

Cold Flow Properties of Biodiesel Blends

This table contains the cloud point, pour point, and cold filter plugging point of three different diesel fuels, biodiesel blends, and biodiesel blends with two different cold flow improving additives. The diesel fuels are a number 2 diesel fuel, a winterblend fuel made up of 50 % number 1 and 50% number 2 diesel fuel, and a seasonally blended premium diesel fuel. The biodiesel used was a soy-methyl ester biodiesel fuel.

Fuel	Cloud Point °F	Pour Point °F	Cold Filter Plugging Point °F
Number 2 diesel fuel	-1	-40	-10
B2: Number 2 diesel fuel with SME and additive A	-3	-40	-40
B20: Number 2 diesel fuel with SME	6	-50	-10
B20: Number 2 diesel fuel with SME and additive A	6	-50	-16
B20: Number 2 diesel fuel with SME and additive B	5	-50	-34

Winterblend (50% D1/50% D2) diesel fuel	-16	-50	-26
B2: Winterblend (50% D1/50% D2) with SME and additive A	-18	-50	< -40
B20: Winterblend (50% D1/50% D2) with SME	-1	-50	-10
B20: Winterblend (50% D1/50% D2) with SME and additive A	-2	< -50	-30
B20: Winterblend (50% D1/50% D2) with SME and additive B	-3	< -50	-34

Seasonally blended premium diesel	-5	-45	-18
B20: Seasonally blended premium diesel with SME	4	-15	-6
B20: Seasonally blended premium diesel with SME and additive A	1	< -50	-28
B20: Seasonally blended premium diesel with SME and additive B	1	-22	-20

Note: The soy-methyl ester biodiesel (SME) used for making the biodiesel blends were obtained in February, 2002. The seasonally blended premium diesel fuel was obtained in March, 2002. The Number 2 and winterblend diesel fuels were obtained in April, 2002. One sample of each fuel, biodiesel blend, and biodiesel blend with additives was tested. This work was a cooperative effort between the Agricultural Utilization Research Institute and the University of Minnesota.