIC) (B009)

SECTION 2: Hazards identification

Signal word	: Danger.
Hazard statements	: H302 - Harmful if swallowed. H317 - May cause an allergic skin reaction. H318 - Causes serious eye damage. H340 - May cause genetic defects. H360 - May damage fertility or the unborn child. H373 - May cause damage to organs through prolonged or repeated exposure. H411 - Toxic to aquatic life with long lasting effects.
<u>Precautionary statements</u>	
General	: Not applicable.
Prevention	: P201 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection. P273 - Avoid release to the environment. P260 - Do not breathe dust. P270 - Do not eat, drink or smoke when using this product.
Response	: P391 - Collect spillage. P308 + P313 - IF exposed or concerned: Get medical advice or attention. P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water. P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention. 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. Immediately call a POISON CENTER or doctor.
Storage	: Not applicable.
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazardous ingredients	: 1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1h,3h,5h)-trione Reaction mass of bis(2,3-epoxypropyl) terephthalate (CAS 7195-44-0) and tris(oxiranylmethyl) benzene- 1,2,4-tricarboxylate (CAS 7237-83-4) Cyclohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethyl-, homopolymer, caprolactam-blocked zinc di(benzothiazol-2-yl) disulphide N,N,N,N-tetrakis(4,6-bis(butyl-(N-methyl-2,2,6,6-tetramethylpiperidin-4-yl)amino)triazin-2-yl)-4,7-diazadecane-1,10-diamine benzothiazole-2-thiol
Supplemental label elements	: EUH212 - Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: Restricted to professional users.
<u>Special packaging requirements</u>	
Containers to be fitted with child-resistant fastenings	: Not applicable.
Tactile warning of danger	: Not applicable.
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 vPvB.

Cover PE (TGIC) (B009)

SECTION 2: Hazards identification

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
1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1h,3h,5h)-trione	REACH #: 01-2119449817-25 EC: 219-514-3 CAS: 2451-62-9 Index: 615-021-00-6	<10	Acute Tox. 3, H301 Acute Tox. 3, H331 Eye Dam. 1, H318 Skin Sens. 1, H317 Muta. 1B, H340 STOT RE 2, H373 Aquatic Chronic 3, H412	ATE [Oral] = 100 mg/kg ATE [Inhalation (vapours)] = 3 mg/l	[1]
Reaction mass of bis(2,3-epoxypropyl)terephthalate (CAS 7195-44-0) and tris(oxiranylmethyl)benzene-1,2,4-tricarboxylate (CAS 7237-83-4)	REACH #: 01-2120065788-39 EC: 940-592-6	<10	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 1B, H360 STOT RE 2, H373 (reproductive organs) (oral) Aquatic Chronic 2, H411	ATE [Oral] = 500 mg/kg	[1]
Cyclohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethyl-, homopolymer, caprolactam-blocked	CAS: 127184-53-6	≤3	STOT RE 1, H372 (inhalation)	-	[1]
zinc di(benzothiazol-2-yl)disulphide	REACH #: 01-2119493020-50 EC: 205-840-3 CAS: 155-04-4	≤3	Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1]
N,N,N,N-tetrakis(4,6-bis(butyl-(N-methyl-2,2,6,6-tetramethylpiperidin-4-yl)amino)triazin-2-yl)-4,7-diazadecane-1,10-diamine	REACH #: 01-0000015180-83 EC: 401-990-0 CAS: 106990-43-6	≤3	Skin Sens. 1, H317 STOT RE 2, H373 (lymphatic system) Aquatic Chronic 2, H411	-	[1]
titanium dioxide	REACH #: 01-2119489379-17 EC: 236-675-5 CAS: 13463-67-7 Index: 022-006-00-2	≤25	Carc. 2, H351 (inhalation)	-	[1] [2] [*]
2,4,8,10-tetraoxa-3,9-diphosphaspiro[5.5]undecane, 3,9-bis[2,4-bis(1,1-dimethylethyl)phenoxy]-	REACH #: 01-2119977073-34 EC: 247-952-5 CAS: 26741-53-7	≤1	Aquatic Chronic 1, H410	M [Chronic] = 1	[1]
bismuth tris(2-ethylhexanoate)	EC: 267-499-7 CAS: 67874-71-9	≤0.3	Skin Irrit. 2, H315 Eye Dam. 1, H318 Repr. 2, H361d	-	[1]
zinc	EC: 231-175-3	≤0.3	Aquatic Acute 1, H400	M [Acute] = 1	[1]

