ACID GAS CARTRIDGE KGC-10(B)

For Industrial Use ONLY
This product is designed for industrial use only. Make sure that this product is used by persons who:
- Have sufficient knowledge on occupational health and safety and respiratory protective equipment; or,
- Work under the close supervision of personnel with sufficient knowledge.

● Shelf life is 2 years from the date of manufacture if this chemical cartridge is stored unopened.

The date of manufacture is printed on the side of the chemical cartridge.

Please observe the following precautions:
- Store this chemical cartridge upright in a cool place; Avoid direct sunlight, toxic gas, and high humidity.
- NEVER use this chemical cartridge if it is torn, holed, or opened.
- NEVER use this chemical cartridge if it's shelf life is expired even in un-opened condition.
- NEVER disassemble this chemical cartridge.
- Make sure that there are no distortions or no damages such as scars on this chemical cartridge.

Read user instruction of chemical cartridge respirator prior to use.
- There is no data degradation even if the air in the package is found expanded due to the change in temperature.
- Read user instruction of the respirator carefully and install the chemical cartridge on the respirator correctly.

Scope of applications
- Working environment where acid gas (vapor) exists
  - Call KOREN for acid gases that can be removed by the chemical cartridge, as some gases cannot be removed.
  - ★ If used with a dedicated filtering material (filter), this chemical cartridge can be used in working environment where acid gas and dusts co-exist (Class 61, *Mighty Micron Pre-filter, Type 10)
  - ★ NEVER use a pre-filter other than the dedicated particulate pre-filters NEVER disassemble this chemical cartridge.

WARNING
- This chemical cartridge should NOT be used in working environment where:
  1. Concentration level of oxygen is under 18%.
  2. Toxic gas that cannot be removed with the use of acid gas cartridge exist; and/or,
  3. Concentration level of toxic gas is over 0.1%, average concentration level of toxic gas is over 50 times its exposure limit in case half-facepiece respirator is used, or average concentration level of toxic gas is over 10 times its exposure limit in case half-facepiece respirator is used. (Average concentration of toxic gas is over 150 times its exposure limit in case half-facepiece respirator is used, and over 30 times of its exposure limit in case half-facepiece respirator is used. If working hours per day are under 30 minutes, please consult to Japan Respirator Manufacturer's Association.)
  4. Even with the use of dedicated particulate pre-filter, this chemical cartridge can NOT be used in the following working conditions:
     - Regular or emergency work performed in areas where there is a possibility of contamination due to spillage of radioactive substances etc.
     - Working applications where there is a possibility of exposure to dusts.
     - Removal work of asbestos.
     - Working applications performed in areas where metal fume (including welding fume) diffuses.
     - Working applications performed in areas where particulates, with standard contaminant concentration level less than 0.1mg/m³ diffuses.
     - Working applications where fog, mist, etc. exists or,
     - Any working applications similar to the above.
  5. This chemical cartridge can NOT be used in working environment which is substantially away from normal temperature, normal humidity or normal atmospheric pressure, as its expected performance may decrease significantly.

Fit test
- Make sure to also read user instruction of chemical cartridge respirator.
- ① Completely cover chemical cartridge with an appropriate filter (filter) and put on respirator. Close the end of the pipe by pinching it with thumb and forefinger and slowly, if facepiece is slightly drawn towards face, good fit is obtained.
- ② If inward leakage is felt inside facepiece, good air-tightness is not obtained. Check installation condition of the chemical cartridge, and adjust tightness of headband and position of the respirator. Perform fit test. If good fit is obtained, remove the fit test filter.
- ③ Make sure to perform fit test prior to each use.
- ④ If pre-filter is used, fit test should be performed with the pre-filter installed on the chemical cartridge.
- (Make sure that pre-filter retention is in place when removing the fit test filter from the chemical cartridge.)

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Translated in December 2014. Contents described in this user instruction may differ from the requirements/specifications exercised outside Japan. In such case, make sure to follow local laws and regulations.
Specifications

<table>
<thead>
<tr>
<th></th>
<th>KG10 only</th>
<th>With the use of a mighty mini prefilter type 10, Class B1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service life *</td>
<td>Over 130 min</td>
<td>Over 130 min</td>
</tr>
<tr>
<td>Air flow resistance</td>
<td>Less than 125 Pa</td>
<td>Less than 250 Pa</td>
</tr>
<tr>
<td>Filtration efficiency (NaCl particles)</td>
<td>--</td>
<td>Over 80%</td>
</tr>
<tr>
<td>Increased value of inhalation resistance (Auger)</td>
<td>--</td>
<td>1200 Pa</td>
</tr>
<tr>
<td>Weight</td>
<td>Less than 53.0 g</td>
<td>Less than 60.0 g</td>
</tr>
</tbody>
</table>

* Test conditions
Hydrogen Chloride: 300 ppm, Temperature: 20°C, Relative humidity: 50%

Replacement schedule of chemical cartridge (Replace well before the expiration)

1. Total time spent has reached the service life time obtained from breakthrough time curve;
   Example:
<table>
<thead>
<tr>
<th>Service life time</th>
<th>Conditions of working environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>130 min</td>
<td>Concentration of hydrogen chloride: 300 ppm, temperature: 20°C and relative humidity: 50%</td>
</tr>
</tbody>
</table>

2. Wearer feels gas smell; or
3. Damage is found on the chemical cartridge.

Use of dedicated pre-filter (Install pre-filter onto chemical cartridge so that the side with tap faces toward wearer's face).

Make sure to install dedicated pre-filter if this chemical cartridge is used in particulate-contaminated environments.

Do NOT reuse the pre-filter by flipping it over when air flow resistance has increased due to clogging.

Deformed or damaged pre-filters should not be used.

Disposal

Do NOT disassemble chemical cartridge for disposal. Tightly seal the chemical cartridge for disposal in a bag so that toxic substance would not diffuse and dispose it as industrial waste, following local regulation. Dispose of the spent filter in a tightly sealed bag so that particulates attached to the surface would not diffuse.

Record of total time spent

Replace chemical cartridge well before the total time spent reaches the estimated service life time,

<table>
<thead>
<tr>
<th>Month/Date</th>
<th>Time spent per day (min)</th>
<th>Estimated service life (min)</th>
<th>Name of Gas</th>
<th>Name of User</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

WARNING

- Assigned test gas specified on Japanese Industrial Standards (JIS) was used to prepare the breakthrough time curve printed on this user instruction. Estimated service life time differs depending on the type of gas.
- Estimated service life time obtained from the use of breakthrough time curve is designed for reference only. In case of real use, service life time differs depending on various factors such as air flow rate, humidity, temperature etc., replace the chemical cartridge with a new one well before the expiration of the service life time for your safety. Even within the estimated service life time, immediately escape to a safe place with clean air and replace the chemical cartridge with a new one if gas smell, stimulation or taste is noticed.
- In case of reusing a chemical cartridge, tightly seal it in a bag and store in dark, cool place. Prior to reusing the chemical cartridge, make sure that sufficient service life time remains and there are no damages such as deformation or scratch on the surface.
- The sense of smell may become paralyzed over time, and therefore, do NOT judge only by smell to replace a chemical cartridge.

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