

DESCRIPTION and CHARACTERISTICS

These gloves are category III Personal Protective Equipment (PPE) and are therefore subject to annual. They bear the CE marking since they conform to the requirements set by Regulation (EU) 2016/425 and have been certified by the Notified Body RICOTEST (no. 0498 – Via Tione 9 – 37010 Pastrengo – VR). These gloves also comply with the requirements of harmonised technical standards EN 420:2003+A1:2009, EN 388:2016+A1 2018,, EN 511:2006.

RECOMMENDED USES/APPLICATIONS

Gloves intended for protection against the risks deriving from liquefied gases (cold burns and frostbite from the intense cold, leaking liquid, splashes) during loading, storage and decanting. Loading/storage/decanting of cryogenic liquefied gases by staff in charge of handling, contact with cryogenic gases. They protect against contact with cold objects and against liquefied gas splashes (liquid nitrogen. The hazards deriving from handling cryogenic liquefied gases are in direct relation to the extremely low temperatures of such substances. Exposing skin to extremely low temperatures can cause damage similar to burns. Although the gloves withstand contact with liquid nitrogen, contact with such a substance must be accidental: do not immerse the gloves in liquefied gas. Contact with liquefied gas hardens the materials used to make the gloves: in case of contact check after 20/30 seconds that the gloves have returned to their original softness and that there are no cracks/holes.

RISKS

The gloves are suitable against risks of:

- abrasion; small cut by blade/sheet metal;
- tearing; puncture/penetration;
- contact with cold and cryogenic

gases. The gloves are NOT suitable against risks of:

- heat and fire;
- chemicals;
- all risks not mentioned in the Information Note herein.

ALLERGENS

- The manufacturer is not aware of the presence of any allergens. Kindly report any cases observed of hypersensitivity or allergic reaction.
- Upon contact with the skin on particularly sensitive people, any glove could cause allergic reactions not envisaged by the manufacturer. In such cases, we recommend you seek immediate medical advice.

IDENTIFICATION AND CHOICE OF SUITABLE GLOVES

The choice of suitable glove model must be made according to the specific requirements of the workplace, the type of risk and the related environmental conditions.

The responsibility for identifying and choosing the appropriate/suitable pair of gloves (PPE) lies with the employer. Consequently, it is a good idea to check, before use, the suitability of the characteristics of this glove model for your specific requirements.

PRELIMINARY CHECKS AND USE: WARNINGS

Before use, perform a visual inspection of the gloves to make sure they are in perfect condition, clean and intact. Should the gloves not be intact (visible damage such as loose seams, breakages or smudges), they must be replaced.

MAINTENANCE INSTRUCTIONS AND EXPIRY DATE

New gloves are packed in series of 5 pairs, in a packet containing the information note. The gloves must be kept in their original packet, in a dry place away from sources of heat. Avoid contact with solvents which could alter the characteristics.

In particularly strenuous conditions of use or in settings with special situations, the gloves may be subject to sudden and unexpected deterioration not envisaged by the manufacturer. Consequently, it is not possible to establish an "expiry date".

CLEANING

NO WASHING IS PERMITTED to avoid the glove losing its safety characteristics. After use, the exterior of the gloves should be cleaned with a light detergent solution and left to dry in the open. Any contaminants must immediately be removed.

Explanation of EN388 levels



abcd

- (a) Abrasion resistance (values from 1 to 4)
- (b) Blade cut resistance (values from 1 to 5)
- (c) Tear resistance (values from 1 to 4)
- (d) Puncture resistance (values from 1 to 4)

Explanation of EN511 levels



abc

- (a) Convective cold level (from 1 to 4)
- (b) Contact cold level (from 1 to 4)
- (c) Water penetration:
(0=not waterproof, 1=waterproof)

ALL MODELS UNDERGO SPECIFIC TEST FOR CONTACT WITH LIQUID NITROGEN (-195.82 °C) FOR ONE MINUTE AND SUBSEQUENT BENDING TEST (RCT TEST).