Cover PE (TGIC) (B009)

SECTION 3: Composition/information on ingredients

2-ethylhexanoic acid	CAS: 7440-66-6 REACH #: 01-2119488942-23 EC: 205-743-6 CAS: 149-57-5 Index: 607-230-00-6	<0.3	Aquatic Chronic 1, H410 Repr. 1B, H360D	M [Chronic] = 1 -	[1]
dioctyltin dilaurate	EC: 222-883-3 CAS: 3648-18-8	<0.3	Repr. 1B, H360D STOT RE 1, H372 (immune system)	-	[1] [2]
benzothiazole-2-thiol	EC: 205-736-8 CAS: 149-30-4 Index: 613-108-00-3	≤0.3	Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 See Section 16 for the full text of the H statements declared above.	M [Acute] = 1 M [Chronic] = 1	[1]

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. This mixture contains ≥ 1% of titanium dioxide. The Annex VI classification of titanium dioxide does not apply to this mixture according to Note 10.

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

SECTION 4: First aid measures**4.1 Description of first aid measures**

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- 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

Cover PE (TGIC) (B009)

SECTION 4: First aid measures

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.

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. Coating powders can cause localised skin irritation in folds of the skin or under tight clothing.

Toxicological results of tests made on mixtures containing TGIC showed
 Acute toxicity: LD50 (oral), 16g/kg body weight, LC50 (inhalation) > 11g/m³
 Sensitisation: Can provoke contact allergic reactions in humans
 Mutagenicity: Ames test: negative
 Chromosomal aberration test in mouse spermatogonial assay: positive
 Dominant lethal assay: negative

Caprolactam is classified as hazardous to human health and the toxicity effects are described by the following hazard statements: Harmful if swallowed or if inhaled (H302 + H332), Causes skin irritation (H315), Causes serious eye irritation (H319), May cause respiratory irritation (H335).

Contains 1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione, Reaction mass of bis(2,3-epoxypropyl) terephthalate (CAS 7195-44-0) and tris(oxiranylmethyl) benzene-1,2,4-tricarboxylate (CAS 7237-83-4), zinc di(benzothiazol-2-yl) disulphide, N,N',N'',N'''-tetrakis(4,6-bis(butyl-(N-methyl-2,2,6,6-tetramethylpiperidin-4-yl)amino) triazin-2-yl)-4,7-diazadecane-1,10-diamine, benzothiazole-2-thiol. 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 foetal weight
 increase in foetal deaths
 skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
 pain or irritation
 redness
 blistering may occur
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
 stomach pains
 reduced foetal weight
 increase in foetal 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.

See toxicological information (Section 11)

Cover PE (TGIC) (B009)

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Recommended: alcohol-resistant foam, CO₂ blanket, water spray or mist.

Unsuitable extinguishing media : Do not use water jet.
Do not use inert gas under high pressure (e.g. CO₂).

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

Hazardous combustion products : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.
Fine dust clouds may form explosive mixtures with air.

5.3 Advice for firefighters

Special protective actions for fire-fighters : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

Special protective equipment for fire-fighters : Appropriate breathing apparatus may be required.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Exclude sources of ignition and ventilate the area. Avoid breathing dust. Refer to protective measures listed in sections 7 and 8.

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

: Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.3 Methods and material for containment and cleaning up

: Contain and collect spillage with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Do not use a dry brush as dust clouds or static can be created.

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).

Advice should be taken from a competent occupational health practitioner on the assessment of employees with skin or respiratory complaints before the individual is exposed to the uncured product.

7.1 Precautions for safe handling

Precautions should be taken to prevent the formation of dusts in concentrations above flammable, explosive or occupational exposure limits.

Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources.

Mixture may charge electrostatically: always use earthing leads when transferring from one container to another.

Operators should wear antistatic footwear and clothing and floors should be of the conducting type.

Keep away from heat, sparks and flame.

Cover PE (TGIC) (B009)

SECTION 7: Handling and storage

Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Put on appropriate personal protective equipment (see Section 8).

Always keep in containers made from the same material as the original one.

Comply with the health and safety at work laws.

Do not allow to enter drains or watercourses.

During stoving/curing caprolactam will be released. Efficient oven extraction must be provided to safely discharge caprolactam from the workplace.

Welding, grinding and other hot work on the already-coated substrate may cause free isocyanates to be formed and released.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.

