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Negative Aspects of Alcohol as an active ingredient when used in Hand Sanitizer and other Skin-Care Products:

The solution is **Alcohol Free Hand Sanitizer**. There are mainly two types of alcohol used in the production of **alcohol hand sanitizer gels, alcohol foam sanitizer** and other types skin care products currently available.

Ethyl Alcohol (Grain Alcohol):

Description: A low molecular weight alcohol containing two carbon atoms. This is the same alcohol as consumed in alcoholic beverages.

Isopropyl Alcohol (Rubbing Alcohol):

Description: A low molecular weight alcohol containing three carbon atoms.

Both of these alcohol's are toxic to microorganisms. They precipitate proteins in the outer surface of these organisms, killing them on contact. The effective concentration range of these alcohol's for killing microorganisms is generally 60-100%.

Testing shows that any alcohol hand sanitizer should be 70% but has to be at least 60% to be deemed effective in killing micro-organisms.

Alcohol is an excellent solvent:

Alcohol's are often used as industrial cleaning solvents, because of their ability to dissolve oils and remove them from surfaces. The residual alcohol also evaporates quickly from the cleaned surface.

While this is good for circuit boards and metal surfaces, the same properties are irritating to skin. The natural oils are removed from the skin, often called "defatting" of the epidermal layer. Extended use will keep the natural oils from protecting and softening the skin, often resulting in dried or cracked skin.

To avoid this irritation, some skin-care products include "emollients," to help replace natural skin oils. These emollients are often very different from the natural oils on the skin and can leave a sticky residue with repeated use.

▶ **Alcohol evaporates rapidly. Alcohol Free Hand Sanitizer stays constant:**

When the concentration of alcohol drops below 60% in the applied solution, its antibacterial action is impaired.

The FDA states that when the alcohol concentration drops below 60%, it is no longer effective as an antibacterial agent. Within seconds after applying to the skin, the alcohol evaporates, decreasing its concentration rapidly. Within a few seconds, the applied product is no longer effective. And, there is no continued antibacterial action.

As such, alcohol hand sanitizer solutions offer no persistence.

▶ **Alcohol is flammable. Alcohol Free Hand Sanitizer has zero flash point:**

Alcohol's burn rapidly. High-performance race car engines burn low molecular weight alcohol's, because of their excellent flammability.

When alcohol's vapors are mixed with oxygen gas, the mixture is explosive. Imagine having alcohol spread across the skin, with evaporating alcohol vapors mixing with the air above the surface of the skin, and having a spark ignite the alcohol.

There are many horror stories of this happening, especially in oxygen rich environments.

▶ **Alcohol has a peculiar odor. Alcohol Free Hand Sanitizer has no scent:**

Due to their high volatility, rapid evaporation fills the air with alcohol molecules that have a distinctive and peculiar odor. This characteristic of alcohol's may be positive or negative to the consumer, however, more often than not, the user finds this offensive.

Where do we go from here? What is the Solution?

The answer is to choose a high quality alcohol free hand sanitizer product.

GentleCare Alcohol Free Hand and Skin Sanitizer.