Kora Srl – Cryokit Cryogenic Protection
MilanoFiori – Strada 6 – Edificio A – Scala 13
Tel. 02 48841819 – info@cryokit.net
www.cryokit.net



PERSONAL PROTECTIVE EQUIPMENT FOR CRYOGENICS

INFORMATION NOTE AND INSTRUCTIONS FOR USE

CRYOPLUS GLOVES-2.0

CRYOPLUS GLOVES-2.1

CRYOKIT400 GLOVES-550

CRYOLITE GLOVES-HP

**CRYO GLOVES-HD
GLOVES**

Vers. 03.02
(ENG)



CRYOPLUS-2.0
CRYOPLUS-2.1



These gloves are made with a special composite fabric bonded to a hydrophilic membrane. The interior features another full, breathable membrane, which does not allow liquids to penetrate inside. Protection from contact cold is guaranteed by an internal lining in soft polyester fleece.

CE CERTIFICATION

CE certification issued by: Ricotest Srl – Notified Lab No. 0498
Subject to specific liquid nitrogen resistance test (-195.82°Cc), by immersion in contact for 1 minute and subsequent RCT test.

N.B.: the performance level concerns the palm side, including fingers; nevertheless, the uniformity of materials and processing makes the back of the glove also protective.

The following marking can be found on the label sewn into the inside of the gloves:

	CE marking, testifying to the conformity of the gloves to the essential health and safety requirements of Regulation (EU) 2016/425
0498	Identification no. of the Notified Body performing the inspection of the PPE manufactured pursuant to §11 of the Directive
CRYOKIT	Manufacturer's registered trade mark
CRYOPLUS-2.0/2.1	Glove model
10 (example)	Size
	Pictogram referring to the information note.
abcde	EN388+pictogram relating to the mechanical risks explained below: 1(a) 2(b) 4(c) 2(d) x(e) This pictogram indicates that the gloves were designed for mechanical risks and the numbers at the foot indicate the levels obtained during laboratory tests (see explanation on the last page).
abc	EN 511 + related pictogram for protection against cold explained below: (a) 2 = level obtained against convective cold (0.193 m ² K/W) (b) 4 = level obtained against contact cold (0.1563 m ² K/W) (c) 1 = level obtained against water penetration (no penetration)



CRYOKIT400
CRYOKIT550



These gloves are made with special composite fabrics bonded to hydrophilic membranes. The interior features another special, breathable membrane, which does not allow liquids to penetrate inside. Protection from contact cold is guaranteed by an internal lining in soft polyester fleece.

CE CERTIFICATION

CE certification issued by: Ricotest Srl – Notified Lab No. 0498
Subject to specific liquid nitrogen resistance test (-195.82°Cc), by immersion in contact for 1 minute and subsequent RCT test.

N.B.: the performance level concerns the palm side, including fingers; nevertheless, the uniformity of materials and processing makes the back of the glove also protective.

The following marking can be found on the label sewn into the inside of the gloves:

	CE marking, testifying to the conformity of the gloves to the essential health and safety requirements of Regulation (EU) 2016/425
0498	Identification no. of the Notified Body performing the inspection of the PPE manufactured pursuant to §11 of the Directive
CRYOKIT	Manufacturer's registered trade mark
CRYOKIT400-550	Glove model
10 (example)	Size
	Pictogram referring to the information note.
abcde	EN388+pictogram relating to the mechanical risks explained below: 2(a) 2(b) 3(c) 1(d) x(e) This pictogram indicates that the gloves were designed for mechanical risks and the numbers at the foot indicate the levels obtained during laboratory tests (see explanation on the last page).
abc	EN 511 + related pictogram for protection against cold explained below: (a) 2 = level obtained against convective cold (0.157 m ² K/W) (b) 2 = level obtained against contact cold (0.0562 m ² K/W) (c) 1 = level obtained against water penetration (no penetration)



CRYOLITE-HP



These gloves are made of soft water-repellent cowhide grain leather. The interior features another special, breathable membrane, which does not allow liquids to penetrate inside. Protection from contact cold is guaranteed by an internal lining in soft polyester fleece.

CE CERTIFICATION

CE certification issued by: Ricotest Srl – Notified Lab No. 0498
Subject to specific liquid nitrogen resistance test (-195.82°Cc), by immersion in contact for 1 minute and subsequent RCT test.

N.B.: the performance level concerns the palm side, including fingers; nevertheless, the uniformity of materials and processing makes the back of the glove also protective.

