



Compound 53-1 Part A - Resin

KonNx UK

Chemwatch: 5633-30

Version No: 7.1

Safety data sheet according to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

Chemwatch Hazard Alert Code: 3

Initial Date: 20/10/2023

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Print Date: 08/10/2025

L.REACH.GB.EN.E

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

1.1. Product Identifier

Product name	Compound 53-1 Part A - Resin
Chemical Name	Not Applicable
Synonyms	Not Available
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains butylated triphenyl phosphate)
Chemical formula	Not Applicable
Other means of identification	Not Available

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

Relevant identified uses	Electro Insulating Resin. Use according to manufacturer's directions.
Uses advised against	No specific uses advised against are identified.

1.3. Details of the manufacturer or importer of the safety data sheet

Registered company name	KonNx UK
Address	St James Building 79 Oxford St Manchester M1 6HT United Kingdom
Telephone	+61 7 49784000
Fax	Not Available
Website	https://konnx.co.uk
Email	Konnx@konnx.co.uk

1.4. Emergency telephone number

Association / Organisation	CHEMWATCH EMERGENCY RESPONSE (24/7)
Emergency telephone number(s)	+44 20 3901 3542 (ID#: 5633-30)
Other emergency telephone number(s)	+44 808 164 9592

SECTION 2 Hazards identification

2.1. Classification of the substance or mixture

Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567 ^[1]	H317 - Sensitisation (Skin) Category 1, H319 - Serious Eye Damage/Eye Irritation Category 2, H341 - Germ Cell Mutagenicity Category 2, H361d - Reproductive Toxicity Category 2, H411 - Hazardous to the Aquatic Environment Long-Term Hazard Category 2
Legend:	1. Classified by Chemwatch; 2. Classification drawn from GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567

2.2. Label elements

Hazard pictogram(s)	
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Signal word	Warning				
Hazard statement(s)					
H317	May cause an allergic skin reaction.				
H319	Causes serious eye irritation.				
H341	Suspected of causing genetic defects.				
H361d	Suspected of damaging the unborn child.				
H411	Toxic to aquatic life with long lasting effects.				
Supplementary statement(s)					
EUH066	Repeated exposure may cause skin dryness or cracking.				
Precautionary statement(s) Prevention					
P202	Do not handle until all safety precautions have been read and understood.				
P280	Wear protective gloves, protective clothing, eye protection and face protection.				
P261	Avoid breathing mist/vapours/spray.				
P273	Avoid release to the environment.				
P264	Wash all exposed external body areas thoroughly after handling.				
P272	Contaminated work clothing should not be allowed out of the workplace.				
Precautionary statement(s) Response					
P308+P313	IF exposed or concerned: Get medical advice/ attention.				
P302+P352	IF ON SKIN: Wash with plenty of water and soap.				
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.				
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.				
P337+P313	If eye irritation persists: Get medical advice/attention.				
P362+P364	Take off contaminated clothing and wash it before reuse.				
P391	Collect spillage.				
Precautionary statement(s) Storage					
P405	Store locked up.				
Precautionary statement(s) Disposal					
P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.				
Material contains butylated triphenyl phosphate, silica crystalline - quartz, triethylenediamine.					
2.3. Other hazards					
Inhalation, skin contact and/or ingestion may produce health damage*.					
Cumulative effects may result following exposure*.					
Possible cancer-causing agent*.					
*LIMITED EVIDENCE					
REACH - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date.					
This substance/mixture does not meet the criteria for classification as Persistent, Bioaccumulative, and Toxic (PBT) in accordance with Annex XIII, Commission Delegated Regulation (EU) 2017/2100, and Commission Regulation (EU) 2018/605.					
This substance/mixture does not meet the criteria for classification as very Persistent and very Bioaccumulative (vPvB) in accordance with Annex XIII, Commission Delegated Regulation (EU) 2017/2100, and Commission Regulation (EU) 2018/605.					
This substance/mixture does not meet the criteria for classification as Persistent, Mobile and Toxic (PMT) in accordance with Commission Delegated Regulation (EU) 2023/707.					
This substance/mixture does not meet the criteria for classification as very Persistent and very Mobile (vPvM) in accordance with Commission Delegated Regulation (EU) 2023/707.					
The substance/mixture does not contain components considered to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605, nor is it included in the list established under REACH Article 59(1), at concentrations equal to or greater than 0.1% (w/w).					
No further product hazard information.					
SECTION 3 Composition / information on ingredients					
3.1.Substances					
See 'Composition on ingredients' in Section 3.2					
3.2.Mixtures					
1. CAS No 2.EC No 3.Index No 4.REACH No	%[weight]	Name	Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567	SCL / M-Factor	Nanoform Particle Characteristics
1. 25791-96-2 2.500-044-5	20	polypropylene glycol glyceryl ether	Non hazardous ^[1]	SCL: Not Available	Not Available

