SAFETY DATA SHEET

according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended

Revision Date 20-Mar-2026 **Revision Number** 5

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THECOMPANY/UNDERTAKING

1.1. Product identifier

Product Description: Silver conductive coating
Cat No. : 44937

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

Recommended Use Laboratory chemicals
Uses advised against No Information available

1.3. Details of the supplier of the safety data sheet

Company

Avocado Research Chemicals Ltd.
(Part of Thermo Fisher Scientific)
Shore Road, Heysham
Lancashire, LA3 2XY,
United Kingdom
Office Tel: +44 (0) 1524 850506
Office Fax: +44 (0) 1524 850608

E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11
Emergency Number **US:**001-201-796-7100 / **Europe:** +32 14 57 52 99
CHEMTREC Tel. No. **US:**001-800-424-9300 / **Europe:**001-703-527-3887

Poison Centre - Emergency information services

Ireland : National Poisons Information Centre (NPIC) -
01 809 2166 (8am-10pm, 7 days a week)
Malta : +356 2395 2000
Cyprus : +357 2240 5611

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

Physical hazards

Flammable liquids	Category 2 (H225)

Health hazards

Aspiration Toxicity	Category 1 (H304)

Serious Eye Damage/Eye Irritation	Category 2 (H319)
Skin Sensitization	Category 1 Sub-category 1B (H317)
Reproductive Toxicity	Category 2 (H361f)
Specific target organ toxicity - (single exposure)	Category 3 (H336)
Specific target organ toxicity - (repeated exposure)	Category 2 (H373)
Environmental hazards	
Chronic aquatic toxicity	Category 3 (H412)

Full text of Hazard Statements: see section 16

2.2. Label elements

Signal Word **Danger**

Hazard Statements

H225 - Highly flammable liquid and vapor
H304 - May be fatal if swallowed and enters airways
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
H361f - Suspected of damaging fertility
H373 - May cause damage to organs through prolonged or repeated exposure
H412 - Harmful to aquatic life with long lasting effects
EUH066 - Repeated exposure may cause skin dryness or cracking

Precautionary Statements

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P331 - Do NOT induce vomiting
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/attention
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P280 - Wear protective gloves/protective clothing/eye protection/face protection

2.3. Other hazards

This product does not contain any known or suspected endocrine disruptors

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Component	CAS No	EC No	Weight %	GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567
Silver	7440-22-4	EEC No. 231-131-3	45-50	Repr. 2 (H361f) STOT RE 2 (H373)
p-Chloro-a,a,a-trifluorotoluene	98-56-6	EEC No. 202-681-1	20-25	Flam. Liq. 3 (H226) Skin Sens. 1B (H317) Aquatic Chronic 2 (H411)
Acetone	67-64-1	200-662-2	20-25	Flam. Liq. 2 (H225) Eye Irrit. 2 (H319) STOT SE 3 (H336) EUH066
Acrylic resin (proprietary)	N/A		5.5	-
Ethylbenzene	100-41-4	EEC No. 202-849-4	1-2	Flam. Liq. 2 (H225) Asp. Tox. 1 (H304) Acute Tox. 4 (H332) STOT RE 2 (H373) Aquatic Chronic 3 (H412)
Xylenes (o-, m-, p- isomers)	1330-20-7	EEC No. 215-535-7	1-2	Flam. Liq. 3 (H226) Asp. Tox. 1 (H304) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335) STOT RE 2 (H373) Aquatic Chronic 3 (H412)

Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Advice If symptoms persist, call a physician.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Ingestion Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Call a physician or poison control center immediately. If vomiting occurs naturally, have victim lean forward.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur. Risk of serious damage to the lungs (by aspiration).

Self-Protection of the First Aider Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

4.2. Most important symptoms and effects, both acute and delayed

Difficulty in breathing. May cause allergic skin reaction. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and

vomiting: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

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

Notes to Physician Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media
Water mist may be used to cool closed containers.

Extinguishing media which must not be used for safety reasons
No information available.

5.2. Special hazards arising from the substance or mixture

Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

Hazardous Combustion Products
None under normal use conditions.

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Ensure adequate ventilation. Avoid

ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat, sparks and flame.

