



सी एस आई आर - राष्ट्रीय समुद्र विज्ञान संस्थान

(वैज्ञानिक एवं औद्योगिक अनुसंधान परिषद)

दोना पौला 403 004 गोवा, भारत

CSIR - National Institute of Oceanography

(Council of Scientific & Industrial Research)

Dona Paula 403 004 Goa, India



NIO/TSP-02/2019 (TSP3275)

11/03/2019

TO WHOMSOEVER IT MAY CONCERN

Approval for the use of ECO-RED Organic OSD for treating offshore and onshore oil spills

Name and Address of the Approval Holder:

*M/s. Adithiyaa Agency, H1-Phase 3, Anna Nagar Post, Trichy-620026, Tamil Nadu India.
Contact No. +91 7708483807;9488983951; adithiyaaagency@gmail.com*

The CSIR-National Institute of Oceanography (CSIR-NIO), Dona Paula, approves the use of:

ECO-RED Organic Dispersant for treating offshore and onshore oil spills

Type III and Type II Dispersant was found to comply with the critical parameters (as per the enclosed Annexure-I) required for its safe use.

[Validity for this test certificate is for a period of **FIVE YEARS** from the date of issue.]

Place: Dona Paula Goa (INDIA)

Date: 11/03/2019

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CSIR- National Institute of Oceanography
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Test Parameters	Recommended Criteria ICG, 2009	Test Result of ECO-RED Organic Dispersant
Dispersant Efficiency in Neat (Type III) form	>60%	84.86% (1 :10 ratio) 81.21% (1:20 ratio)
Dispersant Efficiency in diluted (Type II) form	>60%	82.22% (1 :10 ratio) 80.25% (1:20 ratio)
Emulsion stability in Neat (Type III) form	>50%	88.16% (1:10 ratio) 85.68% (1:20 ratio)
Emulsion stability in diluted (Type II) form	>50%	85.34% (1:10 ratio) 83.01% (1:20 ratio)
Dispersant Toxicity in Neat (Type III) form	Non-Toxic (NT) ² /(PNT) ² @LC ₅₀ 96 hrs;	Shrimps: 1903ppm (NT) Fish: 1785ppm (NT)
Dispersant Toxicity in diluted (Type II) form	-do-	Shrimps: 4744ppm (NT) Fish: 4744ppm (NT)
Dispersant Type III:Oil mixture (1:10)	-do-	Shrimps: 1328ppm (NT) Fish: 1328ppm (NT)
Dispersant Type III:Oil mixture (1:20)	-do-	Shrimps: 780ppm (PNT) Fish: 780ppm (PNT)
Dispersant Type II:Oil mixture (1:10)	-do-	Shrimps: 4169ppm (NT) Fish: 3865ppm (NT)
Dispersant Type II:Oil mixture (1:20)		Shrimps: 3171ppm (NT) Fish: 2960ppm (NT)

Prabha

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