



YOUR ESSENTIAL GUIDE

METHANOL VS ETHANOL

UNDERSTANDING THE DANGERS

When winter strikes, effective de-icing products are a must to ensure safety on roads, runways, and industrial sites. But not all de-icers are created equal, and the choice of ingredients can have significant implications for both health and the environment. A key point of differentiation lies in the use of methanol versus ethanol.



UNDERSTANDING

METHANOL AND ETHANOL

METHANOL (CH₃OH)

A simple alcohol with a single carbon atom, methanol is commonly derived from natural gas or biomass. While it is highly effective in lowering the freezing point of water, methanol is also highly toxic and poses severe risks to humans and animals if ingested, inhaled, or absorbed through the skin.

ETHANOL (C₂H₅OH)

A slightly larger molecule, ethanol is produced through fermentation or petrochemical processes. It is significantly less toxic and is widely used in beverages, pharmaceuticals, and safer chemical formulations.

THE DANGERS OF METHANOL

Methanol exposure can lead to serious health complications, including:



Acute toxicity

Ingesting even small amounts (10-30 ml) can cause blindness or death.



Chronic exposure

Long-term inhalation or skin contact can damage the nervous system.



Environmental concerns

Methanol spills can contaminate soil and waterways, harming wildlife.

METHANOL

IN THE NEWS



Recent news highlights the dangers of methanol contamination, particularly in alcoholic beverages. Methanol poisoning incidents have surfaced globally, including a tragic case in Laos where six tourists died after consuming methanol-tainted alcohol distributed as free shots. A British lawyer was among the victims, highlighting the devastating consequences of ingesting even small quantities of methanol. Authorities have linked such cases to illicit practices where cheaper methanol is used to spike drinks.

In another instance, officials identified methanol poisoning as a leading cause of fatalities in counterfeit alcohol scandals across Southeast Asia. Methanol is often used in improperly distilled or counterfeit spirits due to its low cost, despite its severe health risks, including blindness, organ failure or death.

Sources: The Standard, LBC, Coast FM



SO WHY IS METHANOL STILL USED?

Despite the risks, methanol remains prevalent in some de-icing and cleaning products because:

- It is cheap and readily available.
- It is effective at lowering freezing points in extreme temperatures.

However, these cost benefits come at a high safety price, making methanol a less desirable choice for responsible manufacturers.

THE SAFER ALTERNATIVE

ETHANOL-BASED

DE-ICING SOLUTIONS

Ethanol offers comparable freezing-point reduction with significantly fewer health and environmental risks. At Nielsen Chemicals, we have committed to using ethanol in all our de-icing solutions to ensure both performance and safety.

**TRUST OUR SAFER
DE-ICING PRODUCTS**



**SCREENWASH
& DE-ICER -4°C**

A versatile screenwash and de-icer combination that works effectively down to -4°C.



**SCREENWASH
& DE-ICER -20°C**

Keeps your windscreen clear and safe in sub-zero conditions.



POWER DE-ICER

A high-performance solution for harsh winter environments.



COMMON USES OF METHANOL

Fuel and antifreeze in
industrial settings

Solvent in certain
manufacturing processes

Illegally, in counterfeit
alcoholic beverages

COMMON USES OF ETHANOL

De-icing and cleaning
products

Food-grade applications
(alcoholic beverages)

Pharmaceutical and
cosmetic formulations

WHY CHOOSE

By choosing ethanol-based solutions, you are prioritising safety without compromising on performance. At Nielsen Chemicals, we lead with innovation, crafting de-icing products that reflect our commitment to safer chemistry and environmental responsibility.



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Talk to our experts on
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innovations and news.



Keep your fleet safe, your staff
protected, and your conscience clear
with Nielsen's safer alternatives.



EXPLORE OUR RANGE OF

ETHANOL-BASED

DE-ICING SOLUTIONS