



RAPID SCIENCE MEMO

Summary

Substance	Altex Antifouling Range SZ 1
Application code	APP204248
Application sub-type	Rapid – reduced
Applicant	Altex Coatings Limited
Purpose of the application	To import or manufacture Altex Antifouling Range SZ 1 for release
Date application formally received	20 September 2021

1. Key Points

- 1.1. Altex Antifouling Range SZ 1 is an antifouling paint containing 500 g/L copper (I) oxide and 51 g/L zineb as the active ingredients. It is intended to be manufactured and applied by professional and non-professional users to control biofouling on marine vessels.
- 1.2. No major issues were identified with this substance.

2. Status Of Substance (SOS) or statutory determination history

- 2.1. No SOS or statutory determinations were issued for Altex Antifouling Range SZ 1.

3. Identification of substance and reference

- 3.1. The applicant proposed Altex Ablative Antifouling Coating SZ RTU as a reference substance, which was not considered to be suitable by the EPA because the substance does not contain both active ingredients. The EPA considers that SeaForce 90 is a more suitable reference because it has a higher hazard profile (see Table 1).

Table 1: Identified references for the rapid assessment of Altex Antifouling Range SZ 1

	Substance to be approved	Reference
Name	Altex Antifouling Range SZ 1	SeaForce 90
Substance database UUID	2940FB67-BC2C-4136-A56B-8F8B16DC5196	96630DA4-A1E1-4AF7-BC96-227DCA1EBFEF
HSNO Approval number	-	HSR100412
Substance physical form	Liquid	Liquid
Active ingredient(s) and concentration (g/L)	500 g/L copper (I) oxide and 51 g/L zineb	592.3 g/L copper (I) oxide, 76.8 g/L zineb and 23.5 g/L copper pyrithione

4. RAPID assessment criteria

Active ingredient

- 4.1. This substance meets the active ingredients criteria. The concentration of the active ingredient in Altex Antifouling Range SZ 1 is lower than that of the reference substance.

Physical form

- 4.2. Altex Antifouling Range SZ 1 is in the same physical form as the reference substance, namely as a liquid antifouling paint.

Use pattern

4.3. This substance meets the use pattern criteria. Both Altex Antifouling Range SZ 1 and the reference substance are antifouling paints used in a similar manner (see Table 2).

Table 2: Use pattern of Altex Antifouling Range SZ 1 in comparison to its reference substance

	Substance to be approved	Reference
Target condition	Marine vessels	Marine vessels
Target animal	Aquatic organisms	Aquatic organisms
Application rate (kg a.i./ha)	Not applicable	Not applicable
Comment on any differences	There are no major differences of the use pattern between Altex Antifouling Range SZ 1 and the reference substance	
Are the differences insignificant in terms of risk of adverse effects?	As there are no major differences between the use pattern of Altex Antifouling Range SZ 1 and the reference substance, it is considered that there is no difference in terms of adverse effects associated with the use of the substance	

Major Hazardous Components

4.4. Altex Antifouling Range SZ 1 meets the major hazardous components criteria. The major hazardous components in Altex Antifouling Range SZ 1 constitute a lower proportion (62.5%) than the reference substance (77%).

Adverse Effects

4.5. Altex Antifouling Range SZ 1 meets the adverse effects criteria, as the hazards of this substance are reduced compared to the reference substance (see Table 3). Altex Antifouling Range SZ 1 has no classification for inhalation toxicity compared to the reference substance.

Table 3: Comparison of the respective classifications of Altex Antifouling Range SZ 1 and its reference substance

Classification comparison	
Substance	flammable liquid Category 3
	acute oral toxicity Category 4
	skin irritation Category 2
	eye irritation Category 2
	skin sensitisation Category 1
	carcinogenicity Category 2
	reproductive toxicity Category 2
	specific target organ toxicity – repeated exposure Category 2
	hazardous to the aquatic environment acute Category 1
	hazardous to the aquatic environment chronic Category 1

Reference	flammable liquid Category 3
	acute oral toxicity Category 4
	acute inhalation toxicity Category 4
	skin irritation Category 2
	eye irritation Category 2
	skin sensitisation Category 1
	carcinogenicity Category 2
	reproductive toxicity Category 2
	specific target organ toxicity – repeated exposure Category 2
	hazardous to the aquatic environment acute Category 1
hazardous to the aquatic environment chronic Category 1	

Additional comments

Hazardous to terrestrial vertebrates

4.6. The hazardous to terrestrial vertebrate classification is triggered by mixture rules for this substance. However, as antifouling paints are not considered to be agrichemicals, this classification is not applicable.

Reassessment for antifouling paints

4.7. In June 2013 (under APP201051), a reassessment was carried out for antifouling paints that covered a number of ingredients, including the two active ingredients in Altex Antifouling Range SZ 1. One of the outcomes of this reassessment allowed for the continued use of antifouling paints containing the two active ingredients copper (I) oxide and zineb. However, additional controls were advised, these included:

- a variation to the personal protective equipment control which clarifies that the requirement applies to all people who handle the substance;
- a requirement to have a controlled work area when applying antifouling paints, including signage warning of the risks;
- a requirement to collect and dispose of waste containing antifouling paint when it is removed from a vessel;
- a requirement to include the additional controls on the label;
- a variation to the requirement for a safety data sheet which standardises the information in line with current best practice.

Impurities, restrictions on purity or composition

4.8. The composition of the active ingredient, copper (I) oxide, should have a minimum purity of 900 g/kg, according to Australian Pesticides and Veterinary Medicines Authority (APVMA), and the copper (I) oxide must contain a minimum total copper content of no less than 800 g/kg and when determined.