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1. CAS No 2. EC No 3. Index No 4. REACH No	%[weight]	Name	Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567	SCL / M-Factor	Nanoform Particle Characteristics
3. Not Available 4. Not Available				Acute M factor: Not Applicable Chronic M factor: Not Applicable	
1. 68937-40-6 2. 273-065-8 3. Not Available 4. Not Available	8	<u>butylated triphenyl phosphate</u>	Acute Toxicity (Oral) Category 4, Sensitisation (Skin) Category 1, Germ Cell Mutagenicity Category 2, Reproductive Toxicity Category 2, Hazardous to the Aquatic Environment Long-Term Hazard Category 1; H302, H317, H341, H361d, H410 ^[1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: 1	Not Available
1. 69102-90-5 2. Not Available 3. Not Available 4. Not Available	15	<u>butadiene homopolymer, hydroxyl functionalised</u>	Non hazardous; EUH066 ^[1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 21645-51-2 2. 244-492-7 3. Not Available 4. Not Available	53	<u>aluminium hydroxide</u>	Serious Eye Damage/Eye Irritation Category 2; H319, EUH066 ^[1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 14808-60-7 2. 238-878-4 3. Not Available 4. Not Available	2.5	<u>silica crystalline - quartz</u>	Specific Target Organ Toxicity - Repeated Exposure Category 2; H373 ^[1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 280-57-9 2. 205-999-9 3. Not Available 4. Not Available	0.5	<u>triethylenediamine</u>	Flammable Solids Category 2, Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 1B, Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 1, Sensitisation (Respiratory) Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 3; H228, H302, H314, H317, H318, H334, H412 ^[1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 1309-37-1 2. 215-168-2 3. Not Available 4. Not Available	1	<u>red iron oxide</u>	Non hazardous ^[1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
Legend: 1. Classified by Chemwatch; 2. Classification drawn from GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567; 3. Classification drawn from C&L; * EU IOELVs available; [e] Substance identified as having endocrine disrupting properties					

SECTION 4 First aid measures

4.1. Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: - Wash out immediately with fresh running water. - Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. - Seek medical attention without delay; if pain persists or recurs seek medical attention. - Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If product comes in contact with skin: - Contact a Poisons Information Centre or a doctor. DO NOT allow clothing wet with product to remain in contact with skin, strip all contaminated clothing including boots. - Quickly wash affected areas vigorously with soap and water. DO NOT give anything by mouth to a patient showing signs of narcosis, i.e. losing consciousness. - Give atropine if instructed. DO NOT delay, get to a doctor or hospital quickly.
Inhalation	- If spray mist, vapour are inhaled, remove from contaminated area. - Contact a Poisons Information Centre or a doctor at once. - Lay patient down in a clean area and strip any clothing wet with spray. - Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. - Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. DO NOT give anything by mouth to a patient showing signs of narcosis, i.e. losing consciousness. - Give atropine if instructed. - Get to doctor or hospital quickly.
Ingestion	If swallowed: Contact a Poisons Information Centre or a doctor at once.

Continued...

- ▶ If swallowed, activated charcoal may be advised.
- ▶ Give atropine if instructed.
- ▶ **REFER FOR MEDICAL ATTENTION WITHOUT DELAY.**
- ▶ In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.
- ▶ If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided.
- ▶ Further action will be the responsibility of the medical specialist.
- ▶ If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Firefighting measures

5.1. Extinguishing media

- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.
- ▶ Water spray or fog - Large fires only.

5.2. Special hazards arising from the substrate or mixture

Fire Incompatibility

- ▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

5.3. Advice for firefighters

Fire Fighting

- ▶ Alert Fire Brigade and tell them location and nature of hazard.
- ▶ Wear full body protective clothing with breathing apparatus.
- ▶ Prevent, by any means available, spillage from entering drains or water course.
- ▶ Use water delivered as a fine spray to control fire and cool adjacent area.
- ▶ Avoid spraying water onto liquid pools.
- ▶ **DO NOT** approach containers suspected to be hot.
- ▶ Cool fire exposed containers with water spray from a protected location.
- ▶ If safe to do so, remove containers from path of fire.

Fire/Explosion Hazard

- ▶ Combustible.
 - ▶ Slight fire hazard when exposed to heat or flame.
 - ▶ Heating may cause expansion or decomposition leading to violent rupture of containers.
 - ▶ On combustion, may emit toxic fumes of carbon monoxide (CO).
 - ▶ May emit acrid smoke.
 - ▶ Mists containing combustible materials may be explosive.
- Combustion products include:
 carbon dioxide (CO₂)
 phosphorus oxides (PO_x)
 silicon dioxide (SiO₂)
 metal oxides
 other pyrolysis products typical of burning organic material.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

See section 8

6.2. Environmental precautions

See section 12

6.3. Methods and material for containment and cleaning up

Minor Spills

- Environmental hazard - contain spillage.
- ▶ Clean up all spills immediately.
 - ▶ Avoid breathing vapours and contact with skin and eyes.
 - ▶ Control personal contact with the substance, by using protective equipment.
 - ▶ Contain and absorb spill with sand, earth, inert material or vermiculite.
 - ▶ Wipe up.
 - ▶ Place in a suitable, labelled container for waste disposal.

Major Spills

- ▶ Clear area of personnel and move upwind.
 - ▶ Alert Fire Brigade and tell them location and nature of hazard.
 - ▶ Wear full body protective clothing with breathing apparatus.
 - ▶ Prevent, by all means available, spillage from entering drains or water courses.
 - ▶ Consider evacuation (or protect in place).
 - ▶ No smoking, naked lights or ignition sources.
 - ▶ Increase ventilation.
 - ▶ Stop leak if safe to do so.
 - ▶ Water spray or fog may be used to disperse / absorb vapour.
 - ▶ Contain or absorb spill with sand, earth or vermiculite.
 - ▶ Collect recoverable product into labelled containers for recycling.
 - ▶ Collect solid residues and seal in labelled drums for disposal.
 - ▶ Wash area and prevent runoff into drains.
 - ▶ After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
 - ▶ If contamination of drains or waterways occurs, advise emergency services.
- Environmental hazard - contain spillage.
 Chemical Class: organophosphates
 For release onto land: recommended sorbents listed in order of priority.

