MARPOL Annex V Compliance Report
Product: IPAC EAC-N Acidity Control Agent
May 2026

Prepared for: SULTRAN Ltd
Attn: Blair Hoffmann
Senior Manager, Operations Strategy & Fleet

Prepared by: Tibor Horvath
Technical Manager
Dubois Chemicals Canada Inc.

Summary

IPAC EAC-N is not classified as harmful to the marine environment.

In addition, all components of IPAC EAC-N are not classified as HME for any of the required criteria.

Introduction

NOTE: *For this report, product IPAC EAC-N will be referred to as "IPAC EAC".*

As of January 1, 2015, all maritime shippers are required to completely classify their cargoes, and hence cargo residues, as "harmful to the marine environment" (HME) or not. In order to determine HME classification, seven criteria are utilized. These are listed in section 3.2 of the 2012 Guidelines for the implementation of MARPOL Annex V (2012 Guidelines), and based on the UN Globally Harmonized System for Classification and Labelling of Chemicals (UN GHS), fourth revised edition (2011).

The seven criteria for classification are as follows:

DuBois Chemicals Canada Inc.
1620 West 75th Avenue | Vancouver BC | Canada V6P 6G2
Toll Free 1 888 247 0000 | T 604 263 0803 | F 604 263 0825 | www.duboischemicals.com

1. Acute Aquatic Toxicity Category 1; and/or
2. Chronic Aquatic Toxicity Category 1 or 2; and/or
3. Carcinogenicity Category 1A or 1B combined with not being rapidly degradable and having high bioaccumulation; and/or
4. Mutagenicity Category 1A or 1B combined with not being rapidly degradable and having high bioaccumulation; and/or
5. Reproductive Toxicity Category 1A or 1B combined with not being rapidly degradable and having high bioaccumulation; and/or
6. Specific Target Organ Toxicity Repeated Exposure Category 1 combined with not being rapidly degradable and having high bioaccumulation.
7. Solid bulk cargoes containing or consisting of synthetic polymers, rubber, plastics, or plastic feedstock pellets (this includes materials that are shredded, milled, chopped or macerated or similar materials).

Clearly Criterion 7 does not apply to sulphur or IPAC EAC, so this will not be considered in the classification.

As IPAC EAC is a formulated mixture, the method for determining HME status is also found in UN Globally Harmonized System for Classification and Labelling of Chemicals (UN GHS), fourth revised edition (2011), Section 4.1.3 Classification Criteria for Mixtures.

Obviously if no component of IPAC EAC met a particular criteria for categorization as HME, IPAC EAC itself, as a mixture of these components, would not meet those criteria for that particular categorization.

This was in fact the case. In ***no instance*** did any component of IPAC EAC reach the level of classification as HME in any of the criteria.

Results

1. Acute Aquatic Toxicity Category 1; and/or

   Criteria:

   Category Acute 1:

DuBois Chemicals Canada Inc.
1620 West 75th Avenue | Vancouver BC | Canada V6P 6G2
Toll Free 1 888 247 0000 | T 604 263 0803 | F 604 263 0825 | www.duboischemicals.com

Category	Level
96 hr LC50 (for fish)	≤ 1 mg/l and/or
48 hr EC50 (for crustacea)	≤ 1 mg/l and/or
72 or 96 hr ErC50 (for algae or other aquatic plants)	≤ 1 mg/l

Result: No component of IPAC EAC exceeds the threshold for classification as Acute Aquatic Toxicity Category 1 or 2.

2. Chronic Aquatic Toxicity Category 1 or 2

   Criteria: Toxicity

   Category Chronic 1

Chronic NOEC or ECx (for fish)	≤ 0.1 mg/l and/or
Chronic NOEC or ECx (for crustacea)	≤ 0.1 mg/l and/or
Chronic NOEC or ECx (for algae or other aquatic plants)	≤ 0.1 mg/l

   Category Chronic 2:

96 hr LC50 (for fish)	≤ 1 mg/l and/or
48 hr EC50 (for crustacea)	≤ 1 mg/l and/or
72 or 96 hr ErC50 (for algae or other aquatic plants)	≤ 1 mg/l

   Result: No component of IPAC EAC exceeds the threshold for classification as Chronic Aquatic Toxicity Category 1 or 2.

