



Biofuel Systems Group Limited
"Beech Croft"
51 Ruff Lane, ORMSKIRK
Lancashire, ENGLAND
L39 4UL

www.biofuelsystems.com

Wintron® XC30

The original cold flow additive for biodiesel.

Broad spectrum formulation - effective for biodiesel produced from the widest range of feedstocks.

General

Wintron® XC30 is a pour point depressant formulated specifically for biodiesel.

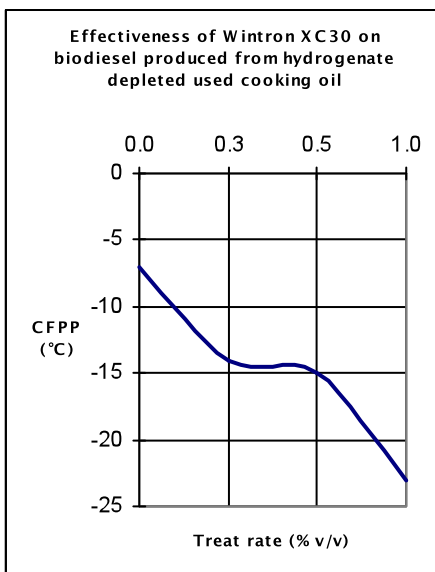
It is a blend of styrene copolymer esters in a 2% toluene base.

It is a viscosity modifier that reduces the tendency of viscosity to increase as the fuel is cooled. This alters the low temperature crystallization process - lowering the temperature at which biodiesel is able to flow and lowering the temperature at which wax crystals become large enough to block the pores of the fuel filter.

Treat rate

Wintron® XC30 is formulated to be effective for biodiesels produced from a range of feedstocks. Best results are seen with highly unsaturated feedstocks such as biodiesel made from rapeseed oil. Although the composition of biodiesel made from used cooking oil can vary tremendously, results are generally good. Wintron® XC30 is not effective for highly saturated esters such as biodiesel derived from tallow and palm oil etc.

Treat rate is typically 0.2% - 2% by volume ; Graph below shows effectiveness of Wintron® XC30 with biodiesel produced from hydrogenate depleted used cooking oil¹



Cold filter plugging point (CFPP) – lowest temperature at which sample can pass through a filter²

Example - 0.5% v/v - equivalent to 5 litres of Wintron® XC30 made up to 1000 litres with finished biodiesel

¹Hydrogenate depleted used cooking oil : cooking oil is cooled to 5°C
The saturates that solidify and sink are not used as their esters will have poor cold flow properties. The liquid top layer is used to make biodiesel

²Conditions specified by EN116, ASTM D 6371 & IP 309 – the lowest temperature at which a 20ml sample passes through a 45µm wire mesh under 0.0194atm vacuum within 60s

The characteristics of biodiesel vary and are largely dependent on the feedstocks used to produce the fuel. Users must determine the required treat rate. The information provided here should be used as a guide only.

Use

Wintron® XC30 is mixed with finished biodiesel. The biodiesel should be warm, and must be at least 5°C above the cloud point of the fuel (i.e. it should appear clear)



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Cold filtration

The cold flow characteristics can be further improved by cold filtration of the fuel after it has been mixed with Wintron® XC30. This method will reduce the CP and further reduce CFPP.

- (1) Optimum treat rate with Wintron® XC30 is determined to maximally reduce pour point of biodiesel
- (2) Warm biodiesel is mixed with Wintron® XC30
- (3) The mixture is allowed to cool to below the cloud point – the fuel must still be able to flow
- (4) Filtration to 1 micron

Safety

Contains toluene : Keep away from heat and ignition sources. May be harmful if swallowed. Avoid breathing vapour. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed. (Toluene : CAS# 108-88-3)

FIRST AID: SKIN: Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen INGESTION: Give several glasses of milk or water. Vomiting may occur spontaneously, but DO NOT INDUCE! Never give anything by mouth to an unconscious person.

FIRE FIGHTING MEASURES: Fire Extinguisher Type: Carbon Dioxide, dry chemical powder or appropriate foam Fire/Explosion Hazards: Vapour may travel considerable distance to source of ignition and flash back. Fire Fighting Procedure: Use water spray to cool fire exposed containers.