	SORBENT TYPE	RANK	APPLICATION	COLLECTION	LIMITATIONS
	LAND SPILL - SMALL				
	cross-linked polymer - particulate	1	shovel	shovel	R, W, SS
	cross-linked polymer - pillow	1	throw	pitchfork	R, DGC, RT
	wood fiber - pillow	1	throw	pitchfork	R,P, DGC, RT
	foamed glass - pillow	2	shovel	shovel	R, W, P, DGC
	sorbent clay - particulate	2	shovel	shovel	R, I, P
	wood fibre - particulate	3	shovel	shovel	R,W, P, DGC
	LAND SPILL - MEDIUM				
	cross-linked polymer -particulate	1	blower	skiploader	R, W, SS
	sorbent clay - particulate	2	blower	skiploader	R, I, P
	polypropylene - particulate	2	blower	skiploader	R, SS, DGC
	expanded mineral - particulate	3	blower	skiploader	R,I, W, P, DGC
	wood fiber- particulate	3	blower	skiploader	R, W, P, DGC
	polypropylene - mat	3	throw	skiploader	DGC, RT
	Legend				
	DGC: Not effective where ground cover is dense				
	R; Not reusable				
	I: Not incinerable				
	P: Effectiveness reduced when rainy				
	RT:Not effective where terrain is rugged				
	SS: Not for use within environmentally sensitive sites				
	W: Effectiveness reduced when windy				
	Reference: Sorbents for Liquid Hazardous Substance Cleanup and Control; R.W Melvold et al: Pollution Technology Review No. 150: Noyes Data Corporation 1988				

6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Safe handling	▶ DO NOT allow clothing wet with material to stay in contact with skin ▶ Avoid all personal contact, including inhalation. ▶ Wear protective clothing when risk of exposure occurs. ▶ Use in a well-ventilated area. ▶ Prevent concentration in hollows and sumps. ▶ DO NOT enter confined spaces until atmosphere has been checked. ▶ Avoid smoking, naked lights or ignition sources. ▶ Avoid contact with incompatible materials. ▶ When handling, DO NOT eat, drink or smoke. ▶ Keep containers securely sealed when not in use. ▶ Avoid physical damage to containers. ▶ Always wash hands with soap and water after handling. ▶ Work clothes should be laundered separately. ▶ Use good occupational work practice. ▶ Observe manufacturer's storage and handling recommendations contained within this SDS. ▶ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.
Fire and explosion protection	See section 5
Other information	▶ Store in original containers. ▶ Keep containers securely sealed. ▶ Store in a cool, dry, well-ventilated area. ▶ Store away from incompatible materials and foodstuff containers. ▶ Protect containers against physical damage and check regularly for leaks. ▶ Observe manufacturer's storage and handling recommendations contained within this SDS.

7.2. Conditions for safe storage, including any incompatibilities

Suitable container	▶ Glass container is suitable for laboratory quantities ▶ Metal can or drum ▶ Packaging as recommended by manufacturer. ▶ Check all containers are clearly labelled and free from leaks.
Storage incompatibility	▶ Avoid strong acids, bases. ▶ Avoid reaction with oxidising agents
Hazard categories in accordance with Regulation (EC) No 2012/18/EU (Seveso III)	E2: Hazardous to the Aquatic Environment in Category Chronic 2
Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of	E2 Lower- / Upper-tier requirements: 200 / 500

7.3. Specific end use(s)

See section 1.2

SECTION 8 Exposure controls / personal protection

8.1. Control parameters

Ingredient	DNELs Exposure Pattern Worker	PNECs Compartment
polypropylene glycol glyceryl ether	Dermal 13.9 mg/kg bw/day (Systemic, Chronic) Inhalation 98 mg/m³ (Systemic, Chronic) Dermal 8.3 mg/kg bw/day (Systemic, Chronic) * Inhalation 29 mg/m³ (Systemic, Chronic) * Oral 8.3 mg/kg bw/day (Systemic, Chronic) *	0.2 mg/L (Water (Fresh)) 1 mg/L (Water - Intermittent release) 0.02 mg/L (Water (Marine)) 0.52 mg/kg sediment dw (Sediment (Fresh Water)) 0.052 mg/kg sediment dw (Sediment (Marine)) 0.067 mg/kg soil dw (Soil) 1000 mg/L (STP)
aluminium hydroxide	Inhalation 10.76 mg/m³ (Systemic, Chronic) Inhalation 10.76 mg/m³ (Local, Chronic) Oral 4.74 mg/kg bw/day (Systemic, Chronic) *	Not Available
triethylenediamine	Dermal 1.4 mg/kg bw/day (Systemic, Chronic) Inhalation 8.24 mg/m³ (Systemic, Chronic) Dermal 0.5 mg/kg bw/day (Systemic, Chronic) * Inhalation 1.46 mg/m³ (Systemic, Chronic) * Oral 0.5 mg/kg bw/day (Systemic, Chronic) *	0.1 mg/L (Water (Fresh)) 1 mg/L (Water - Intermittent release) 0.01 mg/L (Water (Marine)) 1.3 mg/kg sediment dw (Sediment (Fresh Water)) 0.13 mg/kg sediment dw (Sediment (Marine)) 0.19 mg/kg soil dw (Soil) 200 mg/L (STP)

* Values for General Population

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
UK Workplace Exposure Limits (WELs).	silica crystalline - quartz	Silica, respirable crystalline (respirable fraction)	0.1 mg/m3	Not Available	Not Available	Carc (where generated as a result of a work process)
UK Workplace Exposure Limits (WELs).	red iron oxide	Iron oxide, fume (as Fe)	5 mg/m3	10 mg/m3	Not Available	Not Available
UK Workplace Exposure Limits (WELs).	red iron oxide	Rouge: total inhalable	10 mg/m3	Not Available	Not Available	Not Available
UK Workplace Exposure Limits (WELs).	red iron oxide	Rouge: respirable	4 mg/m3	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
polypropylene glycol glyceryl ether	Not Available	Not Available
butylated triphenyl phosphate	Not Available	Not Available
butadiene homopolymer, hydroxyl functionalised	Not Available	Not Available
aluminium hydroxide	Not Available	Not Available
silica crystalline - quartz	25 mg/m3 / 50 mg/m3	Not Available
triethylenediamine	Not Available	Not Available
red iron oxide	2,500 mg/m3	Not Available

