

TREADSTONE

HAND PROTECTION

SAFETY STANDARDS

The PPE Directive 89/686/EEC has now been repealed, and replaced with the new PPE Regulation (EU) 2016/425. There are many changes and these can be found on our website, but some of the key changes are in the marking of gloves alongside manufacturer address, batch numbers, user instruction details, packaging and certification validity. Our new range will reflect these changes, and will be fully compliant from our launch.

CAT I – SIMPLE DESIGN

This category covers gloves used for work where there is minimal risk and gloves would require less stringent performance against low risk hazards. Products must still meet EN 420 (General Requirements) to ensure the glove itself is not harmful and is fit for use and independently verified.

CAT II – INTERMEDIATE DESIGN

Gloves are placed in this category when the risk is classed as neither “minimal” or “irreversible” (complex design). These gloves are used to protect against reversible mechanical injuries, such as cuts, abrasions, punctures, impacts etc. Gloves must meet tough regulations and testing criteria, to ensure they provide appropriate performance levels. These gloves are inspected by an independent notified body to ensure conformance.

CAT III – COMPLEX DESIGN

Gloves for use with chemicals, or for irreversible/mortal risks. These gloves are tightly controlled, independently inspected annually (product or manufacturing plant) and are perhaps the most scrutinized range of protective gloves used. This category includes gloves for protecting against chemicals, heat > 100°C, Cold Air >-50°C, ionising radiation, biological hazards, chainsaws, stabbing, high pressure jets etc.

All PRO and Originals products are now CE and UKCA approved.

EN 511 EN 511



PROTECTING AGAINST COLD

Requirements and test methods, for gloves which protect against convective and conductive cold, includes a waterproof test.

EN 420 EN 420:2003 + A1:2009



PROTECTIVE GLOVES

General requirements and test methods: All gloves must meet this standard. It defines the requirements and relevant test methods for glove design and construction, innocuousness, comfort, dexterity, efficiency, resistance to water penetration, glove markings and also the information which must accompany the supply all protective gloves. Now EN ISO 21420:2020

EN 407 EN 407



PROTECTING AGAINST THERMAL RISKS

If a glove meets the requirements for thermal hazards defined in EN 407 and at least level 1 for EN 388 abrasion and tear then this symbol can be displayed. The degree of protection is shown by a pictogram followed by six scores showing the achieved performance levels.

EN 1149-5 EN 1149-5



ELECTROSTATIC PROPERTIES

Material performance and design requirements. Specifies the requirements and test methods for materials used in the manufacturing of electrostatic dissipative protective clothing including gloves to avoid electrostatic discharges. Surface resistance <math>< 2.5 \times 10^9 \Omega</math> (or Surface resistivity <math>< 5 \times 10^{10} \Omega</math>) OR • Charge decay time $T_{50} < 4s$. EN 1149 – 1. This standard, defines the testing requirements to measure surface resistivity/resistance (Ω) = resistance in ohm across the surface of the material, between two electrodes.

EN 1186 EN 1186



MATERIALS & ARTICLES IN CONTACT WITH FOODSTUFFS

This standard sets out the tests and overall/specific migration limits of materials present, to ensure gloves are suitable for use with food stuffs. Glove may also be identified as food safe against fatty or non-fatty foods.



PRO-420
4141X.
See page 11
for more details.

PRO-229
4X42B.
See page 9 for
more details.

PRO-205
4X42F.
See page 7 for
more details.

EN 388:2016

A 2 Newtons	RED Lowest cut protection
B 5 Newtons	AMBER Medium cut protection
C 10 Newtons	GREEN Highest cut protection
D 15 Newtons	GREEN Highest cut protection
E 22 Newtons	GREEN Highest cut protection
F 30 Newtons	GREEN Highest cut protection

EN 388



EN 388:2016+A1:2018

PROTECTIVE GLOVES AGAINST MECHANICAL RISKS

In 2016, a new version of EN388:2003 was published (EN388:2016). This new, improved standard supersedes the old version and is applicable to new gloves placed on the market in Europe. The new standard specifically allows for improved testing accuracy when testing gloves of a "higher cut resistance". This means that any gloves which can "blunt the blade" under the old "coup test method" must now be tested utilising the new ISO 13997 or so called "TDM" testing method. There is absolutely "no correlation" between the levels of performance obtained between the two test methods. Simply put, this new test standard will provide the end user with a much more accurate method of selecting gloves with a statistically proven cut resistance to a much higher level.

EN 374



EN 374:2016

PROTECTING AGAINST CHEMICALS & MICRO ORGANISMS

Includes: BS EN ISO 374-1:2016 Terminology and performance requirements for chemical risks, BS EN 374-2:2014 Determination of resistance to penetration, BS EN 374-4:2013 Determination of resistance to degradation by chemicals, BS EN ISO 374-5:2016 Terminology and performance requirements for micro-organisms/viruses and BS EN 16523-1:2015 Determination of material resistance to permeation by chemicals, under conditions of continuous contact.

EN 374-1 EN 374-5



UNDERSTANDING SAFETY STANDARDS

Safety standards can be quite complicated to understand and often making decisions about your PPE can be daunting, even for the professionals. Safety standards have recently changed quite considerably, with new testing regimes and regulations coming into force for safety gloves. If there's anything glove related that you're not sure about, please don't hesitate to give us a call. Our technical team are always on hand to offer up to date guidance and support.

All PRO and Originals products are now CE and UKCA approved.

EN 388



Abrasion	4
Cut (Coup test)	2
Tear	4
Puncture	3
Cut (TDM test)	E
Impact Resistance	P

EN 511



Convective Cold	X
Contact Cold	2
Water Impermeability	1

EN 407



Burning Behaviour	4
Contact Heat	2
Convective Heat	4
Radiant Heat	3
Small Splashes (molten metal)	4
Large Quantities (molten metal)	X