

# What is propylene glycol?

It's found in pet foods, medications—even cosmetics and ice cream—so why does it sound so scary?

Google “propylene glycol” or read blog posts regarding the recent lawsuit against Nestlé Purina’s Beneful dog food that claims propylene glycol is making pets sick, and you can easily be overwhelmed with information and opinions regarding the compound. But do we really know what propylene glycol is?

Armed with information from Ahna Brutlag, DVM, MS, DABT, DABVT, associate director of veterinary services for Pet Poison Helpline and SafetyCall International, PLLC, you can make an educated decision on whether you want to feed pet food with propylene glycol on the ingredient list.

## What is propylene glycol?

- > It is a synthetic liquid substance that is used by the chemical, food and pharmaceutical industries for a wide variety of reasons.
- > It is used to absorb extra water and maintain moisture in certain medicines, cosmetics and dog and human food products.
- > It is categorized by the U.S. Food and Drug Administration (FDA) as “generally recognized as safe.”
- > It is approved for use in animal feeds when used in accordance with good manufacturing and feeding practices.
- > It is used as a solvent for food colors, flavors and pharmaceuticals; to create artificial smoke or fog used in theatrical productions and in “pet-safe” antifreeze.
- > It is colorless and nearly odorless.

## Is propylene glycol hazardous to pet health?

- > Cats are particularly sensitive to propylene glycol. FDA says it prohibits the use of propylene glycol in cat foods because it has been shown to cause abnormalities in the red blood cells of cats fed diets containing it.
- > Brutlag says because of significant interspecies differences, propylene glycol does not affect dogs in the same way. The FDA concurs—it is not aware of any research that demonstrates the same effect on dogs.
- > If a dog or cat ingests a large enough amount of propyl-

ene glycol, it can become poisoned. However, Brutlag says the amount of propylene glycol that a dog would be *expected to* ingest in a commercial dog food containing propylene glycol would not be considered enough to cause poisoning.

> Brutlag says research has shown that dogs that ingest propylene glycol in the amount of 2 g/kg/day display no adverse effects.

## What if a dog does ingest a toxic amount of propylene glycol?

- > Ingestion of an excessive amount of propylene glycol can cause severe sedation, walking “drunk,” seizures, tremors, panting, anemia and lethargy.
- > Propylene glycol does not cause kidney failure.

## If propylene glycol is safe, why does it get the bad rap of being a dangerous toxin?

- > Brutlag believes the majority of the misconceptions stem from the fact that propylene glycol is in the same chemical family and has a similar sounding name to ethylene glycol—the most common glycol responsible for poisonings. Ethylene glycol is found in household products such as automotive antifreeze, some de-icing products, printer ink, interior and exterior paint and spackle.
- > Propylene glycol and ethylene glycol are very different compounds. Ethylene glycol—even in small amounts—is highly toxic to animals and humans.
- > Ethylene glycol poisoning can quickly cause clinical signs that look similar to alcohol poisoning followed by severe kidney failure within 24 to 72 hours of ingestion.
- > Brutlag says pets must be treated within hours of ingesting ethylene glycol as delayed treatment often is not effective. Once a dog or cat has developed kidney failure, the prognosis is poor.



## Hear it from Nestlé Purina: Propylene glycol in Beneful and Dog Chow

- > Propylene glycol concentrations in all Beneful dry dog food products are less than 2 percent.
- > Propylene glycol is found in Nestlé Purina’s Beneful and some Dog Chow formulas of dry dog food. “Propylene glycol functions as a humectant food additive and preservative. In other words, we use propylene glycol to help keep the semi-moist kibbles soft and moist,” says Wendy Vlieks, of Nestlé Purina’s corporate public relations department.
- > Nestlé Purina pet foods are “only released after we confirm all of the ingredients are included at the right levels,” Vlieks says.
- > Purina advises pet owners to allow 7 to 10 days when transitioning to Beneful dry dog food. Gradually add more Beneful brand and less of the previous food to your dog’s dish each day until the changeover is complete. This will help avoid dietary upsets.

## Read the labels: Where else is propylene glycol?

- > Ice cream
- > Flavored ice tea, coffee
- > Packaged frosting
- > Boxed cake mix
- > Salad dressings
- > Artificial sweeteners
- > Medications
- > Deodorant
- > Beauty products, cosmetics
- > Baby wipes
- > Margarine