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FLEETLINE SYNCOOL B

DESCRIPTION

Syncool B is a water extendible cutting fluid developed to eliminate many problems experienced in the metal machining industry. Syncool B is free from sodium nitrite and phenols and does not contain any other toxic materials.

METHOD OF USE

20:1 – 50:1 maximum dilution

QUALIFICATIONS

Syncool B may be considered for use on steel, cast iron, yellow metals and aluminium and will provide protection for stored and semi finished components against corrosion.

APPLICATIONS

Automatic Machines	3.0%
Grinding Steels	2.0%
Grinding Cast Iron	2.5%
Drilling	3.0%
Turning	3.0%
Sawing	5.0%
Milling	4.0%
Broaching	5.0%
Thread Cutting	5.0%

APPEARANCE

Clear Blue Fluid

1. PRODUCT AND COMPANY IDENTIFICATION

Trade Name	FLEETLINE SYNCOOL EP
Manufacturer/Supplier	OILFLOW P.O.Box 14527 Wadeville 1422
Phone Number	(011) 827-5848 (011) 827-5832

2. COMPOSITION/INFORMATION ON THE COMPONENTS**Hazardous Components in Product**

Manufactured from base fluids, emulsifiers and corrosion inhibitors, with non-phenolic coupling agents, chlorinated EP and additional performance agents.

Component Name	Concentration	Classification
ALKAONOLAMINE ESTERS AND REACTION PROD	25-60	Xi; 36/68
BASE FLUIDS	20-25	
EMULSIFIERS	10-20	
OXAZOLIDINE PRESERVATIVE	1-5	Xn;R22-36/37/38

3. HAZARD IDENTIFICATION

Main Hazards	Hazardous according to OSHA 29 CFR 1910.1200
Health Effects – Eyes	May cause irritation and damage to the eyes.
Health Effects – Skin	Prolonged and repeated contact will cause irritation and removal of fats.
Health Effects – Ingestion	No problems expected for minor ingestion.
Health Effects – Inhalation	High levels of vapour may results in toxic effects.

4. FIRST AID MEASURES

First Aid – Eyes	Flush thoroughly with water. If irritation occurs, call a doctor.
First Aid – Skin	Wash skin with soap and water.
First Aid – Ingestion	Wash out mouth with water. Obtain medical attention. Do not induce vomiting. Milk to drink may be beneficial.
First Aid – Inhalation	Remove from exposure and if the patient experiences irritation, nausea or unconsciousness, seek medical assistance.

5. FIRE FIGHTING MEASURES

Extinguishing Media	Use foam, dry chemical, carbon dioxide or water fog.
Unsuitable Extinguishing Media	Do not use water jet.
Special Hazards of Product	Large surface areas exposed to air or oxygen may be easily ignited.
Protective Equip, for Fire-Fighting	Wear self-contained breathing apparatus for fires in enclosed spaces.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Material can create slippery conditions underfoot.
Environmental Precautions	Try to prevent the material from entering drains or watercourses.
Spillages	Contain and absorb using diatomaceous earth or other inert material. Transfer into suitable containers for disposal.

7. HANDLING AND STORAGE

Handling	Avoid contact with skin. Avoid contact with eyes – wear chemical goggles when handling the Undiluted product. The use of appropriate barrier and after-work creams may be beneficial. No special precautions are required.
Storage	Store in dry conditions protected from frost and elevated temperature. Store in original containers or in other mild steel or high density polyethylene containers which are closable and clearly labelled.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits	the product does not have an established Occupational Exposure Standard (OES), Maximum Exposure Limit (MEL), or Threshold Limit Value (TLV). However, it contains mineral oil which has an individual established OES/TLV of 5mg/m ³ for oil mist.
Eyes	Wear chemical goggles when handling the undiluted product or if there is a risk of splashing with the diluted product.
Skin	Wear impervious gloves when handling the undiluted product. Prolonged or repeated contact with diluted metalworking fluid emulsions is often unavoidable – the use of appropriate skin protective and reconditioning creams may be beneficial, and gloves should be considered whenever their use is practical and safe. Change heavily contaminated clothing and overalls as soon as possible.
Inhalation	Respiratory protection is not normally required. However, suitable respiratory equipment should be provided for those operations which generate vapour, mists or fumes and where exposure cannot be adequately controlled by local exhaust ventilation or other means.
Industrial Hygiene	Adopt normal good working practices and personal hygiene standards. Wash hands after use, before eating, drinking or smoking, and before and after using the toilet. Contaminated clothing should be laundered before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Colour	Blue
Odour	Mild
pH	9.4 @ 3%
Boiling Range/Point (°C)	Boils above 100°C
Flash Point (PMCC) (°C)	Exceeds 100 °C
Solubility in Water (kg/m ³)	Soluble
Density (kg/m ³)	0.985 kg per litre
Auto-flammability (°C)	Not Established

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions
Conditions to Avoid	Heat, naked flame, static electricity and sparks. Protect from frost.
Materials to Avoid	Strong oxidizing agents
Hazardous Decomposition Products	Combustion will generate carbon monoxide and other unidentified organic and inorganic compounds.

