

COVID-19 Response PPE/MD – Worldwide Production Capacity and availability in the EU

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European Safety Federation

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Production capacity – a global picture

- Masks and Gowns – primary supplier China
- Gloves – primary supplier SE Asia (Malaysia, Thailand)
- Eye and face protection – primary supplier China

First Crisis Point – COVID-19 hits China (Jan-Feb-March 2019)

- Wuhan province severely affected (manufacturing hub)
- Severe impact on PPE/MD output in the region
- Demand for PPE/MD in China soars – most of production capacity in China is redirected internally.
- Initiatives begin to increase production capacity

Second crisis point – COVID-19 spreads beyond China (March-April-May 2019)

- Italy, then rest of Europe hit hard by COVID-19 – demand for PPE soars in the EU
- Minimal production capacity available in EU
- Lack of shipments en route (via sea) to EU require air lifting of PPE into Europe – logistics bottleneck and disruption.
- China starts to re-open PPE/MD production, additional PPE production is deployed (especially masks)
- Secondary disruption – Malaysia gloves production disrupted because of shutdown in suppliers of... cardboard boxes. (Issue rapidly resolved, but highlights vulnerability of supply chains)

Addressing Crisis – Production capacity increases & rational use of resources

- Production capacity increases across the board for PPE/MD, however
 - Increasing capacity for mask production can be expedited in a few weeks
 - Increasing capacity for gloves requires 6-12 months!
- Increased capacity raises challenges for certification of the PPE and MD – certification processes also disrupted by the pandemic – differences PPE and MD procedures (different understanding globally)
- Essential to secure supply of materials for production, and logistics capacity to distribute finished PPE.
- New entries in market (e.g. also 3D printing)
- Lack of knowledge applicable legislation

Bottlenecks – need for raw materials

- **Masks :**
 - Nonwovens and textile elements : cooperation Euratex – Edana – ESF
 - Alternatives in reusable textiles ?
 - All materials necessary, not only major component (e.g. elastic)
 - Introduction 'community masks'
- **Garments :**
 - Similar masks
- **Gloves :**
 - Material availability (natural rubber / nitrile) in EU and globally limited
- **Eye/face :**
 - Parts 3D printed
- **Increase material cost**
- **Shift from other applications – long term effect ?**

Bottlenecks - services

- Transport in EU
 - Internal borders closed
 - How to distinguish essential products/materials
 - Export limitations – practical issues due to custom codes
- Transport globally
 - Availability
 - Cost increase
 - Export limitations
- Certification – validity
- Importers / distributors without knowledge of products and requirements – same for purchasers : open door for non-compliant products (safety of wearers ?)
- Sustainability ?

Reflections

- Continuity of production of PPEs/MDs essential to address pandemic even in midst of an outbreak – essential industry!
- At peak demand during outbreak production capacity cannot keep up with demand – stockpiles are necessary to address peak demand
- Materials needed to ensure production also need to be secured – can lead to additional disruption of supply chains
- Sufficient logistics solutions to ensure distribution of finished PPE is equally essential
- Rational use of PPE/MD is important – ensuring operations of healthcare systems needs to be a priority.
- Knowledge / training in healthcare necessary to protect healthcare workers
- Availability PPE for other essential sectors and for re-start economy