

Dr. Wilfred Sweeny and Dr. Wayne Sorenson are not exactly household names however the invention they have been credited with developing certainly is! While working for DuPont's Textile Engineering lab Dr. Sweeny discovered and engineered a high-molecular-weight product that could be spun into a tough crystallizable fiber offering outstanding thermal and flame resistance. Soon after this discovery, Dr. Sorenson developed a method to achieve mass production and commercialization of the product we now know as Nomex®. This important and revolutionary invention provides much needed thermal protection for thousands of men and women serving worldwide in the armed forces, our hometown heroes fighting fires, and also offers valuable additional seconds of fire protection to racers in all forms of motorsports whether competing in grassroots local events or at the professional level.

### Nomex® vs. Treated Cotton Fabrics

Not all fire resistant fabrics are the same! While your budget may be the biggest determining factor in which driving suit you ultimately purchase, the fabric and construction of the garment should also be given equal consideration. The quality of materials and their thermal properties can vary as drastically as the price.

• **Treated Cotton Fabrics:** Treated suits are manufactured from cotton that has been chemically treated with a compound that bonds to the fabric making it fire retardant. The drawbacks of this treated fabric is the life expectancy of the fire retardant treatment is limited due to the chemical used to treat the fabric diminishes with each wash or dryclean. Unfortunately, the efficacy of the garment's retardant properties are unknown simply by looking at the suit. Impact does not recommend or manufacture our driving suits from treated cotton fabrics.

• **Nomex® Fabrics:** Driving and Crew suits manufactured from Nomex® are inherently flame resistant, meaning that the exceptional thermal and flame protection provided by Nomex® cannot be washed out or worn away. Nomex® also will not sustain combustion in air or melt when exposed to flame. Because Nomex® carbonizes and becomes thicker when exposed to intense heat; it forms a protective barrier between the heat source and the skin. This unique reaction to intense heat provides valuable escape time when fires occur and helps protect wearers against them.

### Suit Layers and SFI Ratings

One of the most effective ways to enhance personal safety on the track or in the pits is to increase the number of Nomex® layers your suit is manufactured from. A two or three layer suit is far more resistant to flame and heat transfer and will provide you with valuable additional seconds of time during an emergency situation versus a single-layer suit. Additional protection can also be obtained by wearing Nomex® under garments beneath the driving or crew suit as well as a balaclava and Nomex® socks.

### Suit Specifications - SFI Specification & FIA Homologation Program

The SFI Foundation and the FIA (Fédération Internationale de l'Automobile) are both non-profit organizations that issue and administer standards for motorsports related equipment. The SFI Foundation is based in the U.S.A and is recognized by racing organizations such as NHRA and NASCAR. The SFI Foundation standards are often adopted as the rules for safety by racing organizations that participate in the SFI Foundation's specification program. The FIA is a European based association that not only issues safety standards for international race cars and equipment, but also governs over international motorsports events as well.

The purpose of a unified set of standards and criteria is to establish recognized levels of quality in motorsports equipment and ensure the overall safety of the racing industry. The consumer benefits from manufacturers that cooperate with the specification programs as there is an established and expected level of performance for the products. Impact proudly and voluntarily participates in both the SFI and FIA specification programs. Both SFI and FIA have certain criteria relating to driving suits and their construction, the materials used, tensile strength, heat transmission, and the garment's thermal resistance.

### SFI Ratings Explained

The SFI Foundation's Driver Suit Specification 3.2A tests a garment's fire retardant capabilities and also details specific garment construction and performance characteristics. The spec contains a rating system based on the garment's ability to provide Thermal Protective Performance (TPP) in the presence of both direct flame and radiant heat. The purpose of the TPP is to measure the length of time the person wearing the garment can be exposed to a heat source before incurring a second degree, or skin blistering burn. There are various sub categories (which refer to the garment's TPP ratings - "Thermal Protective Performance") for the 3.2A specification. The TPP rating is the product of exposure heat flux and exposure time. The TPP results can be converted to the time before a second-degree burn occurs. The higher the garment rating, the more time before a second-degree burn.