MATERIAL DATA

8.2. Exposure controls

8.2.1. Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure. ▶ Employees exposed to confirmed human carcinogens should be authorized to do so by the employer, and work in a regulated area. ▶ Work should be undertaken in an isolated system such as a "glove-box" . Employees should wash their hands and arms upon completion of the assigned task and before engaging in other activities not associated with the isolated system. ▶ Within regulated areas, the carcinogen should be stored in sealed containers, or enclosed in a closed system, including piping systems, with any sample ports or openings closed while the carcinogens are contained within. ▶ Open-vessel systems are prohibited. ▶ Each operation should be provided with continuous local exhaust ventilation so that air movement is always from ordinary work areas to the operation. ▶ Exhaust air should not be discharged to regulated areas, non-regulated areas or the external environment unless decontaminated. Clean make-up air should be introduced in sufficient volume to maintain correct operation of the local exhaust system. ▶ For maintenance and decontamination activities, authorized employees entering the area should be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood. Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood. ▶ Except for outdoor systems, regulated areas should be maintained under negative pressure (with respect to non-regulated areas). ▶ Local exhaust ventilation requires make-up air be supplied in equal volumes to replaced air. ▶ Laboratory hoods must be designed and maintained so as to draw air inward at an average linear face velocity of 0.76 m/sec with a minimum of 0.64 m/sec. Design and construction of the fume hood requires that insertion of any portion of the employees body, other than hands and arms, be disallowed.
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8.2.2. Individual protection measures, such as personal protective equipment	
Eye and face protection	When handling very small quantities of the material eye protection may not be required. For laboratory, larger scale or bulk handling or where regular exposure in an occupational setting occurs: ▶ Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent] ▶ Face shield. Full face shield may be required for supplementary but never for primary protection of eyes. ▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].
Skin protection	See Hand protection below
Hands/feet protection	NOTE: ▶ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. ▶ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended. Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: · frequency and duration of contact, · chemical resistance of glove material, · glove thickness and · dexterity Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent). · When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. · When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. · Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use. · Contaminated gloves should be replaced. As defined in ASTM F-739-96 in any application, gloves are rated as: · Excellent when breakthrough time > 480 min · Good when breakthrough time > 20 min · Fair when breakthrough time < 20 min · Poor when glove material degrades For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended. It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times. Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers technical data should always be taken into account to ensure selection of the most appropriate glove for the task. Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example: · Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of. · Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended. ▶ Rubber gloves (nitrile or low-protein, powder-free latex, latex/ nitrile). Employees allergic to latex gloves should use nitrile gloves in preference. ▶ Double gloving should be considered. ▶ PVC gloves. ▶ Change gloves frequently and when contaminated, punctured or torn. ▶ Wash hands immediately after removing gloves. ▶ Protective shoe covers. [AS/NZS 2210] ▶ Head covering.
Body protection	See Other protection below
Other protection	▶ Employees working with confirmed human carcinogens should be provided with, and be required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area. [AS/NZS ISO 6529:2006 or national equivalent] ▶ Employees engaged in handling operations involving carcinogens should be provided with, and required to wear and use half-face filter-type respirators with filters for dusts, mists and fumes, or air purifying canisters or cartridges. A respirator affording higher levels of protection may be substituted. [AS/NZS 1715 or national equivalent] ▶ Emergency deluge showers and eyewash fountains, supplied with potable water, should be located near, within sight of, and on the same level with locations where direct exposure is likely. ▶ Prior to each exit from an area containing confirmed human carcinogens, employees should be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers must be identified with suitable labels. For maintenance and decontamination activities, authorized employees entering the area should be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood. ▶ Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood. ▶ For quantities up to 500 grams a laboratory coat may be suitable. ▶ For quantities up to 1 kilogram a disposable laboratory coat or coverall of low permeability is recommended. Coveralls should be buttoned at collar and cuffs. ▶ For quantities over 1 kilogram and manufacturing operations, wear disposable coverall of low permeability and disposable shoe covers. ▶ For manufacturing operations, air-supplied full body suits may be required for the provision of advanced respiratory protection. ▶ Eye wash unit. ▶ Ensure there is ready access to an emergency shower.

► For Emergencies: Vinyl suit

Respiratory protection

Type AK-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	AK-AUS P2	-	AK-PAPR-AUS / Class 1 P2
up to 50 x ES	-	AK-AUS / Class 1 P2	-
up to 100 x ES	-	AK-2 P2	AK-PAPR-2 P2 ^

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO₂), G = Agricultural chemicals, K = Ammonia(NH₃), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

If inhalation risk above the TLV exists, wear approved dust respirator.

Use respirators with protection factors appropriate for the exposure level.

