

# EN511

## Protective gloves against cold

**Reference Number:** EN 511: 1994

**Status:** European Standard

**Scope:** This standard specifies the characteristics and test methods for protective gloves against cold transmitted by convection or conduction to a temperature of  $-50^{\circ}\text{C}$ .

### General Requirements

-The protective gloves have to comply with the general requirements for protective gloves EN420 with respect to size designation and pH

### Mechanical Requirements

abrasion resistance) and tear strength resistance shall meet at least level 1 (EN388).

### Specific Requirements

- The coating of the glove shall withstand repeated flexing (ISO 7854:1984) (no bursts after 1000 cycles)
- If required the glove shall be impermeable to water for >30 minutes (test method for leather shoes)
- The cold resistance (ISO 4675:1990) at a temperature of  $-50^{\circ}\text{C}$ . No bursts at the location of the folds.
- Convective cold: The thermic isolation is measured with a heated artificial hand. The heat loss is used as a measure for the thermal insulation of the glove.

<u>Level of performance</u>	<u>Thermic insulation (<math>\text{m}^2 \cdot ^{\circ}\text{C}/\text{W}</math>)</u>
1	$0.10 \leq I_{tr} < 0.15$
2	$0.15 \leq I_{tr} < 0.22$
3	$0.22 \leq I_{tr} < 0.30$
4	$0.30 \leq I_{tr}$

- Conductive cold (contact) (ISO 5085-1:1989) : the resistance to heat loss (in  $m^2 \cdot C^\circ/W$ ) at a specified pressure (6.9 kPa) is used as a measure for the insulation against conductive cold. Four levels of performance are defined.

<u>Level of performance</u>	<u>Thermic resistance (<math>m^2 \cdot C^\circ/W</math>)</u>
1	0.025 £ R <sup>3</sup> 0.050
2	0.050 £ R <sup>3</sup> 0.100
3	0.100 £ R <sup>3</sup> 0.150
4	0.150 £ R

### **Marking**

According to EN420. Also see pictogram.

### **Information for the user**

According to EN420.

### **Pictogram**