Additional information on storage conditions

Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight.

Keep container tightly closed.

Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Seveso Directive - Reporting thresholds

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
E2	200 tonne	500 tonne

See Technical Data Sheet / packaging for further information.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : 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

Dust Limit : 10 mg/m³ (TWA of total inhalable dust) and 4 mg/m³ (TWA of respirable)

Product/ingredient name	Exposure limit values
Titanium dioxide	FOR-2011-12-06-1358 (Norway, 12/2022). TWA: 5 mg/m ³ 8 hours.
dioctyltin dilaurate	FOR-2011-12-06-1358 (Norway, 12/2022). [tinnforbindelser, organiske] Absorbed through skin. TWA: 0.1 mg/m ³ , (calculated as Sn) 8 hours.

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

Cover PE (TGIC) (B009)

SECTION 8: Exposure controls/personal protection

documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects	
1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1h,3h,5h)-trione	DMEL	Short term Inhalation	0.002 mg/m ³	General population	Systemic	
	DMEL	Long term Inhalation	0.005 mg/m ³	General population	Systemic	
	DNEL	Short term Inhalation	0.01 mg/m ³	General population	Local	
	DNEL	Short term Dermal	0.016 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Dermal	0.04 mg/cm ²	General population	Local	
	DNEL	Long term Oral	0.043 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	0.043 mg/kg bw/day	General population	Systemic	
	DMEL	Short term Inhalation	0.052 mg/m ³	Workers	Systemic	
	DMEL	Long term Inhalation	0.052 mg/m ³	Workers	Systemic	
	DMEL	Short term Oral	0.096 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Inhalation	0.1 mg/m ³	Workers	Local	
	DNEL	Short term Dermal	0.16 mg/kg bw/day	Workers	Systemic	
	DNEL	Short term Dermal	0.43 mg/cm ²	Workers	Local	
	DNEL	Long term Dermal	0.43 mg/kg bw/day	Workers	Systemic	
	Cyclohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethyl-, homopolymer, caprolactam-blocked	DNEL	Long term Inhalation	0.013 mg/m ³	General population	Local
		DNEL	Short term Inhalation	0.065 mg/m ³	General population	Local
DNEL		Long term Inhalation	0.075 mg/m ³	Workers	Local	
DNEL		Short term Inhalation	0.375 mg/m ³	Workers	Local	
zinc di(benzothiazol-2-yl) disulphide	DNEL	Long term Oral	0.6 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	1 mg/m ³	General population	Systemic	
	DNEL	Long term Dermal	1.2 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	3.3 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	5.9 mg/m ³	Workers	Systemic	
N,N,N,N-tetrakis(4,6-bis(butyl-(N-methyl-2,2,6,6-tetramethylpiperidin-4-yl)amino)triazin-2-yl)-4,7-diazadecane-1,10-diamine	DNEL	Long term Oral	0.025 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	0.16 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	0.176 mg/m ³	Workers	Systemic	
	DNEL	Long term Dermal	0.25 mg/kg bw/day	General population	Systemic	

Cover PE (TGIC) (B009)

SECTION 8: Exposure controls/personal protection

titanium dioxide	DNEL	Long term Inhalation	0.34 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	28 µg/m ³	General population	Local
	DNEL	Long term Inhalation	170 µg/m ³	Workers	Local
2,4,8,10-tetraoxa-3,9-diphosphaspiro [5.5]undecane, 3,9-bis[2,4-bis (1,1-dimethylethyl)phenoxy]-	DNEL	Long term Oral	0.39 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.39 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	0.68 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	0.78 mg/kg bw/day	Workers	Systemic
bismuth tris(2-ethylhexanoate)	DNEL	Long term Inhalation	2.75 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	0.21 mg/m ³	General population	Systemic
	DNEL	Long term Oral	0.24 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.24 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.48 mg/kg bw/day	Workers	Systemic
2-ethylhexanoic acid	DNEL	Long term Inhalation	0.85 mg/m ³	Workers	Systemic
	DNEL	Long term Oral	1 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	1 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	2 mg/kg bw/day	Workers	Systemic
dioctyltin dilaurate	DNEL	Long term Inhalation	3.5 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	14 mg/m ³	Workers	Systemic
	DNEL	Long term Oral	0.0005 mg/kg bw/day	General population	Systemic
benzothiazole-2-thiol	DNEL	Long term Inhalation	0.0009 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	0.0035 mg/m ³	Workers	Systemic
	DNEL	Long term Oral	1.25 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	2.2 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	2.5 mg/kg bw/day	General population	Systemic
benzothiazole-2-thiol	DNEL	Long term Dermal	5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	8.8 mg/m ³	Workers	Systemic
	DNEL	Short term Oral	10 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	17.6 mg/m ³	General population	Systemic
	DNEL	Short term Dermal	20 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	40 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	70.4 mg/m ³	Workers	Systemic

Cover PE (TGIC) (B009)

SECTION 8: Exposure controls/personal protection

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls : Avoid breathing dust. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain exposure to dusts below the OEL, suitable respiratory protection must be worn.

