SAFETY DATA SHEET

Cookson Electronics ASSEMBLY MATERIALS

Water Analysis Test Kit

1. Identification of the preparation and of the company

Product name : **Water Analysis Test Kit**

Code : **57850**

Head Office :
Cookson Electronics
Forsyth Road
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England
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Tel: +44(0)1483 758400
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Manufacturer :
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Tel: +44(0)1483 758400
Fax: +44(0)1483 728837

Contact person : **shosken@cooksonelectronics.com**

Material uses : Analytical reagent.

2 Hazards identification

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : Carc. Cat. 2; R49
Muta. Cat. 2; R46
R43
N; R51/53

Effects and symptoms

Skin contact Slightly hazardous by the following route of exposure: of skin contact (irritant).

Eye contact Slightly hazardous by the following route of exposure: of eye contact (irritant).

Toxicity data Not available.

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

3 Composition/information on ingredients

Substance/preparation : Preparation

Ingredient name	CAS number	%	EC number	Classification
Europe				
potassium chromate	7789-00-6	0.5 - 1	232-140-5	Carc. Cat. 2; R49 Muta. Cat. 2; R46 Xi; R36/37/38 R43 N; R50/53
See section 16 for the full text of the R-phrases declared above				

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

The classifications listed, indecate the potential hazards of the ingredients

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4. First-aid measures

First-aid measures

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

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

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

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

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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

5. Fire-fighting measures

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : In a fire or if heated, a pressure increase will occur and the container may burst.

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. This material is toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Decomposition products may include the following materials:
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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6. Accidental release measures

Personal precautions : Use suitable protective equipment (section 8).

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

Large spill : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

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

7. Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Refer to special instructions/safety data sheet. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

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

Packaging materials

Recommended : Use original container.

8. Exposure controls/personal protection

Exposure limit values

Ingredient name	Occupational exposure limits
Europe	
potassium chromate	**ACGIH TLV (United States, 1/2008). Notes: measured as Cr** TWA: 0.05 mg/m³, (measured as Cr) 8 hour(s). Form: Soluble
Sweden	
potassium chromate	**AFS 2005:17 (Sweden, 6/2007). Skin sensitiser. Notes: as Cr** STEL: 0.015 mg/m³, (as Cr) 15 minute(s). Form: total dust TWA: 0.005 mg/m³, (as Cr) 8 hour(s). Form: total dust
Denmark	
potassium chromate	**Arbejdstilsynet (Denmark, 3/2008). Carcinogen. Notes: calculated as Cr** TWA: 0.005 mg/m³, (calculated as Cr) 8 hour(s).
Norway	

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8. Exposure controls/personal protection

