


## ANNEXURE-I

	Recommended Criteria by WSL/NIO/Coast Guard	Test Results of Spilcare- ADT
<b>Physical State</b>	Clear homogenous flowing liquid free from suspended solids	In Compliance
<b>Type Approved</b>	Type II & III combination dispersant	Type II & III combination dispersant
<b>Chlorinated hydrocarbon (in ppm)</b>	Max 0.05	<0.05, tested by Spilcare.
<b>Specific Gravity at 15 °C as per ASTM D 1298)</b>	< 1.03	1.01 To 1.02 As Tested By Spilcare
<b>Viscosity at 20 °C (as per ASTM D 445 MPa)</b>	<250cSt	<250cSt as tested by Spilcare
<b>Flash Point (as per ASTM D 93)</b>	>60 °C	>80 °C Tested by Spilcare
<b>Biodegradability</b>	Must Pass the biodegradability test, when tested as per OECD/modified method of OECD giving a biodegradability of >90%	Passed: Tested by Spilcare and is > 90%.
<b>Presence of aromatic hydrocarbons</b>	< 3%	Passed. Tested by Spilcare.
<b>Dispersant efficiency in neat (Type 3 form)</b>	>60% <sup>1</sup>	82.53%
<b>Dispersant efficiency in diluted (Type 2 form)</b>	>60% <sup>1</sup>	91.14%
<b>Emulsion stability in neat (Type 3 form)</b>	>75%	89.16%
<b>Emulsion stability in diluted (Type 2 form)</b>	>75%	91.20%
<b>Dispersant Toxicity in Type 3 form</b>	NT or PNT <sup>2</sup>	5,897 mg/l(ppm)@LC <sub>50</sub> , 96 hrs so classified as NT
<b>Dispersant toxicity in Type 2 form</b>	NT or PNT <sup>2</sup>	11,879 mg/l (ppm) @ LC <sub>50</sub> , 96 hrs; hence classified as NT
<b>Dispersed oil toxicity using Type II form of dispersant</b>	NT or PNT <sup>2</sup>	1,070 ppm (0.107%); hence classified as NT
<b>Dispersed oil toxicity using Type III form of dispersant</b>	NT or PNT <sup>2</sup>	769 ppm (0.077%); hence classified as PNT

<sup>1</sup> Policy and Guidelines for use of Oil Spill Dispersants (OSD) in Indian Waters. 2009.

<sup>2</sup> GESAMP/EPA Rating Marine Protection Rules PART 132 – Dispersants and demulsifiers amendment rules, 2009; Non-toxic (NT): >1,000 ppm; Practically Non-toxic (PNT): >100 and ≤1,000 ppm; Slightly Toxic (ST): 10 and ≤100 ppm; Moderately Toxic (MT): >1 and ≤ 10 ppm; Highly Toxic: >0.1 and ≤ 1 ppm; very highly toxic: >0.01 and ≤ 0.1 ppm

  
**R. A. SREEPADA** 10/02/2010  
 Scientist  
 Aquaculture Laboratory  
 National Institute of Oceanography  
 Dona Paula, Goa - 403 004.