

Safety Management on Nicotine Used in Electronic Cigarette in Korea

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1. Overview

- According to the Ministry of Environment, the undiluted nicotine solution is prohibited of on-line sales as per the Harmful Chemical Substance Control Act. Even in off line sales, the purchasing of undiluted nicotine solution is practically very difficult to buy except with certain special cases such as the rat poison manufacturer & etc. Meantime, the nicotine liquid (diluted solution) used for charging electronic cigarette & etc. is imposed of no specific restriction. The nicotine liquid can be obtained at the convenience stores and electronic cigarette sales shops by whoever intend to buy.
- Incurring certain incidents of using the electronic cigarette nicotine liquid with malicious intention for committing crimes recently, intend to strengthen the safety control of nicotine.

2. Background

- While incurring the first incident in Korea of committing murder crime using the undiluted nicotine solution, the nicotine liquid easily obtainable from market also contains the fatal dose of nicotine but not absolutely regulated. The concerned investigating authorities warn that it is necessary to prepare for the possibility of using the nicotine liquid for committing crime like the same way with undiluted nicotine solution.
- The health experts indicated that digesting the undiluted solution directly is lot more fatal than inhaling the smoke of cigarette. Drinking the undiluted nicotine solution may kill the grown up male with small content of nicotine contained in two cigarettes.
- The nicotine liquid (based on 30ml) selling in the market at KW14,000+ contains equivalent to about 600 cigarettes, which contains approximately 20 times of fatal nicotine dose.

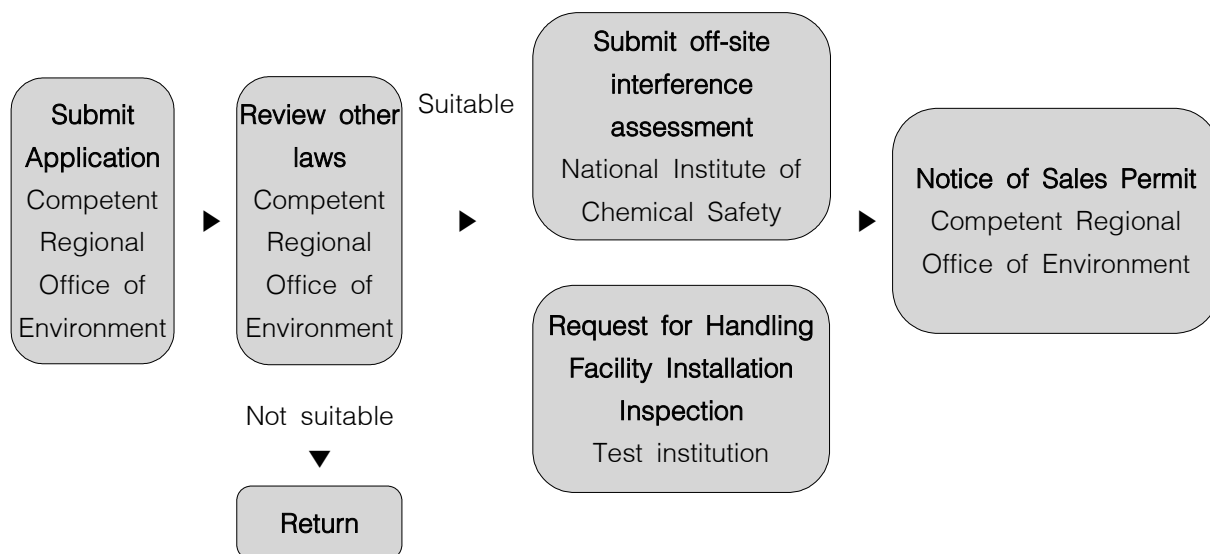
3. Major Aspects

- Hazard of Nicotine
 - When contacted with eye and skin.
 - May cause irritation or damage.
 - When inhaled.
 - Long term routine inhalation may cause breathing difficulty and pain.
 - May be fatal even with small amount if absorbed into lung.
 - May cause damage to unborn child or reproductive function.
 - When digested.
 - May cause sick at the stomach, vomiting, apnea, breath holding spell, and worst of all subject to death.
 - May interfere with human health seriously depending on the exposure level.
- ※ Nicotine Related Incident in Korea
 - A Korean lady of 20s committed suicide using nicotine liquid. (August 1st, 2015)
 - A Korean male of 50s died out of nicotine liquid poisoning. (December 16th, 2014)
 - Poisoning & eyeball damages incurred due to misuse on infants & babies. (June, August, 2014)
- Emergency Countermeasure

- When contracted in eye.
 - Immediately wash the eyes off with flowing water at least for 15 minutes.
 - Quickly receive the treatment of physician.
- When contacted with skin.
 - Immediately take the contaminated cloth, accessories and shoes off.
 - Wash with soap or soft detergent and water off.
- When inhaled.
 - Move to the place subject to fresh air.
 - If unconscious, feed oxygen.
- When digested.
 - Quickly receive the treatment of physician.
 - If unconscious, do not induce vomiting or taking water.
- Instructions to Comply When Importing and/or making sales.

Item	Subject	Target	Timing	Reception Desk	Penalty for Violation
For Import	Submission of Chemical Substance Verification Statement	Manufacturer of importer of nicotine regardless of its content	Prior to manufacturing or importing of nicotine.	Korea Chemicals Management Association	Imposing of fine below KW10M.
	Toxic Substance Import Declaration	Nicotine importer * Applicable to over 1% of nicotine.	Prior to importing of nicotine.	Competent Regional Office of Environment	Imposing of fine below 1 year of imprisonment of fine below KW30M.
For Sales	Recording & Preservation of Document	Recording of purchaser, compliance of handling facility installation criteria & etc. * Refer to the No. 75 Form on Appendix of Chemical Material Control Act Enforcement Regulation.	Prepare per every sales.	Preserve for 5 years.	Imposing of fine below KW3M.

- Harmful Chemical Material Sales Permit Procedure



※ Above procedure is applicable only for those persons who intend to make sales of compounds containing the one of nicotine & its salts over 2% for the cigarette application.

4. Source

- Ministry of Environment (www.me.go.kr)