Technical Rules for Hazardous Substances (TRGS) 510 Storage Class (LGK) (Germany) Class 3

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits
List source(s): **EU** - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC **UK** - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020. **IRE -** 2021 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

Component	The United Kingdom	European Union	Ireland
Silver	STEL: 0.3 mg/m³ 15 min TWA: 0.1 mg/m³ 8 hr	TWA: 0.1 mg/m³ (8h)	TWA: 0.1 mg/m³ 8 hr. Ag metallic STEL: 0.3 mg/m³ 15 min
Acetone	TWA: 500 ppm TWA: 1210 mg/m³ STEL: 1500 ppm STEL: 3620 mg/m³	TWA: 500 ppm (8h) TWA: 1210 mg/m³ (8h)	TWA: 500 ppm 8 hr. TWA: 1210 mg/m³ 8 hr. STEL: 1500 ppm 15 min STEL: 3630 mg/m³ 15 min
Ethylbenzene	STEL: 125 ppm 15 min STEL: 552 mg/m³ 15 min TWA: 100 ppm 8 hr TWA: 441 mg/m³ 8 hr Skin	TWA: 100 ppm 8 hr TWA: 442 mg/m³ 8 hr STEL: 200 ppm 15 min STEL: 884 mg/m³ 15 min Possibility of significant uptake through the skin	TWA: 100 ppm 8 hr. TWA: 442 mg/m³ 8 hr. STEL: 200 ppm 15 min STEL: 884 mg/m³ 15 min Skin
Xylenes (o-, m-, p- isomers)	STEL: 100 ppm 15 min STEL: 441 mg/m³ 15 min TWA: 50 ppm 8 hr TWA: 220 mg/m³ 8 hr Skin	TWA: 50 ppm (8h) TWA: 221 mg/m³ (8h) STEL: 100 ppm (15min) STEL: 442 mg/m³ (15min) Skin	TWA: 50 ppm 8 hr. TWA: 221 mg/m³ 8 hr. STEL: 100 ppm 15 min STEL: 442 mg/m³ 15 min Skin

Biological limit values
List source(s): **UK** - Biological Monitoring Guidance Values provided by the UK's Health and Safety Executive (HSE) Control of Substances Hazardous to Health Regulations (COSHH) 2002 (as amended) and EH40/2005.

Component	United Kingdom	European Union
Xylenes (o-, m-, p- isomers)	Methyl hippuric acid: 650 mmol/mol creatinine urine post shift	

Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

Component	Acute effects local (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)
p-Chloro-a,a,a-trifluorotoluene 98-56-6 (20-25)	DNEL = 17.6µg/cm2			DNEL = 0.4mg/kg bw/day
Acetone 67-64-1 (20-25)				DNEL = 186mg/kg bw/day
Ethylbenzene 100-41-4 (1-2)				DNEL = 180mg/kg bw/day DNEL = 212mg/kg bw/day
Xylenes (o-, m-, p- isomers) 1330-20-7 (1-2)				DNEL = 212mg/kg bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Silver 7440-22-4 (45-50)				DNEL = 0.1mg/m³
p-Chloro-a,a,a-trifluorotoluene 98-56-6 (20-25)				DNEL = 1.025mg/m³
Acetone 67-64-1 (20-25)	DNEL = 2420mg/m³			DNEL = 1210mg/m³
Ethylbenzene 100-41-4 (1-2)	DMEL = 884mg/m³ DNEL = 293mg/m³ DNEL = 442mg/m³	DMEL = 884mg/m³ DNEL = 442mg/m³	DMEL = 442mg/m³ DNEL = 221mg/m³	DMEL = 442mg/m³ DNEL = 77mg/m³ DNEL = 221mg/m³
Xylenes (o-, m-, p- isomers) 1330-20-7 (1-2)	DNEL = 442mg/m³	DNEL = 442mg/m³	DNEL = 221mg/m³	DNEL = 221mg/m³

Predicted No Effect Concentration (PNEC)
See values below.

Component	Fresh water	Fresh water sediment	Water Intermittent	Microorganisms in sewage treatment	Soil (Agriculture)
Silver 7440-22-4 (45-50)	PNEC = 0.04µg/L	PNEC = 438.13mg/kg sediment dw		PNEC = 0.025mg/L	PNEC = 1.41mg/kg soil dw
p-Chloro-a,a,a-trifluorotoluene 98-56-6 (20-25)	PNEC = 2µg/L	PNEC = 0.0216mg/kg sediment dw	PNEC = 20µg/L	PNEC = 0.032mg/L	PNEC = 0.0258mg/kg soil dw
Acetone 67-64-1 (20-25)	PNEC = 10.6mg/L	PNEC = 30.4mg/kg sediment dw	PNEC = 21mg/L	PNEC = 100mg/L	PNEC = 29.5mg/kg soil dw
Ethylbenzene 100-41-4 (1-2)	PNEC = 0.327mg/L	PNEC = 12.46mg/kg sediment dw	PNEC = 0.327mg/L	PNEC = 6.58mg/L	PNEC = 2.31mg/kg soil dw
Xylenes (o-, m-, p-isomers) 1330-20-7 (1-2)	PNEC = 0.327mg/L	PNEC = 12.46mg/kg sediment dw	PNEC = 0.327mg/L	PNEC = 6.58mg/L	PNEC = 2.31mg/kg soil dw

Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air
Silver 7440-22-4 (45-50)	PNEC = 0.86µg/L	PNEC = 438.13mg/kg sediment dw			
p-Chloro-a,a,a-trifluorotoluene 98-56-6 (20-25)	PNEC = 0.2µg/L	PNEC = 0.00216mg/kg sediment dw			
Acetone	PNEC = 1.06mg/L	PNEC = 3.04mg/kg			

67-64-1 (20-25)		sediment dw			
Ethylbenzene 100-41-4 (1-2)	PNEC = 0.327mg/L	PNEC = 12.46mg/kg sediment dw			
Xylenes (o-, m-, p-isomers) 1330-20-7 (1-2)	PNEC = 0.327mg/L	PNEC = 12.46mg/kg sediment dw			

8.2. Exposure controls

Engineering Measures
Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location.
Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection Goggles (European standard - EN 166)

Hand Protection Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Natural rubber Nitrile rubber Neoprene PVC	See manufacturers recommendations	-	EN 374	(minimum requirement)

Skin and body protection Long sleeved clothing.

Inspect gloves before use.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)
Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.
Remove gloves with care avoiding skin contamination.

Respiratory Protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Large scale/emergency use Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced
Recommended Filter type: Particulates filter conforming to EN 143 Inorganic gases and vapours filter Type B Grey

Small scale/Laboratory use Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
Recommended half mask:- Particle filtering: EN149:2001
When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State	Liquid	
Appearance	Silver	
Odor	No information available	
Odor Threshold	No data available	
Melting Point/Range	No data available	
Softening Point	No data available	
Boiling Point/Range	56 °C / 132.8 °F	
Flammability (liquid)	Highly flammable	On basis of test data
Flammability (solid,gas)	Not applicable	Liquid
Explosion Limits	No data available	
Flash Point	< 0 °C / < 32 °F	**Method -** No information available
Autoignition Temperature	No data available	
Decomposition Temperature	No data available	
pH	Not applicable	
Viscosity	No data available	
Water Solubility	Partially miscible	
Solubility in other solvents	No information available	

Partition Coefficient (n-octanol/water)

Component	**log Pow**
p-Chloro-a,a,a-trifluorotoluene	3.7
Acetone	-0.24
Ethylbenzene	3.118
Xylenes (o-, m-, p- isomers)	3.15

Vapor Pressure	23 hPa @ 20 °C	
Density / Specific Gravity	1.62 g/cm3	@ 20 °C
Bulk Density	Not applicable	Liquid
Vapor Density	No data available	(Air = 1.0)
Particle characteristics	Not applicable (liquid)	

9.2. Other information

Explosive Properties Vapors may form explosive mixtures with air

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

None known, based on information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous Polymerization No information available.
Hazardous Reactions None under normal processing.

10.4. Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

None under normal use conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

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

Product Information

(a) acute toxicity;

Oral Based on available data, the classification criteria are not met
Dermal Based on available data, the classification criteria are not met
Inhalation Based on available data, the classification criteria are not met

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Silver	> 2000 mg/kg (Rat)	LD50 > 2000 mg/kg (rat)	LC50 > 5.16 mg/L (Rat) 4 h
p-Chloro-a,a,a-trifluorotoluene	LD50 = 5546 mg/kg (Rat)	LD50 > 3300 mg/kg (Rabbit)	LC50 = 32.03 mg/L (Rat) 4 h
Acetone	5800 mg/kg (Rat)	> 15800 mg/kg (rabbit) > 7400 mg/kg (rat)	76 mg/l, 4 h, (rat)
Ethylbenzene	3500 mg/kg (Rat)	15400 mg/kg (Rabbit)	17.2 mg/L (Rat) 4 h
Xylenes (o-, m-, p- isomers)	LD50 = 3500 mg/kg (Rat)	LD50 > 4350 mg/kg (Rabbit)	29.08 mg/L [MOE Risk Assessment Vol.1, 2002]

