

DEET

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The arthropod repellent N,N-diethyl-3-methylbenzamide (also known as N,N-diethyl-m-toluamide) is commonly known as DEET. It was synthesized and developed in collaboration between the United States Department of Agriculture (USDA) and the US Department of Defense (DOD) and became widely available in 1956. Since its introduction and registration by the US Environmental Protection Agency (EPA) for use by the public in 1957, DEET has become the most widely used and effective active ingredient in topical arthropod repellents to protect humans against a wide variety of biting arthropods, including mosquitoes, ticks, midges, tabanids, sand flies, black flies, horse flies, chiggers, leeches, etc...

DEET has a broad spectrum of activity and has become the Gold Standard for the comparison of novel active ingredients for other arthropod repellent formulations. In the 66 years since DEET became available, it has been used by billions of people and continues to be used throughout the world in a wide variety of formulations including aerosols, cream, lotions, sprays, gels, sticks, and towelette wipes at concentrations of 5% to 100%.

Although the safety of DEET has been reviewed extensively as would be expected for a product used in billions of applications, it always showed an excellent profile of safety in field and laboratory evaluations since 1940s. Its excellent safety record was confirmed by a **Reregistration** document prepared by the US EPA in 1998. Based on DEET's extensive toxicity testing, EPA reports that the normal use of DEET does not present a health concern to the general population, including children, pregnant women, and nursing mothers. DEET products are extensively used with very little risk to human health. There has been only a small number of reports of people having negative reactions after they misused and not followed the EPA label directions for DEET.

DEET is always safe when used as directed by the EPA label and year after year, Consumer Reports recommends DEET-based arthropod repellents and DEET is found in more than 500 repellent products and used by over 200 million people worldwide each year. In addition to DEET's safety, its most significant benefit is its ability to repel disease-carrying arthropods. The enormous scientific evidence and its continual use for 66 years have shown that DEET is one of the safest and best broad-spectrum repellents available for protecting humans against the bites of mosquitoes and other biting arthropods.

I professionally tested and evaluated DEET and compared it to other repellents for over 20 years when I served in the military and published 25 scientific articles, 10 chapters, and five books about DEET and other repellents.

In conclusion, DEET is safe and the most common and effective active ingredient in arthropod repellents available in the United States and throughout the world and is used by millions of travelers, military personnel, and people in their day-to-day life and recreation activities. DEET will always continue to be very important in the prevention of mosquito-borne and other vector-borne diseases in the US and throughout the world.