The recommended OEL for coating powders containing TGIC is 3 mg/m³. This OEL must be considered as a maximum exposure limit averaged over the measured time period (the normal time period in a working day is 8 hours), not normally to be exceeded. All reasonable practical attempts should be made to keep the actual levels as low as possible.

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 to ISO 16321-1:2022 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

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Gloves

Wear suitable gloves tested to ISO 374-1:2016.

Recommended, gloves(breakthrough time) > 8 hours: neoprene (> 0.35 mm), PVC (> 0.5 mm), butyl rubber (> 0.4 mm)

May be used, gloves(breakthrough time) 4 - 8 hours: polyvinyl alcohol (PVA) (> 0.3 mm), nitrile rubber (> 0.75 mm)

For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistant gloves.

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 : Personnel should wear protective clothing. Care should be taken in the selection of protective clothing to ensure that inflammation and irritation of the skin at the neck and wrists through contact with the powder are avoided.

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.

Cover PE (TGIC) (B009)

SECTION 8: Exposure controls/personal protection

- Respiratory protection** : If workers are exposed to concentrations above the exposure limit, they must use a respirator according to EN 140. If dust is generated and ventilation is inadequate, use respirator that will protect against dust/mist. (FFP2 / N95).
- Environmental exposure controls** : Do not allow to enter drains or watercourses.

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** : Solid. Powder.
- Colour** : Various.
- Odour** : Odourless.
- Odour threshold** : Not applicable.
- Melting point (dust)** : 85 - 115 °C
- Initial boiling point and boiling range** : Not applicable.
- Lower explosion limit (dust)** : 30 g/m³ (EN 14034-3)
- Minimum ignition energy (mJ)** : 10 - 30 (EN 13821)
- Flash point** :
- Auto-ignition temperature** : > 400°C
- Decomposition temperature** : >230°C
- pH** : Not applicable.
- Viscosity** : Not applicable.
- Solubility in water** : cold water Not soluble
hot water Not soluble
- Partition coefficient: n-octanol/water** : Not applicable.
- Vapour pressure** : Not applicable.
- Evaporation rate** : Not applicable.
- Density** : 1.2 to 1.9 g/cm³
- Vapour density** : Not applicable.
- Explosive properties** : Not available.
- Oxidising properties** : Not available.
- Particle characteristics**
- Median particle size** : Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

- 10.1 Reactivity** : Fine dust clouds may form explosive mixtures with air.
- 10.2 Chemical stability** : Stable under recommended storage and handling conditions (see Section 7).
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame).
Take precautionary measures against electrostatic discharges.
To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material.

Cover PE (TGIC) (B009)

SECTION 10: Stability and reactivity

Prevent dust accumulation.

10.5 Incompatible materials : Not applicable.**10.6 Hazardous decomposition products** : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.**SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

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.

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. Coating powders can cause localised skin irritation in folds of the skin or under tight clothing.

Toxicological results of tests made on mixtures containing TGIC showed
 Acute toxicity: LD50 (oral), 16g/kg body weight, LC50 (inhalation) > 11g/m³
 Sensitisation: Can provoke contact allergic reactions in humans
 Mutagenicity: Ames test: negative
 Chromosomal aberration test in mouse spermatogonial assay: positive
 Dominant lethal assay: negative

Caprolactam is classified as hazardous to human health and the toxicity effects are described by the following hazard statements: Harmful if swallowed or if inhaled (H302 + H332), Causes skin irritation (H315), Causes serious eye irritation (H319), May cause respiratory irritation (H335).

