

The logo for Duram Products features a stylized yellow swoosh on the right side, curving upwards and then downwards. To the left of this swoosh, the words "DURAM" and "PRODUCTS" are stacked vertically in a bold, black, sans-serif font.

**DURAM  
PRODUCTS**

# **The Duram Mask Operating Manual**



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### The Escape Philosophy

Any person may get exposed to toxic air in situation at work, at home or on holiday. There are many scenarios where hazardous conditions may arise. A fire caused by explosion, or by any other cause, whether at home, in a high-rise office or residential buildings, on a plane or in a boat, in a car or a truck, or in the bush.

Fires kill on average over 100,000 people in the world each year, creating damage with total value of over \$500 billion! Most victims of fire die from smoke and/or toxic gases, not burns.

Other hazardous conditions may be caused by spill of toxic gases or liquids, such as Ammonia. This can happen in or around industrial areas where chemical plants operate, from a truck carrying dangerous chemicals, or by a deliberate attack using chemical agents. In 1984, an accident at a chemical plant in Bhopal, India caused over 2,500 deaths through a chemical reaction.

Biological agents can also be spread in circumstances similar to chemical materials, notably as a result of a terror attack or a political conflict. In 1995, terrorists attacked the Tokyo subway with Sarin gas, causing 12 deaths and over 700 injuries.

Exposure and inhalation of toxic air can cause multiple effects including:

- Severe burns to the skin
- Severe damage to the respiratory system
- Damage as a result of severe tissue irritation
- Total body damage through Carbon Monoxide asphyxiation
- Disorientation
- Motion restraint
- Unconsciousness
- Death

Such deterioration can occur within seconds without proper respiratory protection.

### The Solution

A personal escape mask is the ideal solution to deal with toxication of air through smoke or chemical/biological contamination. The Duram Escape Mask is a reliable and easy-to-use protection device for the entire head and the respiratory system enabling survival, escape and evacuation. The Duram Personal Escape Mask is a compact, single unit with a flexible neck opening which protects the respiratory system, face and eyes against toxic air and enables immediate donning and quick escape from hazardous areas. It is

specifically designed to provide immediate protection and quick escape thanks to a combination of several factors:

- Accessibility – compact and light-weight, carried in a personal pouch, allowing quick response in emergency
- Simplicity – made of one unit with a flexible neck opening which fits any head size and enables quick donning without the need for strengthening straps
- Convenience – hands, sight and speech are not limited, so the user can move around and function as usual
- Effectiveness – powerful yet compact filter that allows time to evacuate the contaminated area

Benefits:

- Immediate respiratory protection
- Enables quick escape in case of emergency
- One-size-fits-all
- High quality product made of high performance materials and parts

### The Duram Mask Structure



### Rubber Hood

The hood is made of Polychloroprene Latex and has extraordinary mechanical and thermal features:

- High tensile strength
- High elongation (up to 8 times its size)
- Resistance to high temperatures
- Fire resistance

The flexible neck-opening allows easy and quick donning with good neck sealing, thanks to the elasticity of the rubber

### Panoramic Visor

The visor is made of a co-polymer film with excellent qualities such as:

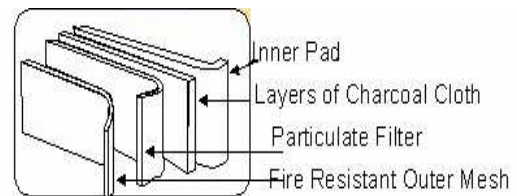
- High tensile strength
- Especially high heat resistance
- High fire-resistance
- High transparency

### Filter

There are two types of filters:

#### 1. Multi-Layer filter

- External polyester screen, fire resistant
- Electrostatic particle filter
- Layers of activated charcoal cloth with impregnation against acid gases
- Soft inner pad of non-woven material



#### 2. CO Filter

Two canisters containing:

- Electrostatic particle filter
- Layers of impregnated activated charcoal cloth
- Catalyst
- Desiccant



### Inhalation / Exhalation Valve

A system combining 2 one-directional valves: an exhalation valve and an inhalation valve + mouth piece.

### **Packaging and Shelf Life**

The mask is packed in a sealed vacuum packaging that keeps it effective for 5 years



**Models**

<b>Model</b>	<b>Purpose/use</b>	<b>Gas filtering</b>	<b>Tests and standards</b>
<b>MASKITO</b> DM-20C-300-YE	Fire incidents buildings	Fire gases: HCN, HCl, NO <sub>2</sub> , SO <sub>2</sub> (not including CO)	<u>Tested at:</u> Royal Military College of Science, England
<b>KIMI</b> DM-43C-300V-YE	Terror incidents: Industry, Transportation	ABEK CCl <sub>4</sub> , HCN, Cl <sub>2</sub> , H <sub>2</sub> S, SO <sub>2</sub> , NH <sub>3</sub>	<u>Tested at:</u> TNO Holland Has CE Mark
<b>CEMBAYO</b> DM-54C-HV-YE\BL	Chemical and Biological events	Warfare gases: Sarin, Cyanide	<u>Tested at:</u> the American Army lab SSBDCOM, Maryland, USA
<b>COGO</b> DM-CO-01-YE	Fire incidents	Gas fires: <b>CO</b> , HCl, HCN, Propenol	<u>Tested at:</u> TNO Holland Has EN-403 standard Has CE Mark

**Donning Instructions**

1. Tear sealed pouch open along dotted line and remove mask



2. Unfold mask and hold upside down with visor side facing your body



3. Locate the mask over your head, stretch the neck opening with both hands, and don it on your head. Make sure your neck is tightly sealed



4. Adjust the mask so that your mouth is centred inside the foam ring which is inside the hood directly behind the exhalation valve



### Correct Donning Tips

- Make sure to follow the donning instructions that appear on the packaging
- Remove eye-glasses before donning
- Tie up long hair before donning
- Hold your breath while donning
- Exhale the air which is inside the mask through the exhalation valve

### Warnings and Limitations

- The mask is designed for escape in emergency only
- Do not use after the expiry date that appears on the back of the packaging
- The mask provides limited protection for a short period of time, up to 15 minutes
- The mask is disposable (one-time)
- The mask is not for children under 13, and not for people with chronic diseases and breathing problems
- Do not use this mask in low Oxygen environment as this mask does not provide Oxygen
- The mask does not protect in long exposure to high temperatures or flames
- Do not use for evacuation of others
- Do not use if Package is torn or damaged
- When donning be careful not to damage the mask, avoid any sharp or pointed objects

- The mask might be filled with vapours that could limit the sight, make sure the mouth is correctly positioned and that the nose is opposite the exhalation valve
- Run away from the dangerous area to a safe place
- Remove the mask immediately in case of having breathing difficulties, suffocating or feeling the need to vomit
- Continuing the use if these symptoms appear could cause health damage

### **How to Act in Emergency**

- Don the mask as per the instructions
- Check your environment and the exit ways, try to find the quickest and safest way out of the hazardous place
- Escape as quickly as possible from the dangerous area to a safer place
- Do not return to the dangerous place and do not do any superfluous acts
- Contact the rescue forces and report your position
- As soon as you arrive in a safe place remove the mask and turn to the rescue forces for initial medical help

**Remember!!! Using the mask as per these instructions will save your life!**