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; Category 2

(d) respiratory or skin sensitization;

Respiratory No data available
Skin Sub-category 1B

Component	Test method	Test species	Study result
p-Chloro-a,a,a-trifluorotoluene 98-56-6 (20-25)	Local Lymph Node Assay	mouse	Sensitization
Acetone 67-64-1 (20-25)	Guinea Pig Maximisation Test (GPMT)	guinea pig	non-sensitising

No information available

(e) germ cell mutagenicity; No data available

Component	Test method	Test species	Study result
p-Chloro-a,a,a-trifluorotoluene 98-56-6 (20-25)	in vivo	Mammalian	negative
Acetone 67-64-1 (20-25)	OECD Test Guideline 471 AMES test --- OECD Test Guideline 476 Mammalian Gene cell mutation	in vivo --- in vitro	negative --- negative

(f) carcinogenicity; No data available

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	EU	UK	Germany	IARC
p-Chloro-a,a,a-trifluorotoluene				Group 2B
Ethylbenzene				Group 2B

(g) reproductive toxicity; Category 2

Component	Test method	Test species / Duration	Study result
p-Chloro-a,a,a-trifluorotoluene 98-56-6 (20-25)	OECD Test Guideline 415	Rat	negative

(h) STOT-single exposure; Category 3

Results / Target organs Central nervous system (CNS).

(i) STOT-repeated exposure; Category 2

Target Organs None known.

(j) aspiration hazard; Category 1

Symptoms / effects,both acute and delayed Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing.

11.2. Information on other hazards

Endocrine Disrupting Properties Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity effects The product contains following substances which are hazardous for the environment. Contains a substance which is:. Very toxic to aquatic organisms.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Silver	LC50: = 0.064 mg/L, 96h static (Lepomis macrochirus) LC50: = 0.0062 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: 0.00155 - 0.00293 mg/L, 96h static (Pimephales promelas)	EC50: = 0.00024 mg/L, 48h Static (Daphnia magna)	
p-Chloro-a,a,a-trifluorotoluene	LC50 = 3 mg/L, 96h semi-static (Danio rerio) LC50 = 11.5 - 15.8 mg/L, 48h static (Lepomis macrochirus)	EC50 = 2 mg/L, 48 h semi-static (Daphnia magna)	
Acetone	Oncorhynchus mykiss: LC50 = 5540 mg/l 96h Alburnus alburnus: LC50 = 11000 mg/l 96h Leuciscus idus: LC50 = 11300 mg/L/48h Salmo gairdneri: LC50 = 6100 mg/L/24h	EC50 = 8800 mg/L/48h EC50 = 12700 mg/L/48h EC50 = 12600 mg/L/48h	NOEC = 430 mg/l (algae; 96 h)
Ethylbenzene	9.6 mg/L LC50 96 h 9.1 - 15.6 mg/L LC50 96 h 32 mg/L LC50 96 h 7.55 - 11 mg/L LC50 96 h 4.2 mg/L LC50 96 h 11.0 - 18.0 mg/L LC50 96 h	1.8 - 2.4 mg/L EC50 48 h	438 mg/L EC50 > 96 h 4.6 mg/L EC50 = 72 h 2.6 - 11.3 mg/L EC50 72 h 1.7 - 7.6 mg/L EC50 96 h
Xylenes (o-, m-, p- isomers)	LC50: 30.26 - 40.75 mg/L, 96h static (Poecilia reticulata)	LC50: = 0.6 mg/L, 48h (Gammarus lacustris)	

	LC50: = 780 mg/L, 96h semi-static (Cyprinus carpio) LC50: 23.53 - 29.97 mg/L, 96h static (Pimephales promelas) LC50: > 780 mg/L, 96h (Cyprinus carpio) LC50: 7.711 - 9.591 mg/L, 96h static (Lepomis macrochirus) LC50: = 19 mg/L, 96h (Lepomis macrochirus) LC50: 13.1 - 16.5 mg/L, 96h flow-through (Lepomis macrochirus) LC50: 13.5 - 17.3 mg/L, 96h (Oncorhynchus mykiss) LC50: 2.661 - 4.093 mg/L, 96h static (Oncorhynchus mykiss) LC50: = 13.4 mg/L, 96h flow-through (Pimephales promelas)	EC50: = 3.82 mg/L, 48h (water flea)	

Component	Microtox	M-Factor
p-Chloro-a,a,a-trifluorotoluene	EC50 = 11.1 mg/L 5 min EC50 = 13.4 mg/L 15 min EC50 = 14.3 mg/L 30 min	
Acetone	EC50 = 14500 mg/L/15 min	
Ethylbenzene	EC50 = 9.68 mg/L 30 min EC50 = 96 mg/L 24 h	
Xylenes (o-, m-, p- isomers)	EC50 = 0.0084 mg/L 24 h	

12.2. Persistence and degradability No information available

Persistence Persistence is unlikely, based on information available.