- Up to 5 X TLV, use valveless mask type; up to 10 X TLV, use 1/2 mask dust respirator
- Up to 50 X TLV, use full face dust respirator or demand type C air supplied respirator
- Up to 500 X TLV, use powered air-purifying dust respirator or a Type C pressure demand supplied-air respirator
- Over 500 X TLV wear full-face self-contained breathing apparatus with positive pressure mode or a combination respirator with a Type C positive pressure supplied-air full-face respirator and an auxiliary self-contained breathing apparatus operated in pressure demand or other positive pressure mode

8.2.3. Environmental exposure controls

See section 12

SECTION 9 Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Appearance	Odourless red oxide coloured liquid.		
Physical state	Liquid	Relative density (Water = 1)	1.40-1.45
Odour	No Odour	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Applicable	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	6000-6500
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	>200	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (1%)	Not Applicable
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available
Heat of Combustion (kJ/g)	Not Available	Ignition Distance (cm)	Not Available
Flame Height (cm)	Not Available	Flame Duration (s)	Not Available
Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	Enclosed Space Ignition Deflagration Density (g/m3)	Not Available
Nanoform Solubility	Not Available	Nanoform Particle Characteristics	Not Available
Particle Size	Not Available		

9.2. Other information

Not Available

SECTION 10 Stability and reactivity

10.1.Reactivity	See section 7.2
10.2. Chemical stability	▶ Unstable in the presence of incompatible materials. ▶ Product is considered stable. ▶ Hazardous polymerisation will not occur.
10.3. Possibility of hazardous reactions	See section 7.2
10.4. Conditions to avoid	See section 7.2
10.5. Incompatible materials	See section 7.2
10.6. Hazardous decomposition products	See section 5.3

SECTION 11 Toxicological information

11.1. Information on toxicological effects

a) Acute Toxicity	Based on available data, the classification criteria are not met.
b) Skin Irritation/Corrosion	Based on available data, the classification criteria are not met.
c) Serious Eye Damage/Irritation	There is sufficient evidence to classify this material as eye damaging or irritating
d) Respiratory or Skin sensitisation	There is sufficient evidence to classify this material as sensitising to skin or the respiratory system
e) Mutagenicity	There is sufficient evidence to classify this material as mutagenic
f) Carcinogenicity	Based on available data, the classification criteria are not met.
g) Reproductivity	There is sufficient evidence to classify this material as toxic to reproductivity
h) STOT - Single Exposure	Based on available data, the classification criteria are not met.
i) STOT - Repeated Exposure	Based on available data, the classification criteria are not met.
j) Aspiration Hazard	Based on available data, the classification criteria are not met.

Inhaled	The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation of vapours, fumes or aerosols, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress. Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.
Ingestion	Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.
Skin Contact	The liquid may be miscible with fats or oils and may degrease the skin, producing a skin reaction described as non-allergic contact dermatitis. The material is unlikely to produce an irritant dermatitis as described in EC Directives . Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye	This material causes serious eye irritation.
Chronic	Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems. Strong evidence exists that the substance may cause irreversible but non-lethal mutagenic effects following a single exposure. Practical experience shows that skin contact with the material is capable either of inducing a sensitisation reaction in a substantial number of individuals, and/or of producing a positive response in experimental animals. Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological, irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even to tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance who are likely to become hyper-responsive. Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing air-way hyper-responsiveness. The latter substances are not classified as asthmagens or respiratory sensitisers. Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance. On the basis of epidemiological data, the material is regarded as carcinogenic to humans. There is sufficient data to establish a causal association between human exposure to the material and the development of cancer. Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. Serious damage (clear functional disturbance or morphological change which may have toxicological significance) is likely to be caused by repeated or prolonged exposure. As a rule the material produces, or contains a substance which produces severe lesions. Such damage may become apparent following direct application in subchronic (90 day) toxicity studies or following sub-acute (28 day) or chronic (two-year) toxicity tests. There is sufficient evidence to provide a strong presumption that human exposure to the material may result in impaired fertility on the basis of: - clear evidence in animal studies of impaired fertility in the absence of toxic effects, or evidence of impaired fertility occurring at around the same dose levels as other toxic effects but which is not a secondary non-specific consequence of other toxic effects. There is sufficient evidence to provide a strong presumption that human exposure to the material may result in developmental toxicity, generally on the basis of: - clear results in appropriate animal studies where effects have been observed in the absence of marked maternal toxicity, or at around the same dose levels as other toxic effects but which are not secondary non-specific consequences of the other toxic effects. Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following. Exposure to the material may cause concerns for humans owing to possible developmental toxic effects, generally on the basis that results in appropriate animal studies provide strong suspicion of developmental toxicity in the absence of signs of marked maternal toxicity, or at around the same dose levels as other toxic effects but which are not a secondary non-specific consequence of other toxic effects.

	Not Available	Not Available
polypropylene glycol glyceryl ether	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg ^[1]	Eye: no adverse effect observed (not irritating) ^[1]
	Inhalation (Rat) LC50: >50 mg/L4h ^[2]	Skin (Rodent - rabbit): 500mg - Mild
	Oral (Rat) LD50: >2000 mg/kg ^[1]	Skin (Rodent - rabbit): 500mg - Mild
		Skin (Rodent - rabbit): 500mg - Mild
butylated triphenyl phosphate	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg ^[1]	Eye (Rodent - rabbit): 0.1mL - Mild
	Inhalation (Rat) LC50: >50 mg/L4h ^[2]	Eye (Rodent - rabbit): 0.1mL/30S - Mild
	Oral (Rat) LD50: 4700 mg/kg ^[1]	Skin (Rodent - rabbit): 0.5mL - Mild
		Skin (Rodent - rabbit): 500mg - Mild
butadiene homopolymer, hydroxyl functionalised	TOXICITY	IRRITATION
	Not Available	Not Available
aluminium hydroxide	TOXICITY	IRRITATION
	Inhalation (Rat) LC50: >2.3 mg/l4h ^[1]	Eye: no adverse effect observed (not irritating) ^[1]
	Oral (Rat) LD50: >2000 mg/kg ^[1]	Skin: no adverse effect observed (not irritating) ^[1]
silica crystalline - quartz	TOXICITY	IRRITATION
	Oral (Rat) LD50: 500 mg/kg ^[2]	Not Available
triethylenediamine	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg ^[1]	Eye (Rodent - rabbit): 25mg - Moderate
	Inhalation (Rat) LC50: >5.05 mg/l4h ^[1]	Eye: adverse effect observed (irritating) ^[1]
	Oral (Rat) LD50: 1700 mg/kg ^[2]	Skin (Rodent - rabbit): 2500ug - Mild
		Skin: adverse effect observed (irritating) ^[1]
red iron oxide	TOXICITY	IRRITATION
	Oral (Rat) LD50: >5000 mg/kg ^[2]	Eye: no adverse effect observed (not irritating) ^[1]
		Skin: no adverse effect observed (not irritating) ^[1]