The following marking can be found on the label sewn into the inside of the gloves:

	CE marking, testifying to the conformity of the gloves to the essential health and safety requirements of Regulation (EU) 2016/425
0498	Identification no. of the Notified Body performing the inspection of the PPE manufactured pursuant to §11 of the Directive
CRYOKIT	Manufacturer's registered trade mark
CRYOLITE	Glove model
10 (example)	Size
	Pictogram referring to the information note.
abcde	EN388+pictogram relating to the mechanical risks explained below: 2(a) 1(b) 2(c) 2(d) x(e) This pictogram indicates that the gloves were designed for mechanical risks and the numbers at the foot indicate the levels obtained during laboratory tests (see explanation on the last page).
abc	EN 511 + related pictogram for protection against cold explained below: (a) 3 = level obtained against convective cold (0.224 m ² K/W) (b) 4 = level obtained against contact cold (0.1476 m ² K/W) (c) 1 = level obtained against water penetration (no penetration) EN 407 + related pictogram for protection against heat explained below: X2XXXX 2 = Level obtained against contact heat: 16 seconds at 250°C.



CRYO-HD



These gloves are made of soft, yet tough, water-repellent cowhide grain leather. The interior features another special, breathable membrane, which does not allow liquids to penetrate inside. Protection from contact cold is guaranteed by an internal lining in soft polyester fleece.

CE CERTIFICATION

CE certification No. 617162701/OI issued by: Ricotest Srl – Notified Lab No. 0498
Subject to specific liquid nitrogen resistance test (-195.82°Cc), by immersion in contact for 1 minute and subsequent RCT test.

N.B.: the performance level concerns the palm side, including fingers; nevertheless, the uniformity of materials and processing makes the back of the glove also protective.

The following marking can be found on the label sewn into the inside of the gloves:

	CE marking, testifying to the conformity of the gloves to the essential health and safety requirements of Regulation (EU) 2016/425
0498	Identification no. of the Notified Body performing the inspection of the PPE manufactured pursuant to §11 of the Directive
CRYOKIT	Manufacturer's registered trade mark
CRYO-HD	Glove model
10 (example)	Size
	Pictogram referring to the information note.
abcde	EN388+pictogram relating to the mechanical risks explained below: 3(a) 2(b) 2(c) 3(d) x(e) This pictogram indicates that the gloves were designed for mechanical risks and the numbers at the foot indicate the levels obtained during laboratory tests (see explanation on the last page).
abc	EN 511 + related pictogram for protection against cold explained below: (a) 2 = level obtained against convective cold (0.216 m ² K/W) (b) 4 = level obtained against contact cold (0.1517 m ² K/W) (c) 1 = level obtained against water penetration (no penetration)

cryokit®

CRYOGENIC PROTECTION

CE 0302

EN388

EN511



2342X

221

CRYOPLUS-2.1

CRYOGENIC PROTECTION AND EXTREME COLD



CRYOPLUS-2.1 is a fully waterproof glove (waterproof) to protect the hand and forearm in operations that involve the use of liquid nitrogen (or other cryogenic gases).

Made with specially designed composite materials for this application, it keeps the hands warm and dry even for long periods of use. Tested, with success, by contact with liquid nitrogen (-195.82 ° C) for one minute and the next test of flexibility (ANCCP Test method)

The construction of multilayered (multi-layer) allows a high level of thermal protection, flexibility and dexterity at -200 ° C.

CE certificate in 3rd cat.

Warning! Persons handling cryogenic gases must be familiar with the risks that they involve, and should be adequately trained to handle security operations. Must also be established emergency procedures and adequate training of all functioning equipment. The cryogenic gas should never be handled without proper protective equipment.

Caution! Not intended for immersion in liquid nitrogen or other cryogenic liquid.

Features

The glove is made entirely with a special composite fabric coupled with polyurethane membrane. Inside there is a particular membrane which allows perspiration but does not allow liquids to penetrate inside. The cold protection is ensured by an inner lining made of soft polyester fleece. Available in different lengths: 38, 45, 55 and 65 cm.

Application

Suitable for all work in the presence of liquid nitrogen, and other liquid gases, to prevent contact cold and burns in the event of leakage of the liquid gas. Suitable for contact with ultracold objects:

- Biology
- Biobanks
- Food industry
- Molecular cuisine
- Gelateria
- Chemical industry
- Scientific research
- Environmental Technologies
- Medical Technologies
- Computing
- etc.