4.9. Impurity limits for cuprous oxide have been identified by Australian Pesticides and Veterinary Medicines Authority (APVMA). These are:

- Arsenic (As): maximum $0.2 \times X = \text{mg/kg}$. Where X is the copper content (g/kg);
- Lead (Pb): maximum $5 \times X = \text{mg/kg}$. Where X is the copper content (g/kg);
- Cadmium (Cd): maximum $0.2 \times X = \text{mg/kg}$. Where X is the copper content (g/kg).
- Copper other than cuprous oxide:
 - Metallic copper: maximum $50 \times X = \text{mg/kg}$. Where X is the copper content (g/kg);
 - Cupric copper: maximum $100 \times X = \text{mg/kg}$. Where X is the copper content (g/kg);
 - Copper soluble in water: maximum $25 \times X = \text{mg/kg}$. Where X is the copper content (g/kg).

4.10. Impurity limits for zineb have been identified by the APVMA, these are:

- Ethylene thiourea (ETU): maximum 3 g/kg;

5. Controls

EPA Notice controls

5.1. The Labelling, Safety Data Sheet (SDS), Packaging, Disposal and Hazardous Property Controls (HPC) Part 1, Part 3, Part 4A, and Part 4B Notices apply to Altex Antifouling Range SZ 1.

5.2. No Tolerable Exposure Limit (TEL) values have been set previously for the active ingredients in Altex Antifouling Range SZ 1 because it is considered that exposure to this substance is not likely to result in an appreciable toxic effect to people, provided controls on use are followed.

5.3. An Environmental Exposure Limit (EEL) value had been set previously for copper, however, the EEL value is deleted for Altex Antifouling Range SZ 1, as the level of risk of adverse effects to the environment has been qualitatively assessed as being negligible.

5.4. No maximum application rate is proposed because the substance is intended to be used an antifouling paint.

Controls varied or added under section 77 and 77A

Label

5.5. The substance label must include the following statement, or words to the same effect:

- When applying this substance by spraying, you must sufficiently enclose the area to ensure that the substance is not deposited on off-target sites and has no adverse effects on bystanders;
- You must ensure that waste generated from maintenance activities does not enter the environment

5.6. A person must not supply this substance to any other person unless the substance label shows the information required by the label control statements.

Antifouling paints

Collection of substances from maintenance activities

5.7. The following controls are proposed for the collection of antifouling paint from maintenance activities:

- (1) Any person who removes any antifouling paint coating from the hull of a boat must ensure that waste containing antifouling paint residue is collected.
- (2) All collected waste, as referred to in subclause (1) must be disposed of in accordance with the Hazardous Substances (Disposal) Notice 2017.

Personal protective equipment

5.8. Where this substance is applied in place other than a workplace, any person who handles the substance must use protective clothing or equipment that is designed, constructed, and operated to ensure that the person does not come into contact with or inhale the substance.

Controlled work area and signage requirements outside of workplaces

5.9. Where this substance is applied in a place other than a workplace:

Controlled work area –

- (1) Any person applying the substance must ensure that application of the substance is carried out in a controlled work area.
- (2) The controlled work area, as referred to in subclause (1) is a designated area in which antifouling paints are applied, using a method and located such that off-target deposition of the substance, including onto bystanders, is avoided by taking all practicable steps.
- (3) Any person applying the substance in a controlled work area must avoid off-target deposition of the substance. To avoid doubt, this requirement includes avoiding off-target deposition of the substance onto persons outside of, but within the immediate vicinity of, the controlled work area.

Signage –

- (4) Any person applying the substance must ensure that signs are placed at every point of entrance into the controlled work area. Signs must be posted from the start of the application, until the end of the application.
- (5) Signs erected in accordance with subclause (4) must –
 - a. warn that an application is being carried out using a substance that is toxic to humans;
 - b. identify the person in charge of the application;
 - c. state that entry into the controlled work area is not permitted unless personal protective equipment (PPE) is worn by the person entering the controlled work area; and
 - d. comply with the requirements for comprehensibility and clarity of Regulation 2.5, subclauses (2)(c)(i – iv) of the Health and Safety at Work (Hazardous Substances) Regulations 2017.
- (6) The conditions of (4) and (5) do not apply when the substance is applied using non-dispersive methods.

Impurity

5.10. The following limits are set for the copper (I) oxide component of this substance:

- The composition of the active ingredient, copper (I) oxide, should have a minimum purity of 900 g/kg. Copper (I) oxide must contain a minimum total copper content of no less than 800 g/kg.
- Arsenic (As): maximum $0.2 \times X = \text{mg/kg}$. Where X is the copper content (g/kg);
- Lead (Pb): maximum $5 \times X = \text{mg/kg}$. Where X is the copper content (g/kg);
- Cadmium (Cd): maximum $0.2 \times X = \text{mg/kg}$. Where X is the copper content (g/kg).
- Copper other than copper (I) oxide:
 - Metallic copper: maximum $50 \times X = \text{mg/kg}$. Where X is the copper content (g/kg);
 - Cupric copper: maximum $100 \times X = \text{mg/kg}$. Where X is the copper content (g/kg);
 - Copper soluble in water: maximum $25 \times X = \text{mg/kg}$. Where X is the copper content (g/kg).

5.11. The following limits are set for the zineb component of this substance:

- Ethylene thiourea (ETU): maximum 3 g/kg.

Use restrictions

5.12. No person may use this substance for any purpose other than as an antifouling paint to prevent, by the slow release of biocides, the build-up of aquatic organisms on the hulls of vessels or other surfaces in contact with water.

Rapid Science Memo for approval to import or manufacture Altex Antifouling Range SZ 1 for release (APP204248)