Legend: 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

POLYPROPYLENE GLYCOL GLYCERYL ETHER	Data for Nixax Polyol L-56 Data for Nixax Polyol LG-168 * BASF Multiranol 9175 SDS
BUTYLATED TRIPHENYL PHOSPHATE	This material has been determined not to be a primary eye irritant in rabbits. This material has been determined not to be a primary skin irritant in rabbits. This product is expected to have low acute oral and dermal toxicity. No evidence of delayed neurotoxicity was observed in rats and hens following acute exposure. This material was not determined to be mutagenic in the Ames Test, in a mouse lymphoma forward mutation assay and a mouse lymphoma cytogenetic assay. * Chemtura MSDS (for similar product) In an oral reproductive/developmental toxicity study in rats, doses of 50, 250 or 1000 mg/kg/day were administered by gavage. During the study no treatment related effects were seen in any end points measured. There were no treatment related histological changes in the reproductive organs. Further, there were no significant differences in litter size or the number of live pups on postnatal days 0 and 4. The NOAEL for reproductive toxicity is 1000 mg/kg/day. A rat reproductive study is reported in the literature and was conducted using a butylated triphenyl phosphate based hydraulic fluid dosed at 600 mg/kg, 1,000 mg/kg and 1,700 mg/kg. The authors reported that fertility indices were reduced at doses of 1,000 mg/kg and higher. A NOAEL was established at 600 mg/kg. Because the report is unclear regarding the actual composition of the hydraulic fluid and certain deficiencies in study method exist (e.g. selection of rat strain, statistical analysis), this study may not accurately represent effects of all butylated triphenyl phosphate products. In an oral teratology study in rats, doses of 100, 400, or 1000 mg/kg/day was administered by gavage. There was no treatment related effects on the number of corpora lutea, implants, resorption sites, or live fetuses per dam. There was no effect on litter size or fetal weights for the mid and low dose groups. The high dose group showed significantly reduced foetal weights, probably due to maternal toxicity. There were no significant increases in external, soft tissue, or skeletal anomalies in any treatment group. Treatment did not result in developmental toxicity. Epidemiology studies completed in 1977 and 1985 of current and former workers at the production facility where Kronitex and Durad, natural and synthetic triaryl phosphate esters are manufactured have not demonstrated any unusual pattern of mortality or disease. The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
SILICA CRYSTALLINE - QUARTZ	WARNING: For inhalation exposure <u>ONLY</u>: This substance has been classified by the IARC as Group 1: CARCINOGENIC TO HUMANS The International Agency for Research on Cancer (IARC) has classified occupational exposures to respirable (<5 um) crystalline silica as being carcinogenic to humans . This classification is based on what IARC considered sufficient evidence from epidemiological studies of humans for the carcinogenicity of inhaled silica in the forms of quartz and cristobalite. Crystalline silica is also known to cause silicosis, a non-cancerous lung disease. Intermittent exposure produces; focal fibrosis, (pneumoconiosis), cough, dyspnoea, liver tumours. * Millions of particles per cubic foot (based on impinger samples counted by light field techniques). NOTE : the physical nature of quartz in the product determines whether it is likely to present a chronic health problem. To be a hazard the material must enter the breathing zone as respirable particles.

TRIETHYLENEDIAMINE	Allergic reactions which develop in the respiratory passages as bronchial asthma or rhinoconjunctivitis, are mostly the result of reactions of the allergen with specific antibodies of the IgE class and belong in their reaction rates to the manifestation of the immediate type. In addition to the allergen-specific potential for causing respiratory sensitisation, the amount of the allergen, the exposure period and the genetically determined disposition of the exposed person are likely to be decisive. Factors which increase the sensitivity of the mucosa may play a role in predisposing a person to allergy. They may be genetically determined or acquired, for example, during infections or exposure to irritant substances. Immunologically the low molecular weight substances become complete allergens in the organism either by binding to peptides or proteins (haptens) or after metabolism (prohaptens). Particular attention is drawn to so-called atopic diathesis which is characterised by an increased susceptibility to allergic rhinitis, allergic bronchial asthma and atopic eczema (neurodermatitis) which is associated with increased IgE synthesis. Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure. The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.
POLYPROPYLENE GLYCOL GLYCERYL ETHER & BUTYLATED TRIPHENYL PHOSPHATE & TRIETHYLENEDIAMINE	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.
BUTYLATED TRIPHENYL PHOSPHATE & TRIETHYLENEDIAMINE	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.
BUTADIENE HOMOPOLYMER, HYDROXYL FUNCTIONALISED & ALUMINIUM HYDROXIDE	No significant acute toxicological data identified in literature search.

Acute Toxicity	✗	Carcinogenicity	✗
Skin Irritation/Corrosion	✗	Reproductivity	✓
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	✗
Respiratory or Skin sensitisation	✓	STOT - Repeated Exposure	✗
Mutagenicity	✓	Aspiration Hazard	✗

Legend: ✗ – Data either not available or does not fill the criteria for classification
✓ – Data available to make classification

11.2 Information on other hazards

11.2.1. Endocrine disrupting properties

No evidence of endocrine disrupting properties were found in the current literature.