A driving or crew suit with an SFI specification label 3.2A/1 will most likely be a single-layer suit and only accepted in the entry-level and grassroots racing organizations. The most commonly required specification by racing sanctions is SFI's 3.2A/5 rated driving suits. Impact offers a full-line of budget-friendly off-the-shelf driving suits manufactured to the SFI Foundation's 3.2A/5 specification. Constructed from Futura Nomex® our 2-layer Racer suit offers many of the comfort and convenience features found on much higher priced and custom suits and is the ideal choice for drivers not wanting to sacrifice comfort and quality because of price. Impact's Team One and Team One Plus suits offer style and comfort with our exclusive line of 2-layer lightweight sateen Nomex® and honeycomb moisture-wicking inner liner. Additional creature comforts such as stretch gusseting along the lower back panel and 360° floating sleeves add mobility while making these two suits affordable and stylish.

Are you running an alcohol or Nitro-powered drag car? Chances are your racing sanction will require you to wear a suit manufacturer's certified to the 3.2A/15 or 3.2A/20 standard. Impact has you covered with our off-the-shelf line of Team Drag suits constructed as either a one-piece suit or two-piece (jacket and pants). Available by special order, Impact can also manufacture Team Drag suits to the SFI 3.2A/20 specification or if you are looking for something a little more custom, Impact's sales and art department can work with you to create a suit to meet your needs.



For drivers competing internationally, Impact offers custom driving and crew suits constructed from our exclusive line of sateen Nomex and available in either a two-layer or three-layer version and FIA-approved to the 8856-2000 homologation standard.

Continuous research, development and testing is conducted by Impact on materials and sewing methods to perfect what may be the most under-rated piece of driver's safety equipment. Impact creates each race suit with style and appearance in mind while focusing on the ultimate goal: Safety. We understand that each driving suit that leaves our factory in the heart of Gasoline Alley in Indianapolis, Indiana, has the potential to save a life. We also understand that each driver prefers their suit to be built to their exacting standards. With a wealth of driver feedback, including Impact owner Robbie Pierce, who tests his products to the limits during the grueling Baja 1000, we take every detail into account when designing a suit. No driver will have to "tough it out" for multiple heat races and a main or a 500-mile trek through the Baja desert. Though safety and comfort are Impact's main priority, a driving suit is more than a protective cover between a driver and a potential disaster; every driver wants to look their best on the podium. When you look good, we look good and Impact is dedicated to continuously researching methods to improve our comfort, styling and options to promote the best practices in safety performance.

### EPAULETS

**SFI suits:** Designed to reduce discomfort when restraint systems are in use, Impact crafts our epaulets with an overlock flat stitching along the shoulder line to improve strength and reduce the pressure points created by race harnesses and frontal head restraints.

**FIA suits:** In addition to the overlock flat stitching to reduce pressure points, the epaulets on our FIA-approved suits feature a double-stitched and reinforced handle-styling in the event a driver needs to be extracted from a vehicle.

### 360° ARM GUSSET - FLOATING SLEEVE

The full-custom suit features a full-floating sleeve via a 360° shoulder gusset for maximum comfort and ease of motion. With this gusset, you will have unrestricted movement, especially in the repetitive forward/backward driving position.

### OPTIONAL ARM RESTRAINT

The arm restraint is integrated into the driving suit sleeve for open-wheel and drag racing applications. The built-in arm restraint features all the required hardware and is manufacturer's certified to SFI's 3.3 specification.

### ADJUSTABLE BELT

Infinite adjustment and comfort is possible with our Velcro® closure, standard on all suits.

### LUMBAR/LOWER BACK GUSSET

Impact's exclusive back gusset offers unparalleled flexibility allowing for full movement while controlling the suit from riding up in the seated position.

### RIBBED KNIT CUFF

Pant cuff is gathered at the bottom with a ribbed cuff that tucks into the shoe.

