

User Instructions: Balaclava

This document outlines the safe use of the Clydesdale NOAH Arc flash Balaclava, part number CLY 581 121. This product is referred to as 'the PPE' or 'the balaclava' in this document. 'The User' is defined in this document as the person wearing the PPE. The PPE has been shown to conform with the European PPE Directive 89/686/EEC through compliance with EN ISO 11612:2008 EN ISO 13688:2013, as well as by satisfying all applicable Basic Health and Safety Requirements in Annex II of the European PPE Directive according to Article 3 of that directive. The fabric has also been tested under arc flash conditions according to EN 61482-1-1

CAREFULLY READ THESE INSTRUCTIONS BEFORE USING THIS PRODUCT

1. Intended Use of the PPE:

NOTE: THE PPE IS INTENDED TO PROTECT THE USER FROM THE FLAME AND THERMAL EFFECTS OF AN ELECTRIC ARC FLASH ONLY.

The PPE is **NOT** intended to be used to provide protection against other risks such as electric shock, mechanical impact, mechanical vibration, physical injury (abrasion, perforation, cuts, bites) or harmful effects of noise.

NOTE: THE PPE MUST NOT COME IN TO CONTACT WITH LIVE EQUIPMENT. WHENEVER POSSIBLE, ALWAYS DEENERGISE CIRCUITS BEFORE WORKING ON OR AROUND THEM.

The PPE is only intended to provide protection for the neck and head of the user excluding the face. Torso, limb, foot, hand and face protection must also be provided using compatible PPE as described in section 4 of this document. The Arc Thermal Performance Value (ATPV) of the fabric used is the incident energy that results in a 50% probability that sufficient heat transfer through the tested specimen is predicted to cause the onset of a second degree skin burn injury based on the Stoll curve, without break-open. It is measured in cal/cm². For each application where there is a risk of an electric arc occurrence, a suitable Arc Flash Hazard Analysis **MUST ALWAYS** be conducted by a competent person to ascertain the potential incident energy that an electric arc could emit. Each application is unique and can be defined by the following factors: Arc fault current, Supply voltage, Electrode gap, Number of phases of system, Electrical equipment environment (open air or enclosure), Arc duration, Distance of the PPE user to arc. Software for calculating the correct Arc Rating can be obtained from www.clydesdale.net/calculator. Once an Arc Flash Hazard Analysis has been conducted, PPE of an appropriate Arc Rating must be selected from the available range.

NOTE: THE ARC RATING OF THE PPE SELECTED FOR THE APPLICATION MUST BE HIGHER THAN THE POTENTIAL INCIDENT ENERGY RESULTING FROM AN ELECTRIC ARC (CALCULATED FROM AN ARC FLASH HAZARDS ANALYSIS) TO PROTECT FROM THE RISK OF SECOND DEGREE BURNS.

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The PPE should always be worn correctly by the user when entering a hazardous area. The Balaclava is supplied as a single size to fit all head sizes due to the elastic nature of the fabric. The PPE should not be worn in such a way that the wearer's undergarments or skin may be exposed. The PPE should always fit the user correctly. If the PPE is either too loose or too tight, the PPE will not provide an optimum level of protection as the user's movement and sight may become impeded or the user's skin or undergarments may become exposed and unprotected.

2. Classes of Protection:

The PPE conforms with EN ISO 11612:2008 (Protective clothing - Clothing to protect against heat and flame) and meets the requirements of the following code letters:

A1 - Limited Flame Spread, Property B1 - Convective Heat, Property C1 - Radiant Heat.

The balaclava fabric provides an ATPV of 12.1 cal/cm² according to EN 61482-1-1 (Standard Test Method for Determining the Arc Rating of Materials for Clothing).

3. Cleaning, Maintenance and Life Span:

The PPE should be kept clean & dry to provide an optimum level of protection.

NB: SOILED CLOTHING PROTECTS LESS.

The PPE is intended for home washing only.



The PPE should not be washed in temperatures over 40°C*



The PPE is dry-cleanable. Do not use trichloroethylene



Tumble dry at normal temperature* Do not over-dry



Chlorine bleaches such as those containing sodium hypochlorite, oxygen bleaches such as hydrogen peroxide as well as soaps (salts of fatty acids) should not be used to wash the PPE either separately or in detergents as they may affect the protective properties of the PPE

*If garments are tumble dried, this should be on a gentle cycle and the garments should be removed before fully dry and line dried. Over-drying will result in shrinkage. In order to provide an optimum level of protection, the PPE must be maintained in its original condition. If the PPE becomes damaged due to factors such as rips, cuts, abrasion and perforation, it may not provide the optimum level of protection and must be replaced. Do not attempt to repair the PPE.

N.B: INSPECT THE PPE BEFORE EACH USE. DO NOT ATTEMPT TO USE THE PPE FOR ITS INTENDED PURPOSE IF ITS CONDITION IS IN DOUBT.

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The PPE will maintain its protective properties until such time as the condition of the PPE is in doubt. In other words the PPE will maintain its protective properties for its life span - the arc flash or flame retardant properties cannot be washed out. No modification of the PPE is permitted.

4. Compatibility and Accessories:

For torso and limb protection either a Clydesdale NOAH Coverall or Jacket / Lab coat and Trouser combination of suitable Arc Rating will provide sufficient protection. If a Clydesdale NOAH Jacket or Lab coat is worn, a flame retardant undergarment such as a Clydesdale NOAH long sleeve polo shirt should also be worn. For face protection from the thermal effects of an electric arc flash, a Clydesdale Arc Flash Protection Hood or Visor with an equal or higher Arc Rating to the PPE must be used. For hand protection it is recommended that appropriate Clydesdale Insulating Gloves are worn in conjunction with Clydesdale Leather Protector Gloves to provide mechanical protection. Foot protection should be provided for with heavy duty leather work shoes which will normally provide a significant level of protection for incident energy levels of 8 cal/cm² and above. Please contact Clydesdale for further details of the compatible PPE detailed above.

5. Storage and Transport:

The PPE is packed and delivered in a polythene bag. The PPE should be stored or transported, preferably in a similar polythene bag, in a dry and dust free environment, protected from mechanical effects, UV light, temperature extremes and chemicals which may damage the PPE.

6. Significant Markings:

The PPE has a marking located on the breast region indicating the ATPV level to which the PPE can protect the user. The marking is a Flame Resistant iron-on transfer badge and depicts a flame symbol together with the ATPV in cal/cm² of the fabric. A label inside the balaclava indicates the ATPV, CE conformity mark, cleaning instructions, manufacturer's details, product reference numbers, EN11612 reference and performance levels, additional relevant standards the PPE conforms to as well as a pictogram reference to the availability of this user instruction.

7. Details of Notified Body:

BTTG Certification Services, Unit 14, Wheel Forge Way, Ashburton Rd West, Trafford Park, Manchester, M17 1EH, United Kingdom. Notified Body #0339.