

# ECA\* Water Demulsifiers For Soluble Oil Emulsions

### *Introduction*

The increased attention paid to the discharge of oily wastewater, and the high costs, have made it necessary for many engineering companies and formulators of soluble oil, to treat the spent waste product.

Soluble oils are made by adding 3-10% oil to fresh water. The emulsifying agents ensure the stability of this engineering coolant.

Once spent, due to oil loss, contamination with particulates, tramp oil, and biological growth, these emulsions lose their effectiveness. Since the primary impurities making such waste "hazardous" are the emulsified oil, heavy metals, and suspended solids, these can be removed by chemical treatment.

### *Application*

Emulsions Control's ECA Water Demulsifiers are complex blends of water-soluble bases, described as reverse demulsifiers, coagulants or flocculents, and function as follows.

- 1. Neutralize residual stabilizing forces thus releasing oil and oily solids from the water.**
- 2. Rapidly coalesce oil droplets for quick lift, and coagulate solids for separation.**
- 3. When followed by pH adjustment to around 9, heavy metals are flocculated out.**
- 4. Result is typically a layer of free oil above a layer of floating solids, and clear water. Phase separation is then effected by gravity settling, filtration, belt-press, etc.**

### *Technical Service*

Emulsion Control, Inc. offers a complete package of preliminary system evaluation, chemical and dosage selection, the supply of chemical and the supervision of initial trials.

E.C.I. also has the ability to formulate tailor-made demulsifiers for unusual emulsion problems. Technical service and further information are available through your E.C.I. representative.

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