

## Uninvited guest of summer: suffocation

### KOSHA 's warning of suffocation

Deaths from suffocation under manholes or in septic tanks are the most frequent in June and July with 73 cases for the past decade.

1<sup>st</sup> June

The safety warning lights are flashing red for people working in the manholes, septic tanks or sewage-treatment facilities due to rapidly rising temperature and torrential rain in Summer of Korea.

According to KOSHA(President Hun-Ki Baek)'s accident statistics, fatal suffocation cases have recorded the highest in June and July over the past ten years.

### Monthly death status due to suffocation over the last 10 years

(From 2002 to 2011, unit: cases)

Month	total	1	2	3	4	5	6	7	8	9	10	11	12
Fatal suffocation	171	6	8	10	10	11	30	28	15	17	15	7	14

In summer, rising temperature and intensive rain facilitate reproduction of microorganism within a confined space, decaying organism easily.

Especially in places like under the manhole and septic tanks where usually access is limited with bad ventilation have high possibility of suffocating workers as oxygen is easily dried up and poisonous gas such as hydrogen sulfide that provokes suffocation increases.

When people are exposed to less than 18 percent of oxygen concentration, their pulse may go up with nausea, hyperpnea or dizziness. If the oxygen concentration goes below 10 percent, they could lose their consciousness or even die as they stop breathing in a few minutes.

What is more it is repeated that a rescuer also dies while trying and save the worker who passed out with suffocation, because of a low oxygen concentration rate.

Suffocation accidents in summer occur the most in under the manholes followed by in sewage treatment facilities, storage tanks, chemical facilities and inside the ships.

## Death status due to suffocation by places over the past ten years

(From 2002 to 2011, unit: cases)

places	total	manhole	sewage treatment facility	storage tank, chemical facility	ship
fatal suffocation	171	44	39	25	20
pipe	food storage hopper	of using combustion tool	underground studio	others	
9	3	8	2	21	

Especially, existing law on sewerage system forces owners of individual sewerage facility to clean inside the septic tank more than one time a year encouraging the owners pay more attention to prevent accidents.

MOEL(The Ministry of employment and labor) and KOSHA issues suffocation warning to work places as summer, the season witnesses frequent suffocation accidents at confined spaces, comes. They also plan to train people working at confined spaces such as tank cleaning company, and support them to back up technologies, with three prevention principles:

- △ check the concentration rate of poisonous gas rate before and during the work;
- △ ventilate the air before and during the work
- △ wear the respiratory protective equipment before going in to the confined space to rescue the suffocated.

Alongside with these efforts, KOSHA rents devices such as oxygen indicator, poisonous gas measuring instrument, and portable ventilation fan, free of charge or it backs up part of costs for companies to purchase.

Director Jeong MS of Occupational Health Team at KOSHA said “Suffocation accidents in summer can be prevented by just paying attention to it” encouraging workers to recognize the danger of working at a confined space and to stick to the safety principles.

End.