Contains 1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione, Reaction mass of bis(2,3-epoxypropyl) terephthalate (CAS 7195-44-0) and tris(oxiranylmethyl) benzene- 1,2,4-tricarboxylate (CAS 7237-83-4), zinc di(benzothiazol-2-yl) disulphide, N,N',N'',N'''-tetrakis(4,6-bis(butyl-(N-methyl-2,2,6,6-tetramethylpiperidin-4-yl)amino) triazin-2-yl)-4,7-diazadecane-1,10-diamine, benzothiazole-2-thiol. May produce an allergic reaction.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1h,3h,5h)-trione	LD50 Oral	Rat	138 mg/kg	-
zinc di(benzothiazol-2-yl) disulphide	LD50 Oral	Rat	540 mg/kg	-
benzothiazole-2-thiol	LD50 Dermal	Rabbit	>7940 mg/kg	-

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Cover PE (TGIC) (B009)	995.3	N/A	N/A	35.8	N/A
1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1h,3h,5h)-trione	100	N/A	N/A	3	N/A
Reaction mass of bis(2,3-epoxypropyl) terephthalate (CAS 7195-44-0) and tris(oxiranylmethyl) benzene- 1,2,4-tricarboxylate (CAS 7237-83-4)	500	N/A	N/A	N/A	N/A

Irritation/Corrosion

Cover PE (TGIC) (B009)

SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1h,3h,5h)-trione	Eyes - Irritant	Mammal - species unspecified	-	-	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
titanium dioxide	Skin - Mild irritant	Human	-	72 hours	-
	Skin - Severe irritant	Rabbit	-	0.5 Grams	-
3,9-diphosphaspiro[5.5]undecane, 3,9-bis[2,4-bis(1,1-dimethylethyl)phenoxy]-zinc	Skin - Mild irritant	Human	-	72 hours 300 Micrograms	-
				Intermittent	
2-ethylhexanoic acid	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Rabbit	-	450 milligrams	-

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1h,3h,5h)-trione	skin	Mammal - species unspecified	Sensitising
zinc di(benzothiazol-2-yl)disulphide	skin	Mammal - species unspecified	Sensitising
N,N,N,N-tetrakis(4,6-bis(butyl-(N-methyl-2,2,6,6-tetramethylpiperidin-4-yl)amino)triazin-2-yl)-4,7-diazadecane-1,10-diamine	skin	Mammal - species unspecified	Sensitising
benzothiazole-2-thiol	skin	Mammal - species unspecified	Sensitising

Mutagenicity

May cause genetic defects.

Carcinogenicity

No known significant effects or critical hazards.

Reproductive toxicity

Developmental effects : May damage the unborn child.

Fertility effects : May damage fertility.

Teratogenicity

May damage the unborn child.

Specific target organ toxicity (single exposure)

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

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1h,3h,5h)-trione	Category 2	-	-
Reaction mass of bis(2,3-epoxypropyl) terephthalate (CAS 7195-44-0) and tris(oxiranylmethyl) benzene-1,2,4-tricarboxylate (CAS 7237-83-4)	Category 2	oral	reproductive organs
Cyclohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethyl-, homopolymer, caprolactam-blocked	Category 1	inhalation	-
N,N,N,N-tetrakis(4,6-bis(butyl-(N-methyl-	Category 2	-	lymphatic system

Cover PE (TGIC) (B009)

SECTION 11: Toxicological information

2,2,6,6-tetramethylpiperidin-4-yl)amino)triazin-2-yl) -4,7-diazadecane-1,10-diamine dioctyltin dilaurate	Category 1	-	immune system
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Aspiration hazard

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

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

There are no data available on the mixture itself.

Coating powder residues should not be allowed to enter drains or watercourses or be deposited where they could affect ground or surface waters.

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
zinc di(benzothiazol-2-yl) disulphide	Acute EC50 0.71 mg/l	Daphnia	48 hours
titanium dioxide	Acute LC50 0.73 mg/l	Fish	96 hours
	Chronic NOEC 0.041 mg/l	Fish	89 days
	Acute LC50 3 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 6.5 mg/l Fresh water	Daphnia - Daphnia pulex - Neonate	48 hours
2,4,8,10-tetraoxa-3,9-diphosphaspiro[5.5]undecane, 3,9-bis[2,4-bis(1,1-dimethylethyl)phenoxy]-	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours
	Acute EC10 15.4 mg/l	Algae	72 hours
zinc	Acute EC50 97 mg/l	Algae	72 hours
	Acute LC50 70.7 mg/l	Fish	96 hours
	Chronic NOEC 0.1 mg/l	Daphnia	21 days
benzothiazole-2-thiol	Acute LC50 330 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 0.78 mg/l Fresh water	Fish	96 hours
	Acute EC50 230 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 4.19 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute EC50 2.9 mg/l Fresh water Acute LC50 0.73 mg/l Fresh water	Daphnia - Daphnia magna Fish - Oncorhynchus mykiss	48 hours 96 hours

