

# CLYDESDALE

## Powering the Future

### Cleaning, care and durability

### NOAH Switching Range

#### HOME LAUNDERING NOAH Switching Range garments and hood

##### General Guidelines

NOAH Switching Range garments can be washed and dried by any conventional home method, followed by hand ironing if necessary. No special technology is needed for home laundering NOAH Switching Range garments

However, home procedures may not remove the last traces of very heavy, widespread or ground-in soils, which may be flammable and could adversely affect the performance of NOAH Switching Range garments.

If home laundering does not remove contaminants or contaminant build-up, garments can be periodically dry cleaned or commercially laundered. When garments are contaminated by hazardous materials, only commercial or on-site laundering should be used with the appropriate wastewater treatment techniques.

The following procedures can help provide optimum cleaning and maintenance of protective apparel:

##### Detergents and other Laundry Products

###### **Washing Detergent Supplies**

A wide variety of detergents are available in supermarkets and other stores for household use. A list of detergents acceptable for use with NOAH Switching Range is given in Appendix III. It is important to use a detergent and wash temperature that is sufficient to thoroughly clean soiled clothing.

Washing detergent supplies not recommended for use with INDURA Ultra Soft and INDURA fabrics are listed in Appendix IV.

###### **Other Laundry Products**

Laundry products such as fabric softeners and hand builders (starch) present a complex situation relative to use with all flame and arc resistant garments washed at home. Since it is impossible to examine and control each product and procedure that might be used, we recommend that such products not be used.

###### **Use of Softened Water**

For best cleaning results and the preservation of protective characteristics an adequate supply of soft water is required for laundering NOAH Switching Range garments. Hard water contains salts, such as calcium and magnesium that combine with other salts and fatty based soaps to form insoluble deposits, film, scum and curd in the wash process and can deposit on the fabric. These contaminants are difficult to rinse from the fabric and may mask the flame resistance. Using soft water reduces detergent consumption, improves the quality of washing and avoids adverse effects on flame retardancy. For more specific details see Appendix V for information about water hardness and its effect on home laundering.

##### Detergents and Supplemental Chemicals to Avoid

###### **Chlorine Bleach**

Chlorine bleach (sodium hypochlorite must not be used on NOAH Switching Range garments, either separately or in detergents). Review of various laundry advisories generally recommends against the use of chlorine bleach for protective fabrics of any fibre composition.

###### **Hydrogen Peroxide**

Hydrogen peroxide, which is an oxygen bleach, must not be used on NOAH Switching Range garments, either separately or in detergents. The presence of metals with hydrogen peroxide can catalyse the decomposition of the fabric polymer.

###### **Soaps**

The use of soaps (salts of fatty acids) is not recommended for laundering NOAH Switching Range garments. Soaps can form insoluble scums with hard water that are deposited on the fabric. Soap scums may be flammable themselves and they can adversely affect the thermal protection performance of the garment if they burn.

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#### HOME LAUNDERING NOAH Switching Range garments (continued)

##### Washing/Drying Procedure

###### **Sorting**

NOAH Switching Range garments should be sorted by colour, light washed with light colours and dark with dark to avoid dye transfer. NOAH Switching Range garments should be washed with other NOAH Switching Range garments.

###### **Pre-treating**

Stains, as well as deep soil lines on the collars and cuffs of garments, are more readily removed if pre-treated. Stains should be pre-treated at the earliest opportunity and sufficient time allowed for the pre-treatment material to penetrate and loosen the soil. The heavily soiled or stained areas should be rubbed with a full-strength, heavy-duty liquid detergent or any off-the-self laundry pre-treatment product. Such pre-treatment products should not contain bleach or hydrogen peroxide either separately or in combination with detergent.

###### **Load Size**

When laundering NOAH Switching Range garments, it is important not to overload the machine. To ensure a cleaner wash and avoid setting wash wrinkles, the load size must permit clothes to move freely through the wash water and rinse cycle. Regardless of the machine's rated capacity in pounds, bulk—not weight—should be the limiting factor. For optimum performance wash garments inside out.

###### **Wash Temperature**

Wash NOAH Switching Range garments (Bib overalls and jackets) that are heavily soiled using up to a 60C wash setting. Garments with lesser degrees of soil should be laundered with lower water temperatures, which also will be beneficial in retaining garment colour. The NOAH SR Hood has a stretch panel that may shrink at higher wash temperatures and so should be washed at 40C maximum to control shrinkage.

###### **Tumble Drying**

NOAH Switching Range can be tumble dried or air-dried following washing. For tumble-drying, drying time should be carefully controlled so that garments are removed from the drier immediately when dry or when slightly damp.

Over drying will result in excessive shrinkage. Drying times will vary depending on the load size and the relative weight of the garments being dried. Use of the "Permanent Press" setting on the dryer provides a beneficial cool down cycle.

Using high temperature tumble drying for the SR hood can lead to shrinkage of the stretch panel.

###### **Ironing**

Depending on individual preferences, NOAH Switching Range may require pressing. A steam or dry iron may be used on the cotton setting. Ironing has no adverse effect on flame resistance properties of NOAH Switching Range garments.

###### **Dry Cleaning**

Dry cleaning of NOAH Switching Range garments is desirable for effective removal of greases and oils that are not easily removed by home or commercial laundering. Dry cleaning will not adversely affect flame resistance of NOAH Switching Range garments. Care should be taken to maintain the solvent in a clean condition to avoid soil redeposition.