Degradability Not relevant for inorganic substances.

Component	Degradability
p-Chloro-a,a,a-trifluorotoluene 98-56-6 (20-25)	19.2 %, 28d
Acetone 67-64-1 (20-25)	91 % (28 d) (OECD 301 B)

Degradation in sewage treatment plant Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

12.3. Bioaccumulative potential Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
p-Chloro-a,a,a-trifluorotoluene	3.7	122
Acetone	-0.24	0.69 dimensionless
Ethylbenzene	3.118	15 dimensionless
Xylenes (o-, m-, p- isomers)	3.15	0.6 - 15 dimensionless

12.4. Mobility in soil The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces Will likely be mobile in the environment due to its volatility. Disperses rapidly in air

12.5. Results of PBT and vPvB assessment No data available for assessment.

12.6. Endocrine disrupting properties

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

Persistent Organic Pollutant	This product does not contain any known or suspected substance
Ozone Depletion Potential	This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues/Unused Products	Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.
Contaminated Packaging	Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.
European Waste Catalogue (EWC)	According to the European Waste Catalog, Waste Codes are not product specific, but application specific.
Other Information	Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Can be landfilled or incinerated, when in compliance with local regulations. Do not let this chemical enter the environment. Do not empty into drains.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

14.1. UN number	UN1133
14.2. UN proper shipping name	ADHESIVES
14.3. Transport hazard class(es)	3
14.4. Packing group	II

ADR

14.1. UN number	UN1133
14.2. UN proper shipping name	ADHESIVES
14.3. Transport hazard class(es)	3
14.4. Packing group	II

IATA

14.1. UN number	UN1133
14.2. UN proper shipping name	ADHESIVES
14.3. Transport hazard class(es)	3
14.4. Packing group	II

14.5. Environmental hazards	No hazards identified
14.6. Special precautions for user	No special precautions required.
14.7. Maritime transport in bulk according to IMO instruments	Not applicable, packaged goods

SECTION 15: REGULATORY INFORMATION

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

International Inventories

X = listed. US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Silver	7440-22-4	231-131-3	-	-	X	X	KE-31261	X	-
p-Chloro-a,a,a-trifluorotoluene	98-56-6	202-681-1	-	-	X	X	KE-05928	X	X
Acetone	67-64-1	200-662-2	-	-	X	X	KE-29367	X	X
Acrylic resin (proprietary)	N/A	-	-	-	-	-	-	-	-
Ethylbenzene	100-41-4	202-849-4	-	-	X	X	X	X	X
Xylenes (o-, m-, p- isomers)	1330-20-7	215-535-7	-	-	X	X	KE-35427	X	X

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Silver	7440-22-4	X	ACTIVE	X	-	X	X	X
p-Chloro-a,a,a-trifluorotoluene	98-56-6	X	ACTIVE	X	-	X	X	X
Acetone	67-64-1	X	ACTIVE	X	-	X	X	X
Acrylic resin (proprietary)	N/A	-	-	-	-	-	-	-
Ethylbenzene	100-41-4	X	ACTIVE	X	-	X	X	X
Xylenes (o-, m-, p- isomers)	1330-20-7	X	ACTIVE	X	-	X	X	X

Legend: X - Listed '-' - Not Listed **KECL** - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Silver	7440-22-4	-	Use restricted. See entry 75. (see link for restriction details)	-
p-Chloro-a,a,a-trifluorotoluene	98-56-6	-	-	-
Acetone	67-64-1	-	Use restricted. See entry 75. (see link for restriction details)	-
Acrylic resin (proprietary)	N/A	-	-	-
Ethylbenzene	100-41-4	-	-	-
Xylenes (o-, m-, p- isomers)	1330-20-7	-	Use restricted. See entry 75. (see link for restriction details)	-

REACH links

https://echa.europa.eu/substances-restricted-under-reach

Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Silver	7440-22-4	Not applicable	Not applicable
p-Chloro-a,a,a-trifluorotoluene	98-56-6	Not applicable	Not applicable
Acetone	67-64-1	Not applicable	Not applicable

