

Points for attention concerning ethanol as a disinfectant

Introduction

Ethanol is a basic product for many disinfectants, such as alcohol gel, hand gels, and many other kinds of disinfectants. Ethanol is highly soluble in water but the product can also be used undiluted.

The great advantages of ethanol are:

- Cleans and disinfects very well;
- Does not damage the treated product/surface;
- Does not leave behind a residue on the treated product/surface;

However, there are also important points for attention in the use and storage of ethanol.

Always read the SDS of the product or the existing safety instruction card before use

Properties








HAZARD:

Highly flammable liquid and vapour

Causes severe eye irritation

Ethanol has a very low flash point(*). Pure ethanol has a flash point of 12°C and the flash point in disinfectants is below 20°C.

Fire and explosion hazards must be taken into account concerning storage, tapping, and use and protection must be provided so that the product cannot get into the eyes.

				
Fire and smoking ban		Wearing gloves is mandatory for frequent or prolonged use when cleaning	If there is a risk of splashing, wearing safety goggles is mandatory!	Powder or foam extinguisher

First Aid

IF THERE IS CONTACT WITH THE EYES: rinse gently with water for several minutes; remove contact lenses, if possible; continue rinsing. In case of permanent irritation, consult an (eye) doctor.

Points for attention concerning STORAGE

Risk	Measure	Ref. legal framework
EXPLOSION	Store in a well-ventilated room	ATEX 153
	Store products in sealed packaging	CODEX Book III – title 4 Code of good practices: NPR 7910-1
	There must be an ATEX hazard classification in enclosed rooms as from the storage of 5 L. <i>(zoning report and explosion protection document)</i>	
	There must be an ATEX hazard classification for outdoor storage/storage in an open room the storage of 50 L. <i>(zoning report and explosion protection document)</i>	
FIRE	As from the storage of more than 50 L, the product must be stored in a room of the first group. The storage room must be compartmentalised.	Belgian General Regulations for Occupational Health and Safety (ARAB), Art. 52
ENVIRONMENT	Storage on drip trays	Flemish Environmental Permitting Regulations (VLAREM)

Points for attention concerning USE

Risk	Measure	Ref. legal framework
EXPLOSION/ FIRE	Use in a well-ventilated room and/or large spaces.	ATEX 153
	Do not use on large surfaces or in large quantities.	CODEX Book III – title 4
	Do not use on warm surfaces.	CODEX
	Always close the packaging after use.	
ENVIRONMENT/ FIRE	In case of spillage, the product must be cleaned up immediately. The used cloths must be stored in a sealed metal container/disposal bin.	

Points for attention concerning TAPPING

Companies are increasingly buying ethanol or derivatives in bulk packaging for subsequent division into smaller containers (bottles, nebulisers, canisters, etc.)

Risk	Measure	Ref. legal framework
IMPROPER USE	The tapping must be done by a trained and competent person. This employee must have knowledge of the dangers and risks. The fire fighting service must be trained to fight fire by ethanol.	Welfare at Work
EXPLOSION	Tapping in a well-ventilated room	ATEX 153
	An ATEX layout of the room must be drawn up. <i>(zoning report and explosion protection document)</i>	CODEX Book III – title 3 CODEX Book III – title 4
	Avoid static electricity: <ul style="list-style-type: none"> - An equipotential bond must be fitted to metal drums/IBCs - The tap flow rate must be kept as low as possible (e.g. install small tapping valve) - The employees must wear anti-static safety shoes. 	
	When pumping mechanically, the pump must be an ATEX pump.	
	Equipped with extinguishing agent in the immediate surroundings.	
ENVIRONMENT	Tapping must be done over drip trays. In case of spillage, the product must be cleaned up immediately. The used cloths must be stored in a sealed metal container/disposal bin.	Flemish Environmental Permitting Regulations (VLAREM)
HEALTH	The smaller containers (bottles, nebuliser, canisters, etc.) must be labelled with the name of the contents of the product, diluted or not, and hazard symbols.	CLP – CODEX Book VI title 1