11. TOXICOLOGICAL INFORMATION

Eyes	Eye contact with the undiluted product may cause strong irritation and stinging. There may be a potential to cause corneal injury if treatment is not prompt. Dilute emulsions are expected to cause only slight transient irritation or redness.
Skin	Dermal LD50: >2500 (rabbits, expected LD50) The undiluted product in brief or occasional skin contact may cause slight irritation which may become more intense if not properly removed. Prepared emulsions are surface active and slightly alkaline, and prolonged or repeated contact with them, especially if the emulsions are over strength, may cause defatting of the skin, slight irritation and dermatitis.
Inhalation	Inhalation LC50: Not established. This product is unlikely to present any significant inhalation hazard at ambient temperatures. High temperatures or atomizing systems may lead to generation of vapours, mists or fumes which could cause irritation to eyes and respiratory tract. Repeated excessive vapours to oil mists may cause respiratory damage and a condition resembling pneumonia.
Ingestion	Oral LD50: >2500 (rats, expected LD50). The product has a low order of acute oral toxicity – ingestion is not regarded as a significant health hazard likely to arise in normal use. Swallowing Significant quantities may cause discomfort, nausea, irritation of digestive tract and diarrhoea. Aspiration into the lungs caused by vomiting or regurgitation following ingestion can be hazardous with Possible resultant chemically induced pneumonia.
Chronic Toxicity	There are no reports of long term adverse toxic effects in man attributable to the use of this type of product.
Carcinogenicity	No carcinogenic effects are normally anticipated with this type of product. All mineral oils incorporated in the product have been highly refined.
Note	Contamination of emulsions during use may introduce additional hazards.

12. ECOLOGICAL INFORMATION

Biodegradability See Below
Chemical Oxygen Demand
Water

No data.

The individual components range from readily to poorly biodegradable. Mineral oil has limited biodegradability when tested by method CECL-33-T-82. The components are not expected to be highly toxic to aquatic life. If released to water, the product may deplete the oxygen supply to bottom dwelling organisms. Nitrosamines may be formed with the nitrogen content in the water or in the presence of nitrites. The product contains a small amount of boron: water soluble borates are widely distributed naturally in the soil and sea.

Soil

Small quantities will be absorbed in the upper soil layers where biodegradation may take place. Larger quantities may penetrate into anaerobic soil layers in which some of the organic compounds (e.g. mineral oil) may persist. Whilst many of the components have a high soil absorption coefficient, some will be capable of penetrating the soil to cause ground water contamination. Mineral oil can have a potential to bio accumulate. Boron is an essential micronutrient for plants – but it is phytotoxic in higher concentrations.

13. DISPOSAL

Note

All means of disposal should comply with local regulations. Dispose of product and containers carefully and responsibly. Do not allow product to contaminate ponds, water courses, soil or drains. Do not dispose of undiluted product or untreated emulsions down the drains.

Undiluted Product

The product may be incinerated in suitable equipment and under controlled conditions. Alternatively, the product can be disposed of via an authorized person/licensed waste disposal contractor.

Diluted Fluid

Dispose via an authorized person/licensed waste disposal contractor. Alternatively, emulsions can be treated in an appropriate effluent treatment facility (e.g. chemical splitting or ultra filtration) to separate mineral oil and other components from the water phase. The clarified water phase may contain dissolved salts, surfactants, trace hydrocarbons, and other dissolved materials. It should not be discharged into sewage systems without the approval of the appropriate local authority and without checking for compliance with issued consent conditions. Further treatment may be required. The non aqueous phase can be disposed of as for the undiluted product.

14. TRANSPORT INFORMATION

Un Class	Not classified
IMO Class	Not classified as dangerous
IMDG Class	
IATA Class	Not classified as dangerous

15. REGULATORY INFORMATION

EEC Classification	Xi: Skin & Eye Irritant
EEC Number	Not applicable
Risk Phrases	R36/38; Irritating to eyes and skin.
Safety Phrases	S25; Avoid contact with eyes. S26; In case of contact with eyes, rise immediately with plenty of water and seek medical advice.
Note	The above classification applies to the undiluted product as supplied. It does not apply when the product is diluted for use at the correct operating strength.

16. OTHER INFORMATION

- (1) Other materials should not be added to the product or emulsions unless recommended.
- (2) Emulsions should be maintained at the recommended concentrations in order to minimize any health hazards. In particular, water evaporation can lead to an increase in concentration which may result in an increased likelihood of skin defatting and irritation. A refractometer can be used to give a convenient check of emulsion strength.
- (3) Minimise tramp oil and other contamination; remove metallic swarf or other debris from machines at frequent intervals.
- (4) During machining, metallic particles from work pieces or tools can contaminate emulsions. These may abrade the skin with a resultant increase in perceptibility to the inherent irritancy effect of the emulsion.
- (5) During machining, emulsions may become contaminated with certain metals which are present in the work pieces or tools. These may solubilise in the emulsions. Some of these contaminants (e.g. Chromium, nickel and cobalt) are capable of inducing allergic skin reactions. Some may also introduce an increased risk to health if excessive exposure to mists occurs.
- (6) Proper procedures for regular draining and cleaning of machine tool coolant systems can help obtain optimum fluid performance and reduce bacterial spoilage.
- (7) The product contains mineral oil which has a published OES/TLV of 5mg/m³ for oil mist. However, it is advisable to control oil mist exposures to below 2-3 mg/m³ to minimize nuisance and discomfort complaints.