DuBois Chemicals Canada Inc.
1620 West 75th Avenue | Vancouver BC | Canada V6P 6G2
Toll Free 1 888 247 0000 | T 604 263 0803 | F 604 263 0825 | www.duboischemicals.com

3. Carcinogenicity Category 1A or 1B combined with not being rapidly degradable and having high bioaccumulation

   Criteria: Carcinogenicity

   Category 1A: Known to have carcinogenic potential for humans; the placing of a substance is largely based on human evidence.

   Category 1B: Presumed to have carcinogenic potential for humans; the placing of a substance is largely based on animal evidence.

   Result: No component of IPAC EAC is either known or presumed to have carcinogenic potential for humans, based on human or animal evidence, combined with being not rapidly degradable or having high bioaccumulation.

4. Mutagenicity Category 1A or 1B combined with not being rapidly degradable and having high bioaccumulation

   Criteria: Mutagenicity

   Category 1A: Substances known to induce heritable mutations in germ cells of humans.

   Category 1B: Substances which should be regarded as if they induce heritable mutations in the germ cells of humans.

   Result: No component of IPAC EAC is either known to induce or should be regarded as if they induce heritable mutations in the germ cells of humans, combined with not being rapidly degradable or having high bioaccumulation.

5. Reproductive Toxicity Category 1A or 1B combined with not being rapidly degradable and having high bioaccumulation

   Criteria: Reproductive Toxicants

   Category 1A: Known human reproductive toxicant.

   Category 1B: Presumed human reproductive toxicant.

DuBois Chemicals Canada Inc.
1620 West 75th Avenue | Vancouver BC | Canada V6P 6G2
Toll Free 1 888 247 0000 | T 604 263 0803 | F 604 263 0825 | www.duboischemicals.com

Result: No component of IPAC EAC is either a known or presumed human reproductive toxicant combined with not being rapidly degradable or having high bioaccumulation.

6. Specific Target Organ Toxicity Repeated Exposure Category 1 combined with not being rapidly degradable and having high bioaccumulation

   Criteria: STOT-RE (Specific Target Organ Toxicity following Repeated Exposure)

   Category 1: Substances that have produced significant toxicity in humans, or that, on the basis of evidence from studies in experimental animals can be presumed to have the potential to produced significant toxicity in humans following repeated exposure.

   Category 2: Substances that, on the basis of evidence from studies in experimental animals can be presumed to have the potential to be harmful to human health following repeated exposure.

   Result: No component in IPAC EAC is known to have or presumed to have produced significant toxicity in humans following repeated exposure, combined with not being rapidly degradable or having high bioaccumulation.

DuBois Chemicals Canada Inc.
1620 West 75th Avenue | Vancouver BC | Canada V6P 6G2
Toll Free 1 888 247 0000 | T 604 263 0803 | F 604 263 0825 | www.duboischemicals.com

Representative References

Agency for Toxic Substances & Disease Registry: Priority List of Hazardous Substances http://www.atsdr.cdc.gov/spl/index.html

California Proposition 65 (Prop 65) http://oehha.ca.gov/prop65.html

Environment Canada Domestic Substances (DSL) List http://www.ec.gc.ca/lcpe-cepa/eng/subs_list/DSL/DSLsearch.cfm

Environment Canada, CEP Environmental Registry, Toxic Substances List http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=0DA2924D-1

European Chemical Agency (ECHA) Inventory Database http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database

United States Centers for Disease Control/National Institute for Occupational Safety and Health Int. Chemical Safety Cards http://www.cdc.gov/niosh/ipcsneng/neng0991.html

United States National Library of Medicine, Toxnet Toxicology Data Network http://toxnet.nlm.nih.gov/

United States Occupational Health and Safety Administration chemical information: https://www.osha.gov/html/a-z-index.html

United States National Toxicology Program Report on Carcinogens http://ntp.niehs.nih.gov/

DuBois Chemicals Canada Inc.
1620 West 75th Avenue | Vancouver BC | Canada V6P 6G2
Toll Free 1 888 247 0000 | T 604 263 0803 | F 604 263 0825 | www.duboischemicals.com