Acrylic resin (proprietary)	N/A	Not applicable	Not applicable
Ethylbenzene	100-41-4	Not applicable	Not applicable
Xylenes (o-, m-, p- isomers)	1330-20-7	Not applicable	Not applicable

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

Component	CAS No	OECD HPV	Restriction of Hazardous Substances (RoHS)	Basel Convention (Hazardous Waste)
Silver	7440-22-4	Listed	Not applicable	Not applicable
p-Chloro-a,a,a-trifluorotoluene	98-56-6	Listed	Not applicable	Annex I - Y45
Acetone	67-64-1	Listed	Not applicable	Annex I - Y42
Acrylic resin (proprietary)	N/A	Not applicable	Not applicable	Not applicable
Ethylbenzene	100-41-4	Listed	Not applicable	Not applicable
Xylenes (o-, m-, p- isomers)	1330-20-7	Listed	Not applicable	Annex I - Y42

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals
Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?
See table for values

Component	OECD PFAS	US (EPA) PFAS	EU (ECHA) PFAS	UK (HSE) PFAS	Chemsec PFAS (Sin List)
p-Chloro-a,a,a-trifluorotoluene (CAS #: 98-56-6)	-	-	Listed	Listed	Listed

PFAS Legend
Listed = Meets the PFAS definition of the named authority

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .
Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
Take note of Directive 94/33/EC on the protection of young people at work
Take note of Dir 92/85/EC on the protection of pregnant and breastfeeding women at work

National Regulations

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

WGK Classification Water endangering class = 2 (self classification)

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
Silver	nwg	
p-Chloro-a,a,a-trifluorotoluene	WGK2	
Acetone	WGK1	
Ethylbenzene	WGK 1	
Xylenes (o-, m-, p- isomers)	WGK2	

Component	France - INRS (Tables of occupational diseases)
Acetone	Tableaux des maladies professionnelles (TMP) - RG 84
Ethylbenzene	Tableaux des maladies professionnelles (TMP) - RG 84
Xylenes (o-, m-, p- isomers)	Tableaux des maladies professionnelles (TMP) - RG 4bis,RG 84

Component	Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR	Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC)	Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure

	814.81)		
p-Chloro-a,a,a-trifluorotoluene 98-56-6 (20-25)	Prohibited and Restricted Substances		
Acetone 67-64-1 (20-25)		Group I	
Ethylbenzene 100-41-4 (1-2)	Prohibited and Restricted Substances	Group I	
Xylenes (o-, m-, p- isomers) 1330-20-7 (1-2)	Prohibited and Restricted Substances	Group II	

15.2. Chemical safety assessment

Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H304 - May be fatal if swallowed and enters airways
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
H361f - Suspected of damaging fertility
H373 - May cause damage to organs through prolonged or repeated exposure
H412 - Harmful to aquatic life with long lasting effects
EUH066 - Repeated exposure may cause skin dryness or cracking
H225 - Highly flammable liquid and vapor
H226 - Flammable liquid and vapor
H312 - Harmful in contact with skin
H315 - Causes skin irritation
H332 - Harmful if inhaled
H335 - May cause respiratory irritation
H411 - Toxic to aquatic life with long lasting effects

Legend

CAS - Chemical Abstracts Service
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
IECSC - Chinese Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japanese Existing and New Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit
ACGIH - American Conference of Governmental Industrial Hygienists
DNEL - Derived No Effect Level
RPE - Respiratory Protective Equipment
LC50 - Lethal Concentration 50%
NOEC - No Observed Effect Concentration
PBT - Persistent, Bioaccumulative, Toxic

TWA - Time Weighted Average
IARC - International Agency for Research on Cancer
Predicted No Effect Concentration (PNEC)
LD50 - Lethal Dose 50%
EC50 - Effective Concentration 50%
POW - Partition coefficient Octanol:Water
vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road
IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code
OECD - Organisation for Economic Co-operation and Development
BCF - Bioconcentration factor

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association
MARPOL - International Convention for the Prevention of Pollution from Ships
ATE - Acute Toxicity Estimate
VOC - (Volatile Organic Compound)

Key literature references and sources for data

https://echa.europa.eu/information-on-chemicals
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Physical hazards	On basis of test data
Health Hazards	Calculation method
Environmental hazards	Calculation method

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Prepared By	Health, Safety and Environmental Department
Revision Date	20-Mar-2026
Revision Summary	SDS sections updated.

This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended. .

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Disclaimer

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End of Safety Data Sheet