potassium chromate	**Arbeidstilsynet (Norway, 11/2007). Skin sensitiser. Carcinogen. Notes: calculated as Cr** TWA: 0.02 mg/m³, (calculated as Cr) 8 hour(s).
France	
potassium chromate	**INRS (France, 12/2007). Notes: indicative exposure limits** TWA: 0.05 mg/m³, (as Cr) 8 hour(s).
Netherlands	
potassium chromate	**MinSZW Wettelijke Grenswaarden (Netherlands, 4/2008). Absorbed through skin.** MAC-TGG, 8 uur: 0.025 mg/m³ 8 hour(s). MAC-TGG, 15 min.: 0.05 mg/m³ 15 minute(s).
Germany	
Potassium chromate	**MAK-Werte Liste TRK (Germany, 7/2004).** TWA: 0.05 mg/m³ 8 hour(s). Form: Inhalable fraction
Finland	
potassium chromate	**Työterveyslaitos, Sosiaali- ja terveysministeriö (Finland, 8/2007). Notes: calculated as CrO4** TWA: 0.05 mg/m³, (calculated as CrO4) 8 hour(s).
United Kingdom (UK)	
potassium chromate	**EH40/2005 WELs (United Kingdom (UK), 8/2007). Skin sensitiser. Notes: as Cr** TWA: 0.05 mg/m³, (as Cr) 8 hour(s).
Austria	
potassium chromate	**GKV_TRK (Austria, 9/2007). Notes: measured as CrO3** STEL: 0.2 mg/m³, (measured as CrO3), 4 times per shift, 15 minute(s). Form: aerosol, inhalable fraction TWA: 0.05 mg/m³, (measured as CrO3) 8 hour(s). Form: aerosol, inhalable fraction
Switzerland	
potassium chromate	**SUVA (Switzerland, 1/2007). Skin sensitiser. Notes: not temporary** TWA: 0.05 mg/m³ 8 hour(s). Form: inhalable dust and aerosol
Belgium	
potassium chromate	**Lijst Grenswaarden / Valeurs Limites (Belgium, 6/2007). Notes: as Cr** TWA: 0.05 mg/m³, (as Cr) 8 hour(s).
Spain	
potassium chromate	**INSHT (Spain, 1/2008). Skin sensitiser. Notes: As Cr** TWA: 0.05 mg/m³, (As Cr) 8 hour(s).
Turkey	
potassium chromate	**NIOSH REL (United States, 6/2008).** TWA: 0.001 mg/m³, (as CR) 10 hour(s).
Czech Republic	
potassium chromate	**178/2001 (Czech Republic, 12/2007). Skin sensitiser.** STEL: 0.1 mg/m³, (as Cr) 15 minute(s). TWA: 0.05 mg/m³, (as Cr) 8 hour(s).
Ireland	
potassium chromate	**NAOSH (Ireland, 8/2007). Notes: as Cr** OELV-8hr: 0.05 mg/m³, (as Cr) 8 hour(s).
Italy	
potassium chromate	**ACGIH TLV (United States, 1/2008). Notes: measured as Cr** TWA: 0.05 mg/m³, (measured as Cr) 8 hour(s). Form: Soluble
Estonia	

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8. Exposure controls/personal protection

potassium chromate	**Sotsiaalminister (Estonia, 10/2007). Skin sensitiser. Notes: calculated as Cr** TWA: 0.02 mg/m³, (calculated as Cr) 8 hour(s).
Lithuania	
potassium chromate	**Del Lietuvos Higienos Normos (Lithuania, 12/2001). Notes: As Cr** TWA: 0.02 MG/M3, (As Cr) 8 hour(s).
Slovakia	
Potassium chromate	**Nariadenie Vlády Slovenskej republiky (Slovakia, 1/2002).** TWA: 0.05 mg/m³ 8 hour(s). Form: All forms
Hungary	
No exposure limit value known.	
Poland	
potassium chromate	**Ministra Pracy i Polityki Społecznej (Poland, 9/2007). Notes: calculated as Cr (VI)** STEL: 0.3 mg/m³, (calculated as Cr (VI)) 15 minute(s). TWA: 0.1 mg/m³, (calculated as Cr (VI)) 8 hour(s).
Slovenia	
potassium chromate	**Uradni list Republike Slovenije_TDK (Slovenia, 6/2007). Notes: Technically achievable concentration – is given for carcinogenic substances and it means the concentration of the substance in the air at workplace, which is achievable at the level of technique available.** TWA: 0.05 mg/m³ 8 hour(s). Form: inhalable dust and aerosols
Latvia	
No exposure limit value known.	
Greece	
potassium chromate	**PD 90/1999 (Greece, 8/2007). Notes: as potassium chromate** TWA: 0.5 mg/m³, (as potassium chromate) 8 hour(s).
Portugal	
potassium chromate	**Instituto Português da Qualidade (Portugal, 3/2007). Notes: expressed as Cr** TWA: 0.05 mg/m³, (expressed as Cr) 8 hour(s).

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Exposure controls

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

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection : Recommended:None assigned.

Hand protection : disposable vinyl

Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: safety glasses with side-shields

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8. Exposure controls/personal protection

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

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

9. Physical and chemical properties

General information

Appearance

Physical state : Liquid.

Colour : Clear. Yellowish.

Important health, safety and environmental information

pH : 7 [Conc. (% w/w): 100%]

Boiling point : 100°C (212°F)

Relative density : 1

Solubility : Easily soluble in the following materials: cold water and hot water.