11.2.2. Other information

See Section 11.1

SECTION 12 Ecological information

12.1. Toxicity

Compound 53-1 Part A - Resin	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
polypropylene glycol glyceryl ether	Endpoint	Test Duration (hr)	Species	Value	Source
	BCF	1008h	Fish	0.2-2.2	7
	NOEC(ECx)	504h	Crustacea	>=10mg/l	2
	EC50	72h	Algae or other aquatic plants	>100mg/l	2
	EC50	48h	Crustacea	>100mg/l	2
	LC50	96h	Fish	>1000mg/l	2
butylated triphenyl phosphate	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	1.4mg/l	2
	EC50	48h	Crustacea	3.2-4.7mg/l	Not Available
	EC50	96h	Algae or other aquatic plants	2.6mg/l	2
	EC50(ECx)	48h	Crustacea	3.2-4.7mg/l	Not Available

	LC50	96h	Fish	2.8-4mg/l	Not Available
butadiene homopolymer, hydroxyl functionalised	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
aluminium hydroxide	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	72h	Algae or other aquatic plants	>100mg/l	1
	EC50	72h	Algae or other aquatic plants	0.017mg/L	2
	EC50	48h	Crustacea	>0.065mg/l	4
	EC50	96h	Algae or other aquatic plants	0.005mg/L	2
	LC50	96h	Fish	0.57mg/l	2
silica crystalline - quartz	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
triethylenediamine	Endpoint	Test Duration (hr)	Species	Value	Source
	BCF	1008h	Fish	<1.3	7
	EC50	72h	Algae or other aquatic plants	110mg/l	2
	EC50	48h	Crustacea	92mg/l	Not Available
	EC50(ECx)	48h	Crustacea	92mg/l	Not Available
	LC50	96h	Fish	1730mg/l	Not Available
red iron oxide	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	18mg/l	2
	EC50	48h	Crustacea	>100mg/l	2
	NOEC(ECx)	504h	Fish	0.52mg/l	2
	LC50	96h	Fish	0.05mg/l	2

Legend: Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
DO NOT discharge into sewer or waterways.

12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
butylated triphenyl phosphate	HIGH	HIGH
triethylenediamine	HIGH	HIGH

12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
polypropylene glycol glyceryl ether	LOW (BCF = 7)
butylated triphenyl phosphate	LOW (LogKOW = 10.43)
triethylenediamine	LOW (BCF = 13)

12.4. Mobility in soil

Ingredient	Mobility
butylated triphenyl phosphate	LOW (Log KOC = 565800)
triethylenediamine	LOW (Log KOC = 95.14)

12.5. Results of PBT and vPvB assessment

	P	B	T	PBT criteria fulfilled?	vP	vB	vPvB criteria fulfilled?
Compound 53-1 Part A - Resin				No			No
polypropylene glycol glyceryl ether	No data available	No data available	No data available	No	No data available	No data available	No
butylated triphenyl phosphate	No data available	No data available	No data available	No	No data available	No data available	No
butadiene homopolymer, hydroxyl functionalised	No data available	No data available	No data available	No	No data available	No data available	No
aluminium hydroxide	No data available	No data available	No data available	No	No data available	No data available	No
silica crystalline - quartz	No data available	No data available	No data available	No	No data available	No data available	No

	P	B	T	PBT criteria fulfilled?	vP	vB	vPvB criteria fulfilled?
triethylenediamine	No data available	No data available	No data available	No	No data available	No data available	No
red iron oxide	No data available	No data available	No data available	No	No data available	No data available	No

12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties were found in the current literature.

12.7. Other adverse effects

No evidence of ozone depleting properties were found in the current literature.

SECTION 13 Disposal considerations

13.1. Waste treatment methods

Product / Packaging disposal	- Containers may still present a chemical hazard/ danger when empty. - Return to supplier for reuse/ recycling if possible. Otherwise: - If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. - Where possible retain label warnings and SDS and observe all notices pertaining to the product. Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate: - Reduction - Reuse - Recycling - Disposal (if all else fails) This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. DO NOT allow wash water from cleaning or process equipment to enter drains. - It may be necessary to collect all wash water for treatment before disposal. - In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. - Where in doubt contact the responsible authority. - Recycle wherever possible or consult manufacturer for recycling options. - Consult State Land Waste Authority for disposal. - Bury or incinerate residue at an approved site. - Recycle containers if possible, or dispose of in an authorised landfill.
Waste treatment options	Not Available
Sewage disposal options	Not Available

SECTION 14 Transport information

Labels Required

	
Marine Pollutant	

Land transport (ADR-RID)

14.1. UN number or ID number	3082		
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains butylated triphenyl phosphate)		
14.3. Transport hazard class(es)	Class	9	
	Subsidiary Hazard	Not Applicable	
14.4. Packing group	III		
14.5. Environmental hazard	Environmentally hazardous		
14.6. Special precautions for user	Hazard identification (Kemler)	90	
	Classification code	M6	
	Hazard Label	9	
	Special provisions	274 335 375 601 650	
	Limited quantity	5 L	
	Transport Category	3	
	Tunnel Restriction Code	Not Applicable	

Air transport (ICAO-IATA / DGR)

14.1. UN number	3082		
14.2. UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (contains butylated triphenyl phosphate)		
14.3. Transport hazard class(es)	ICAO/IATA Class	9	
	ICAO / IATA Subsidiary Hazard	Not Applicable	
	ERG Code	9L	
14.4. Packing group	III		
14.5. Environmental hazard	Environmentally hazardous		
14.6. Special precautions for user	Special provisions	A97 A158 A197 A215	
	Cargo Only Packing Instructions	964	
	Cargo Only Maximum Qty / Pack	450 L	
	Passenger and Cargo Packing Instructions	964	
	Passenger and Cargo Maximum Qty / Pack	450 L	
	Passenger and Cargo Limited Quantity Packing Instructions	Y964	
	Passenger and Cargo Limited Maximum Qty / Pack	30 kg G	