Conclusion/Summary : This material is toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
zinc	-	-	Not readily
benzothiazole-2-thiol	-	-	Not readily

Cover PE (TGIC) (B009)

SECTION 12: Ecological information**12.3 Bioaccumulative potential**

Product/ingredient name	LogP _{ow}	BCF	Potential
1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6-(1h,3h,5h)-trione	-0.8	-	low
zinc di(benzothiazol-2-yl)disulphide	5.02	<8	low
N,N,N,N-tetrakis(4,6-bis(butyl-(N-methyl-2,2,6,6-tetramethylpiperidin-4-yl)amino)triazin-2-yl)-4,7-diazadecane-1,10-diamine	-0.94	-	low
2-ethylhexanoic acid	2.7	-	low
dioctyltin dilaurate	-	<100	low
benzothiazole-2-thiol	2.42	18.35	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : 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

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**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 : Yes.

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:

Cover PE (TGIC) (B009)

SECTION 13: Disposal considerations

Waste code	Waste designation
08 01 11*	Waste paint and varnish containing organic solvents or other dangerous substances

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.

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.

Type of packaging	European waste catalogue (EWC)
CEPE Guidelines	15 01 10* packaging containing residues of or contaminated by hazardous substances

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.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	UN3077	UN3077	UN3077	UN3077
14.2 UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. (zinc di (benzothiazol-2-yl) disulphide)	Environmentally hazardous substance, solid, n.o.s. (zinc di (benzothiazol-2-yl) disulphide)	Environmentally hazardous substance, solid, n.o.s. (zinc di (benzothiazol-2-yl) disulphide). Marine pollutant (Reaction mass of bis (2,3-epoxypropyl) terephthalate (CAS 7195-44-0) and tris (oxiranylmethyl) benzene-1,2,4-tricarboxylate (CAS 7237-83-4), zinc di(benzothiazol-2-yl) disulphide)	Environmentally hazardous substance, solid, n.o.s. (zinc di (benzothiazol-2-yl) disulphide)
14.3 Transport hazard class(es)	9  	9  	9  	9  
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes.

Additional information

Cover PE (TGIC) (B009)

SECTION 14: Transport information

- ADR/RID** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
Hazard identification number 90
Tunnel code (-)
- ADN** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
- IMDG** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
Emergency schedules F-A, S-F
- IATA** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

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.

14.7 Maritime transport in bulk according to IMO instruments : Not available.

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

Intrinsic property	Ingredient name	Status	Reference number	Date of revision
Mutagen	1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6 (1h,3h,5h)-trione	Candidate	ED/87/2012	18.06.2012
Toxic to reproduction	dioctyltin dilaurate	Candidate	D(2020) 9139-DC	19.01.2021

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Restricted to professional users.

Other EU regulations

- VOC** : The provisions of Directive 2004/42/EC on VOC apply to this product. Refer to the product label and/or technical data sheet for further information.
- VOC for Ready-for-Use Mixture** : Not available.
- Industrial emissions (integrated pollution prevention and control) - Air** : Not listed

Cover PE (TGIC) (B009)

SECTION 15: Regulatory information

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

Ozone depleting substances (1005/2009/EU)

Not listed.

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

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product may add to the calculation for determining whether a site is within the scope of the Seveso Directive on major accident hazards.

National regulations

Industrial use : The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

Norway

Product registration number : Under declaration

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 : 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]

Cover PE (TGIC) (B009)

SECTION 16: Other information

Classification	Justification
Acute Tox. 4, H302	Calculation method
Eye Dam. 1, H318	Calculation method
Skin Sens. 1, H317	Calculation method
Muta. 1B, H340	Calculation method
Repr. 1B, H360	Calculation method
STOT RE 2, H373	Calculation method
Aquatic Chronic 2, H411	Calculation method

Full text of abbreviated H statements

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H340	May cause genetic defects.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H360D	May damage the unborn child.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
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. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Carc. 2	CARCINOGENICITY - Category 2
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Muta. 1B	GERM CELL MUTAGENICITY - Category 1B
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
Repr. 2	REPRODUCTIVE TOXICITY - Category 2
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2

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