VOC content : 0 % (w/w) [ISO % 11890-2]

10. Stability and reactivity

Stability : The product is stable.

Conditions to avoid : Avoid exposure - obtain special instructions before use. Avoid release to the environment. Refer to special instructions/safety data sheet.

Materials to avoid : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Potential acute health effects

Inhalation : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Skin contact : May cause sensitisation by skin contact.

Eye contact : No known significant effects or critical hazards.

Acute toxicity

Over-exposure signs/symptoms

Product name	List name	Name on list	Classification	Notes
United Kingdom (UK)				
potassium chromate	UK Occupational Exposure Limits EH40 - WEL	chromium (VI) compounds	Carc.	
Netherlands				
potassium chromate	Netherlands Carcinogenic Chemicals	chroom(VI) verbindingen Alle	Carc.	
	Netherlands Reprotoxic Chemicals	chroom (VI) verbindingen	Repro. fertility category 3, Dev. development category 2	
	Netherlands Mutagenic Substances	kaliumchromaat	Muta.	

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11. Toxicological information

France				
potassium chromate	France Occupational Exposure Limits	chrome VI (composés du)	Carc. C1, Carc. C2, Carc. C3, Repro. R1, Repro. R2, Repro. R3, Muta. M1, Muta. M2, Muta. M3	
Poland				
potassium chromate	Poland Carcinogen, Mutagen chemicals	chromian(VI) potasu	Carc.. cat.2, Muta. Muta. cat.2	

12. Ecological information

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
potassium chromate	-	Acute EC50 6480 ug/L Marine water	Crustaceans - Opossum shrimp - Americamysis bahia	48 hours
	-	Acute EC50 6000 to 6900 ug/L Fresh water	Crustaceans - Opossum shrimp - Americamysis bahia	48 hours
	-	Acute EC50 5120 to 7140 ug/L Marine water	Crustaceans - Opossum shrimp - Americamysis bahia - LARVAE - <=48 hours	48 hours
	-	Acute EC50 5110 ug/L Marine water	Crustaceans - Opossum shrimp - Americamysis bahia	48 hours
	-	Acute EC50 4280 ug/L Marine water	Crustaceans - Opossum shrimp - Americamysis bahia	48 hours
	-	Acute EC50 4210 ug/L Marine water	Crustaceans - Opossum shrimp - Americamysis bahia	48 hours
	-	Acute EC50 2690 to 3330 ug/L Fresh water	Crustaceans - Amphipod - Crangonyx pseudogracilis - Adult - 4 mm - 0.2 mg	48 hours
	-	Acute EC50 130 ug/L Fresh water	Daphnia - Water flea - Daphnia pulex	48 hours
	-	Acute EC50 110 ug/L Fresh water	Daphnia - Water flea - Daphnia pulex	48 hours
	-	Acute EC50 80 ug/L Fresh water	Daphnia - Water flea - Daphnia pulex	48 hours

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12. Ecological information

-	Acute EC50 66.7 to 75.2 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - 72 to 120 hours	48 hours
-	Acute EC50 60 ug/L Fresh water	Daphnia - Water flea - Daphnia pulex	48 hours
-	Acute EC50 39 ug/L Fresh water	Daphnia - Water flea - Daphnia pulex	48 hours
-	Acute EC50 24 ug/L Fresh water	Daphnia - Water flea - Daphnia pulex	48 hours
-	Acute EC50 19.2 to 21.4 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - 72 to 120 hours	48 hours
-	Acute EC50 15.3 to 24.5 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - 72 to 120 hours	48 hours
-	Acute LC50 45600 to 59600 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 3.8 to 6.4 cm - 1 to 2 g	96 hours
-	Acute LC50 42600 to 47100 ug/L Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus - Juvenile (Fledgling, Hatchling, Weanling) - 2 to 3 months	96 hours
-	Acute LC50 39800 to 40900 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 2 to 4 weeks - 9 to 12 mm	96 hours
-	Acute LC50 35320 ug/L Fresh water	Fish - Indian catfish - Mystus vittatus vittatus - Mature - 8 g	96 hours
-	Acute LC50 35000 to 43000 ug/L Fresh water	Fish - Threespine stickleback - Gasterosteus aculeatus	96 hours
-	Acute LC50 32000 ug/L Marine water	Fish - Common starfish - Asterias forbesii - Adult	96 hours
-	Acute LC50 31600 ug/L Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus - <=48 hours	96 hours
-	Acute LC50 25000 to 27000 ug/L Fresh water	Fish - Sheepshead minnow - Cyprinodon variegatus	96 hours