Sea transport (IMDG-Code / GGVSee)

14.1. UN number	3082		
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains butylated triphenyl phosphate)		
14.3. Transport hazard class(es)	IMDG Class	9	
	IMDG Subsidiary Hazard	Not Applicable	
14.4. Packing group	III		
14.5 Environmental hazard	Marine Pollutant		
14.6. Special precautions for user	EMS Number	F-A, S-F	
	Special provisions	274 335 969	
	Limited Quantities	5 L	

Inland waterways transport (ADN)

14.1. UN number	3082		
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains butylated triphenyl phosphate)		
14.3. Transport hazard class(es)	9	Not Applicable	
14.4. Packing group	III		
14.5. Environmental hazard	Environmentally hazardous		
14.6. Special precautions for user	Classification code	M6	
	Special provisions	274; 335; 375; 601	
	Limited quantity	5 L	
	Equipment required	PP	
	Fire cones number	0	

14.7. Maritime transport in bulk according to IMO instruments

14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code
Not Applicable

14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
polypropylene glycol glyceryl ether	Not Available
butylated triphenyl phosphate	Not Available
butadiene homopolymer, hydroxyl functionalised	Not Available
aluminium hydroxide	Not Available
silica crystalline - quartz	Not Available
triethylenediamine	Not Available
red iron oxide	Not Available

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
polypropylene glycol glyceryl ether	Not Available
butylated triphenyl phosphate	Not Available
butadiene homopolymer, hydroxyl functionalised	Not Available
aluminium hydroxide	Not Available
silica crystalline - quartz	Not Available
triethylenediamine	Not Available
red iron oxide	Not Available

SECTION 15 Regulatory information

15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture

polypropylene glycol glyceryl ether is found on the following regulatory lists
Not Applicable
butylated triphenyl phosphate is found on the following regulatory lists
Not Applicable
butadiene homopolymer, hydroxyl functionalised is found on the following regulatory lists
Not Applicable
aluminium hydroxide is found on the following regulatory lists
International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)
silica crystalline - quartz is found on the following regulatory lists
Chemical Footprint Project - Chemicals of High Concern List
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 1: Carcinogenic to humans
UK Workplace Exposure Limits (WELs).
triethylenediamine is found on the following regulatory lists
Not Applicable
red iron oxide is found on the following regulatory lists
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic
International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)
UK Workplace Exposure Limits (WELs).

Additional Regulatory Information

Not Applicable
This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : Directives 98/24/EC, - 92/85/EEC, - 94/33/EC, - 2008/98/EC, - 2010/75/EU; Commission Regulation (EU) 2020/878; Regulation (EC) No 1272/2008 as updated through ATPs.

Information according to 2012/18/EU (Seveso III):

Seveso Category	E2
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15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (polypropylene glycol glyceryl ether; butadiene homopolymer, hydroxyl functionalised; aluminium hydroxide; silica crystalline - quartz; triethylenediamine; red iron oxide)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (butadiene homopolymer, hydroxyl functionalised)
Japan - ENCS	No (butylated triphenyl phosphate)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	All chemical substances in this product have been designated as TSCA Inventory 'Active'
Taiwan - TCSI	Yes
Mexico - INSQ	No (polypropylene glycol glyceryl ether; butylated triphenyl phosphate)
Vietnam - NCI	Yes
Russia - FBEPH	No (butadiene homopolymer, hydroxyl functionalised)
UAE - Control List (Banned/Restricted)	No (polypropylene glycol glyceryl ether; butylated triphenyl phosphate; aluminium hydroxide; silica crystalline - quartz; triethylenediamine; red iron oxide)

National Inventory	Status
Substances)	
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

SECTION 16 Other information

Revision Date	07/10/2025
Initial Date	20/10/2023

Full text Risk and Hazard codes

H228	Flammable solid.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

SDS Version Summary

Version	Date of Update	Sections Updated
6.1	13/03/2025	Physical and chemical properties - Appearance, Identification of the substance / mixture and of the company / undertaking - Synonyms
7.1	07/10/2025	Physical and chemical properties - Appearance, Composition / information on ingredients - Ingredients, Name

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

- EN 166 Personal eye-protection
- EN 340 Protective clothing
- EN 374 Protective gloves against chemicals and micro-organisms
- EN 13832 Footwear protecting against chemicals
- EN 133 Respiratory protective devices

Definitions and abbreviations

- PC - TWA: Permissible Concentration-Time Weighted Average
- PC - STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit,
- IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index
- DNEL: Derived No-Effect Level
- PNEC: Predicted no-effect concentration
- MARPOL: International Convention for the Prevention of Pollution from Ships
- IMSBC: International Maritime Solid Bulk Cargoes Code
- IGC: International Gas Carrier Code
- IBC: International Bulk Chemical Code
- AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSL: Non-Domestic Substances List
- IECSC: Inventory of Existing Chemical Substance in China
- EINECS: European INventory of Existing Commercial chemical Substances
- ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ENCS: Existing and New Chemical Substances Inventory
- KECI: Korea Existing Chemicals Inventory
- NZIoC: New Zealand Inventory of Chemicals
- PICCS: Philippine Inventory of Chemicals and Chemical Substances
- TSCA: Toxic Substances Control Act
- TCSI: Taiwan Chemical Substance Inventory
- INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
- FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	Classification Procedure
Sensitisation (Skin) Category 1, H317	Calculation method
Serious Eye Damage/Eye Irritation Category 2, H319	Calculation method
Germ Cell Mutagenicity Category 2, H341	Calculation method
Reproductive Toxicity Category 2, H361d	Calculation method
Hazardous to the Aquatic Environment Long-Term Hazard Category 2, H411	Calculation method
, EUH066	On basis of test data

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