Model/code/size

CRYOPLUS38-2.1	7 - 8 - 9 - 10 - 11
CRYOPLUS45-2.1	7 - 8 - 9 - 10 - 11
CRYOPLUS55-2.1	8 - 9 - 10 - 11
CRYOPLUS65-2.1	8 - 9 - 10 - 11

cryokit®

CRYOGENIC PROTECTION

CRYOKIT400-550-700

CRYOGENIC PROTECTION AND EXTREME COLD



CRYOKIT GLOVE is a fully waterproof glove (waterproof) to protect the hand and the arm in operations that involve the use of liquid nitrogen (or other cryogenic gases).

Made with specially designed composite materials for this application, it keeps the hands warm and dry even for long periods of use. Tested, with success, by contact with liquid nitrogen (-195.82 ° C) for one minute and the next test of flexibility (RCT Test method).

The construction of multilayered (multi-layer) allows a high level of thermal protection, flexibility and dexterity at -200 ° C.

CE certificate in 3rd Cat.

Warning! Persons handling cryogenic gases must be familiar with the risks that they involve, and should be adequately trained to handle security operations. Must also be established emergency procedures and adequate training of all functioning equipment. The cryogenic gas should never be handled without proper protective equipment.

Caution! Not intended for immersion in liquid nitrogen or other cryogenic liquid.

CE 0498

EN388



2231X

EN511



221

Features

The glove is made entirely with special composite materials coupled. On the inside there is a particular integral membrane which allows perspiration but does not allow liquids to penetrate inside. The cold protection is ensured by an inner lining made of soft fleece, which is also coupled, polyester. Available in two length: 40 and 55 and 70 cm.

Applications

Indicated for all work in the presence of liquid nitrogen and other cryogenic gas, to prevent contact cold and burns in the event of leakage of the liquid gas. Suitable for contact with ultracold objects:

- Biology
- Biobanks
- Workshops
- Food industry
- Molecular cuisine
- Express ice cream
- Scientific research
- Medical Technologies
- Computing
- etc.

Code/Size

CRYOKIT400	7 - 8 - 9 - 10 - 11
CRYOKIT550	7- 8 - 9 - 10 - 11
CRYOKIT700	8 - 9 - 10 - 11

CRYOLITE-HP

CRYOGENIC PROTECTION, EXTREME COLD AND HEAT

- Suitable for Liquid Nitrogen (LN2)
- Suitable for Liquid Oxygen (LOX)
- Antistatic



CRYOLITE-HP is a fully waterproof glove to protect the hand and forearm in operations that involve the use of liquid nitrogen (or other cryogenic gases) and heat.

Made by materials specifically designated for this application, it keeps the hands warm and dry for long periods of use. Tested, with success, by contact with liquid nitrogen (-195.82 ° C) for one minute and following test of flexibility (RCT method).

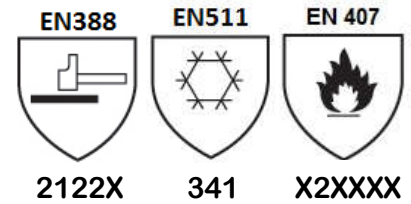
Suitable for contact with Liquid Oxygen (Oxygen Index O.I. 25,4 external layer – Test Report 166/2016 Dipartimento di Ingegneria UNIPD).

The multilayered construction allows a high level of thermal protection, flexibility and dexterity from -200 ° C to 250 ° C.

CE certified in 3rd cat.

Warning! Persons handling cryogenic gases must be familiar with the risks that they involve, and should be adequately trained to handle security operations. Must also be established emergency procedures and adequate training of all functioning equipment. The cryogenic gas should never be handled without proper protective equipment.

Caution! Not intended for immersion in liquid nitrogen or other cryogenic liquid.



Features

The glove is made by a special water repellent treated leather. Special inner membrane which allows perspiration but does not allow liquids to penetrate inside. The thermal protection is ensured by an inner lining made of soft composit multilayer fabric. Adjustable leather cuff with Velcro system. Total glove length 38 cm.

Applications

Suitable for all work in presence of liquid nitrogen and other cryogenic gas, to prevent contact cold and burns in the event of leakage of the liquid. Suitable for contact with ultracold and heat objects:

- Food industry
- Gas Production
- Gas transport
- Chemical industry
- Environmental Technologies
- Metallurgy
- Glass industry

Code/Sizes

CRYOLITE-HP

8 - 9 - 10 - 11