Thorough removal of all traces of dry-cleaning solvent from garments is recommended. A further caution that dry cleaning may not be as effective as washing in removing body soils and odours should be noted. After 5 dry cleanings, a water wash is recommended to offset this problem.

###### **Maintenance of NOAH switching range garments**

In order to perform its protective function, a garment must be maintained in its original condition. Rips, tears and abrasion to the fabric should be repaired or replaced as soon as possible. For advice on proper repair techniques contact Clydesdale

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## Powering the Future

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#### Visor Cleaning NOAH SR Hood

##### Procedure

##### **Disassembly**

Remove the fabric portion of the hood if it requires washing according to the preceding guidance. This is achieved by separating the upper and lower Velcro strips.

##### **Visor cleaning**

Inspect the complete hood assembly after and prior to each use and clean the window with a damp cloth unless heavily soiled. If the visor has been exposed to heavy soiling then a weak solution of soap and water maybe be used. This must then be thoroughly rinsed and dried with clean water and soft cloth.

##### **Reassembly**

Details of reassembling the hood can be seen in the relevant section of our assembly video

<https://youtu.be/ai1Rw0SxKFo>

##### **Sanitiser**

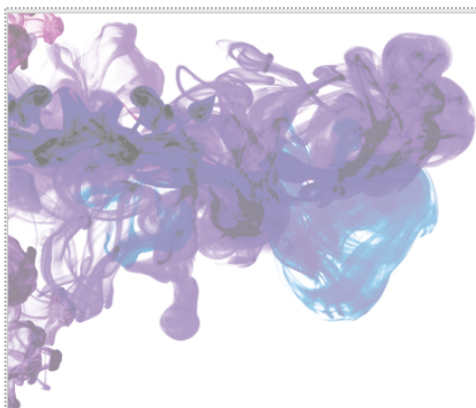
Many sanitisers are available but they often feature either a solvent propellant that may leave flammable traces on a garment or they may feature bleach solution. Any products such as this should be avoided. Our guidance is to contact Clydesdale with the details of your preferred sanitiser so we can review its contents and provided guidance on its suitability.

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## Powering the Future

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Adlington, 15<sup>th</sup> April 2019.

Clydesdale Ltd.  
Walter Sample House,  
3 Sunbeam Road,  
Woburn Road Industrial Estate,  
Kempston,  
Bedfordshire,  
MK42 7BZ

Attention: Mr Simon Raglione-Hall.

**Carrington FR guarantee for the life of garment.**

Dear Simon,

With the process of in-situ polymerisation at fabric stage used by Carrington to make flame retardant (FR) fabrics, we guarantee that garments will remain FR for the life time of the garment, provided our wash and aftercare instructions are adhered to.

Our FR technology is considered to have intrinsic and built-in flame resistant properties complying with the definition of inherent flame resistance as per the NFPA 2112 (2018) standard.

Yours sincerely,

Tony Raisbeck,  
Sales Executive

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# ArcWear

3018 Eastpoint Parkway, Louisville, KY 40223. 502-333-0510, [www.ArcWear.com](http://www.ArcWear.com)

### Arc Testing Scouting Report (NOT OFFICIAL ARC RATING)

Date: August 27, 2019

Report #: 1908Ps04-SP

Client: Clydesdale Ltd  
3 Sunbeam Road  
Kempston, Bedfordshire, MK42 7BZ UK  
+44 1234 844208

At request of: Simon Raglione-Hall

Sample Identified by Client As:

Clydesdale Ltd, 2 Layers of, Mfg. Carrington, UK, Style 2x Flamestat Satin, 10.2 oz/yd<sup>2</sup> 345 g/m<sup>2</sup> Sateen, 88% Cotton 11% Nylon 1% Anti-Stat, Navy, AAD 10.6 oz/yd<sup>2</sup> 359 g/m<sup>2</sup>, ArcWear# 1908Ps04

Sample received on: July 15, 2019

Test Procedure:

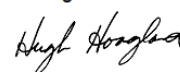
The samples were laundered 100 times in accordance with Section 8.2.1 of ASTM F1959/F1959M-14e1 *Standard Test Method for Determining the Arc Rating of Materials for Clothing* and AATCC Test Method 135-18, Procedure 3, IV, Aiii. The post-laundered aerial density was determined and test specimens were cut, assembled, and prepared for testing in accordance with Section 8 of ASTM F1959/F1959M-14e1 *Standard Test Method for Determining the Arc Rating of Materials for Clothing*.

This test was to evaluate the fabric(s) for an arc rating but is not an official arc rating. This document is for internal use and not a final arc rating report. Photos, videos and raw data are available in your password protected folder at [www.arcwearonline.com](http://www.arcwearonline.com).

The results of testing to ASTM F1959/F1959M-14e1\* have been documented in Kinectrics Data Sheet K-352148-1908Ps04. Based on this test report, this sample received a probable arc rating of:

Probable Arc Rating: ATPV ~ 40 cal/cm<sup>2</sup>

Signed for the Company by:



Digitally signed by Hugh  
Hoagland  
Date: 2019.08.27 14:07:18  
-04'00'

Hugh Hoagland  
President