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12. Ecological information

-	Acute LC50 23200 to 29600 ug/L Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus	96 hours
-	Acute LC50 4900 ug/L Marine water	Crustaceans - Opossum shrimp - Americamysis bahia - Juvenile (Fledgling, Hatchling, Weanling) - <24 hours	48 hours
-	Acute LC50 4300 ug/L Marine water	Crustaceans - Opossum shrimp - Americamysis bahia - Juvenile (Fledgling, Hatchling, Weanling) - <24 hours	48 hours
-	Acute LC50 3600 ug/L Marine water	Crustaceans - Opossum shrimp - Americamysis bahia - Juvenile (Fledgling, Hatchling, Weanling) - <24 hours	48 hours
-	Acute LC50 22 to 32 ug/L Fresh water	Daphnia - Water flea - Daphnia hyalina - Adult - 1.27 mm	48 hours
-	Chronic NOEC 1.5 mg/L Fresh water	Fish - Nile tilapia - Tilapia nilotica - 14.7 cm	96 hours

Biodegradability

Other adverse effects : No known significant effects or critical hazards.

AOX : The product does not contain organically bound halogens which could lead to an AOX value in waste water.

13. Disposal considerations

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

European waste catalogue (EWC) : 16 03 03* inorganic wastes containing dangerous substances

Hazardous waste : Yes.

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14. Transport information

International transport regulations

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA Class	Not regulated.	-	-	-		-

PG* : Packing group

15. Regulatory information

EU regulations

Classification and labeling have been determined according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use.

Hazard symbol or symbols :



Toxic, Dangerous for the environment

Risk phrases : R49- May cause cancer by inhalation.
R46- May cause heritable genetic damage.
R43- May cause sensitisation by skin contact.
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases : S53- Avoid exposure - obtain special instructions before use.
S24- Avoid contact with skin.
S37- Wear suitable gloves.
S61- Avoid release to the environment. Refer to special instructions/safety data sheet.

Contains : potassium chromate 232-140-5

Product use : Industrial applications.

Other EU regulations

Restrictions on the Marketing and Use Directive : Restricted to professional users.

France

Professional disease or diseases : potassium chromate RG 10, RG 10bis, RG 10ter

Germany

Hazardous incident ordinance : Applicable. Category: 9b Dangerous for the environment.

Hazard class for water : 2 Appendix No. 4

Technical instruction on air quality control : TA-Luft Class I - Number 5.2.2: 1%

Italy

Emission control directive : Not classified.

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16. Other information

Full text of R-phrases referred to in sections 2 and 3 - Europe : R49- May cause cancer by inhalation.
R46- May cause heritable genetic damage.
R36/37/38- Irritating to eyes, respiratory system and skin.
R43- May cause sensitisation by skin contact.
R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of classifications referred to in sections 2 and 3 - Europe : Carc. Cat. 2 - Carcinogen category 2
Muta. Cat. 2 - Mutagen category 2
Xi - Irritant
N - Dangerous for the environment

History

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Prepared by : Simon Hosken
Environmental, Health and Safety Manager

Indicates information that has changed from previously issued version.

References

The Health and Safety At Work Act 1974, section 6.
Control of Substances Hazardous to Health (CoSHH) Regulations 2002 and its amendments.

Preparation contains soley TSCA and REACh 1907/2006 listed substances.

This safety data sheet has been prepared in accordance with the requirements of the Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 which implement EC Directives 1999/45/EC and 2001/58/EC and their amendments.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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