

Safety and environmental protection

*asecos*<sup>®</sup>

***Flammable Storage Cabinets  
with enhanced fire performance  
for high risk areas***



# THE ADVANTAGES OF SAFETY STORAGE CABINETS

## WITH ENHANCED FIRE PERFORMANCE

The comparison of a double-wall steel cabinet with an EN Type 90 cabinet demonstrates impressive differences.



### 1 Cabinet structure

**EN TYPE 90 CABINET:** Multiple layers of fire-proof calcium sulphate, encased in sheet steel.

**STEEL CABINET:** Two layers of sheet steel (18 gauge in most cases) with air in between.

### 2 Fire test

**EN TYPE 90 CABINET:** The cabinet is fire tested for 90 minutes. Extended resistance against a temperature increase means more time for the personnel to evacuate

and for the fire fighters/rescue services to do their jobs safely.

**STEEL CABINET:** Cabinets are fire tested for only 10 minutes and have no formal fire rating.

### 3 Maximum permissible internal temperature increase

**EN TYPE 90 CABINET:** Max. 180°C (356 °F) during the entire duration of the fire test = 90 minutes.

**STEEL CABINET:** Max. 325 °F (approx. 163 °C) in the first 10 minutes of exposure to a fire.



#### 4 Self-closing doors

**EN TYPE 90 CABINET:** Mandatory. If no door open arrest system is used the doors must close automatically from every position when released.

**STEEL CABINET:** Mandatory.

#### 5 Self-latching doors

**EN TYPE 90 CABINET:** Mandatory. One-point latching sufficient. Calcium sulfate keeps structural integrity when heated.

**STEEL CABINET:** *Mandatory. Three-point latching required to hold the door in place when the metal starts bend in the fire.*

#### 6 Door open arrest system

**EN TYPE 90 CABINET:** Optional. Built-in. Doors must close at approx. 122 °F maximum (50 °C).

**STEEL CABINET:** *Optional. To be inserted manually. Doors must close at 212 °F (100 °C) maximum.*

#### 7 Bottom collecting sump

**EN TYPE 90 CABINET:** Mandatory. Capacity is relative to model size. It must be at least 10 % of the volume of all containers stored or a minimum of 110 % of the largest container. Whichever volume is greater. Sumps are removable for easy cleaning.

**STEEL CABINET:** *Mandatory. No capacities mentioned. Only minimum height specified, regardless of capacity. Higher risk of overflow. Sumps mostly built-in and cannot be easily cleaned.*

#### 8 Perforated insert in the sump

**EN TYPE 90 CABINET:** Optional. Available for sumps and drawers. If sumps/drawers are used as a storage level, the stored containers may reduce the retention, which then could lead to an overflow when liquids are spilled. Perforated inserts keep the retention volume.

**STEEL CABINET:** *Not common.*

#### 9 Fusible Links

**EN TYPE 90 CABINET:** Fusible links at door open arrest system, vent connections and drawers. A mechanical fusible link is a device consisting of two strips of metal soldered together with a fusible alloy that separates at a set temperature.

**STEEL CABINET:** *Fusible links only at door open arrest system (optional). Manual insertion by user.*

#### 10 Insulation

**EN TYPE 90 CABINET:** Multiple layers of calcium sulfate dihydrate.

**STEEL CABINET:** *Air.*

#### 11 Seals

**EN TYPE 90 CABINET:** All gaps and openings (including air channels for venting) are lined with intumescent materials. When exposed to high heat, these materials expand and seal the unit hermetically to avoid heat entering the cabinet.

**STEEL CABINET:** *None.*

#### 12 Vent connections

**EN TYPE 90 CABINET:** Mandatory. Located on top of the unit - or at the rear (under counter units). Vent connections are self-closing in the event of a fire to prevent heat transfer.

**STEEL CABINET:** *Mandatory. Manual closing (bungs).*

#### 13 Storage volume

**EN TYPE 90 CABINET:** Usable storage space for each shelf/drawer is stated instead of the total interior volume of the cabinet or the number of a certain type of safety can. Indicating the volume per shelf/drawer is a more practical approach especially for environments where different bottle and container sizes are used (e.g. laboratories).

**STEEL CABINET:** *In most cases the storage volume is stated in gallons based on the number of standard 5 gallon safety cans that can fit. Translating into other bottle and container sizes can be challenging.*

#### 14 Third party testing

**EN TYPE 90 CABINET:** Mandatory. Only accredited testing labs can certify cabinets according to EN 14470-1.

**STEEL CABINET:** *Not mandatory. However, third party testing is quite common among manufacturers.*

#### 15 Durability tests

**EN TYPE 90 CABINET:** Not mandatory. Manufacturers typically test according to EN 16122 (standard for non-domestic storage furniture). 40.000 wear-free opening and closing cycles are the minimum requirement for compliance. GS approval is another option, requiring at least 50.000 successful opening and closing cycles.

**STEEL CABINET:** *Not mandatory. Not common.*

**Type 90 cabinets according to EN 14470-1 make it possible to further reduce the hazards beyond what would be provided by double walled steel cabinets and open up new design possibilities without compromising on fire safety.**

TAKE A CLOSER LOOK  
AT OUR **CABINET**  
**COMPARISON ON YOUTUBE:**



[www.youtube.com/asecosChannel](https://www.youtube.com/asecosChannel)

# www.asecos.global

## asecos GmbH

Sicherheit und Umweltschutz  
Weierfeldsiedlung 16-18  
DE-63584 Gründau

☎ +49 6051 92200  
✉ +49 6051 922010  
@ info@asecos.com

## Asecos BV

Veiligheid en milieubescherming  
Tuinderij 15  
NL-2451 GG Leimuiden

☎ +31 172 506476  
✉ +31 172 506541  
@ info@asecos.nl

## asecos SARL

Sécurité et protection de l'environnement  
1, rue Pierre Simon de Laplace  
FR-57070 Metz

☎ +33 3 87 78 62 80  
@ info@asecos.fr

## asecos S.L.

Seguridad y Protección del  
Medio Ambiente  
CIM Valles, C/ Calderí S/N  
Oficinas 75 a 77  
ES-08130 - Santa Perpètua de Mogoda  
Barcelona

☎ +34 935 745911  
✉ +34 935 745912  
@ info@asecos.es

## asecos Ltd.

Safety and Environmental Protection  
Profile House  
Stores Road  
Derby, Derbyshire  
DE21 4BD

☎ +44 1332 415933  
@ info@asecos.co.uk

## asecos

Safety and Environmental Protection Inc.  
19109 West Catawba Avenue, Suite 200  
Cornelius, NC 28031  
USA

☎ +1 704 8973820  
✉ +49 6051 922010  
@ info@asecos.com

## asecos Schweiz AG

Sicherheit und Umweltschutz  
Gewerbe Brunnmatt 5  
CH-6264 Pfaffnau

☎ +41 62 754 04 57  
✉ +41 62 754 04 58  
@ info@asecos.ch

## asecos AB

Säkerhet och miljöskydd  
Skyttelgatan 23  
753 42 Uppsala

☎ +46 18 34 95 55  
@ info@asecos.se