

## DESCRIPTION

AMERGY PPD pour point depressant is an ashless, low temperature flow improver for marine distillate fuels, including marine gas oil (MGO), hybrid and ultra-low sulfur diesel (ULSD) fuel. AMERGY PPD modifies the crystallization of the wax or paraffin normally found in distillate fuels when subjected to low storage temperatures.

As more vessels are transiting polar waters, the IMO has already proposed the International Code of Safety for Ships Operating in Polar Waters, or the Polar Code. As more operators evaluate routes across this region to gain voyage efficiencies, it is essential they consider the possible issues regarding the suitability of fuel bunkered prior to entering cold waters.

When vessels' fuels are subjected to cold sea temperatures, especially during winter or in arctic waters, and are left untreated, fuels will accumulate wax deposits that lead to poor pumpability and filter plugging. In extreme cases, where the fuel is subjected to extremely cold conditions, the fuel will solidify in storage or transfer, leading to engine starvation.

To counter these harsh conditions, AMERGY PPD is formulated to depress the pour point and improve the cold flow properties of typical marine distillate fuels. AMERGY PPD provides superior cold filter plugging point (CFPP) and pour point depression. The advanced chemistry in AMERGY PPD minimizes the need for expensive kerosene addition and dilution. Generally, when treating fuel that has a cloud point greater than -16°C, AMERGY PPD will prevent wax buildup and provide trouble-free flow in cold conditions.

## APPLICATION & USE

Drew Marine recommends that fuel deliveries be representatively sampled and analyzed. This action will enable determination of overall fuel quality, pinpointing properties that may lead to fuel handling and/or combustion issues. Consult your local Drew Marine representative for further details on fuel sampling equipment and fuel analysis services.

The fuel must be above its cloud point prior to treating with AMERGY PPD. Cloud point is the temperature at which wax crystals begin to form. Cloud point should be requested to be analyzed and provided by bunker suppliers, if possible.

Cloud point is different from cold filter plugging point (CFPP). CFPP is the lowest temperature at which a fuel will give trouble-free flow. Pour point, unlike cloud point, is a more common test provided by bunker suppliers (e.g., certificate of

analysis). Pour point is the temperature at which the accumulation of wax prevents the fuel from having any movement. Once the fuel reaches its pour point, it solidifies until the temperature increases sufficiently to thaw the wax deposits.

The dosage of AMERGY PPD depends on the cloud point and homogeneity of the fuel. A sample should be obtained from the nominated delivery tank(s) or during the initial delivery at the bunker manifold. Afterwards, the sample should be immediately analyzed for cloud point and stability. While ISO 8217:2012 DMX grade which is used for emergency diesel and lifeboat engines, has a maximum cloud point requirement of -16°C, it is recommended that the cloud point be between 4°C to 6°C below the lowest ambient temperature at which the vessel will be operating. In absence of a cloud point result, all suspect fuels should be treated prior to bunkering. The dosage is 1:500 or 1 liter of AMERGY PPD per 0.5 MT of fuel.

The stability of the fuel may impact the effectiveness of AMERGY PPD. Unstable fuels may require additional treatment to overcome wax deposit formation. In the absence of a Spot Number result, use the dosage assuming a spot #4 or #5 when cloud point is known. Stability may be quickly determined using the FO COMPATIBILITY TESTER, available from Drew Marine. Refer to the FO COMPATIBILITY TESTER product data sheet for technical details and ordering information about that test kit.

AMERGY PPD Dosage Rate	Stability, Spot Number		
Cloud Point, °C	1	2 or 3	4 or 5
> +8.0	1:500	1:500	1:500
+ 4.0 < CP ≤ +8.0	1:1,000	1:500	1:500
0.0 < CP ≤ +4.0	1:2,500	1:1,000	1:500
- 4.0 < CP ≤ 0.0	1:5,000	1:2,500	1:1,000
- 8.0 < CP ≤ -4.0	1:10,000	1:5,000	1:2,500
- 12.0 < CP ≤ -8.0	1:15,000	1:10,000	1:5,000
- 16.0 < CP ≤ -12.0	1:20,000	1:15,000	1:10,000
CP ≤ -16.0	No treatment necessary		

**Example:** MGO with cloud point of -5°C with a stability spot number result of #2 should be dosed 1:5,000 or 1 liter AMERGY PPD per 5 MT of fuel.

For those vessels voyaging into colder climates, while their bunkers taken at warmer climates, their fuel should also be treated with AMERGY PPD prior to bunkering to ensure proper mixing. AMERGY PPD should be dosed directly into the nominated bunker tanks and into non-nominated tanks that will be used while operating in colder geographies. Treated fuel in non-nominated tanks must be circulated to ensure adequate mixing prior to entering colder waters.

## TYPICAL PHYSICAL PROPERTIES

Specific Gravity @15.6°C	0.898
Viscosity @40°C	39 mm <sup>2</sup> /s
Pour Point	-21°C
Flash Point	60°C

**NOTE:** Always wear the appropriate personal protective equipment when using this product.

## PACKAGING

AMERGY PPD is available in 200-liter drums PCN 5750279 and 25-liter pails PCN 5750402.

## RELATED PRODUCTS

FO COMPATIBILITY TESTER (PCN 1AB2185)

## IMPORTANT INFORMATION

Drew Marine maintains Safety Data Sheets on all of its products. Safety Data Sheets contain health and safety information for your development of appropriate product handling procedures to protect your employees.

Our Safety Data Sheets should be read and understood by all of your supervisory personnel and employees before using Drew Marine products.



# Drew Marine<sup>®</sup>

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