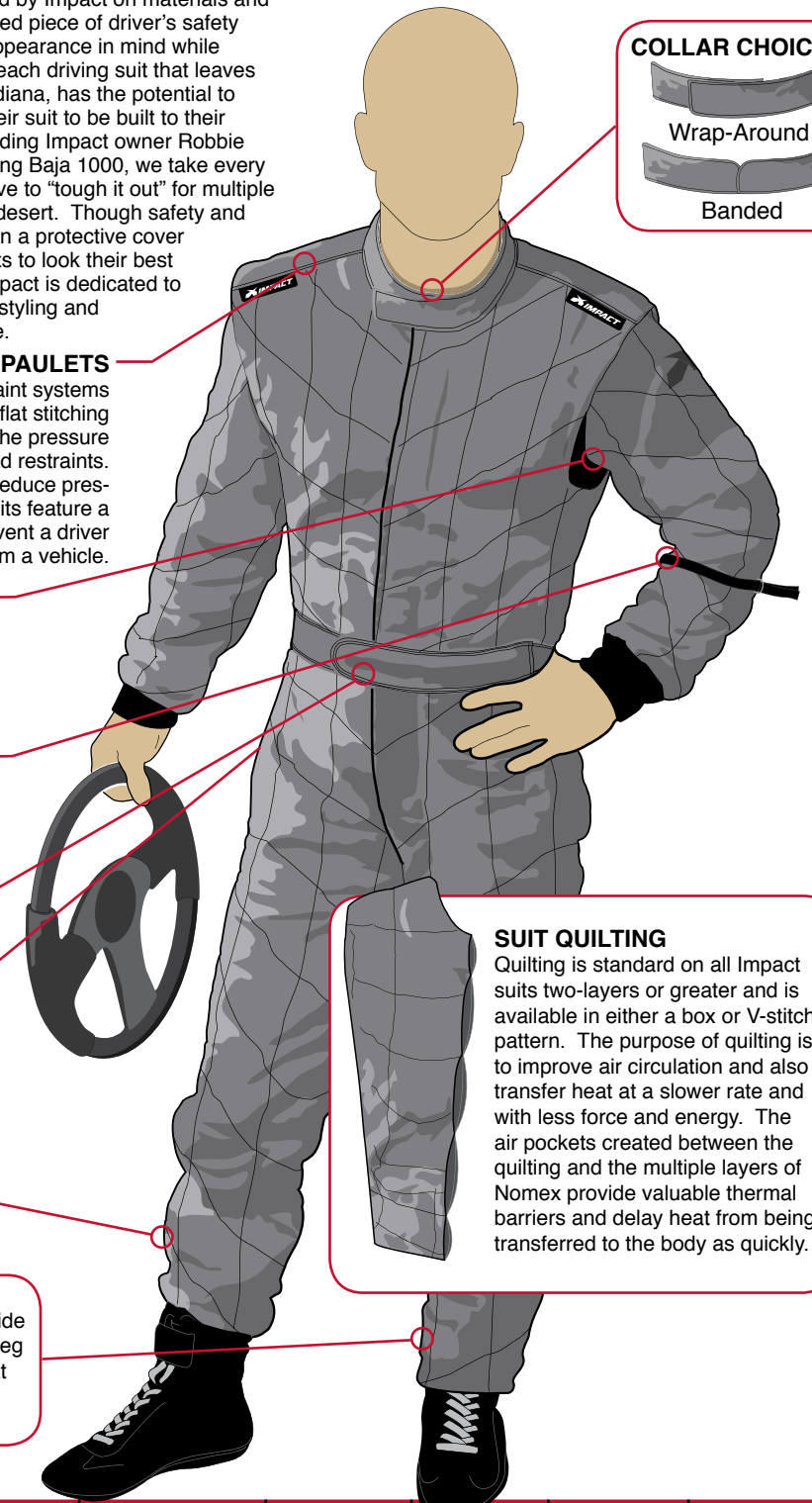
### BOOT CUT CUFF

Ribbed cuff on the inside covered by a straight leg cuff on the outside that covers the shoe - like your jeans.

### COLLAR CHOICES

Wrap-Around

Banded



### SUIT QUILTING

Quilting is standard on all Impact suits two-layers or greater and is available in either a box or V-stitch pattern. The purpose of quilting is to improve air circulation and also transfer heat at a slower rate and with less force and energy. The air pockets created between the quilting and the multiple layers of Nomex provide valuable thermal barriers and delay heat from being transferred to the body as quickly.

### STANDARD FIRESUIT SIZING

Size:	Height	Weight (lbs.)	Chest	Waist	Hips	Torso	Inseam
Adult Small	5' 4" - 5' 6"	130 - 150	38" - 40"	29"	33"	27"	31"
Adult Medium	5' 6" - 5' 8"	150 - 170	42" - 44"	32"	36"	28"	31"
Adult Large	5' 8" - 5' 10"	170 - 190	46" - 48"	36"	40"	29"	32"
Adult Extra Large	5' 10" - 6' 1"	190 - 210	50" - 52"	39"	44"	31"	33"
Adult XXL	6' - 6' 2"	220 - 240	54" - 56"	44"	47"	32"	33"
Junior Small	4' 1" - 4' 4"	50 - 65	27" - 29"	23"	26"	19"	22"
Junior Medium	4' 3" - 4' 7"	70 - 90	28" - 30"	25"	27"	21"	25"
Junior Large	4' 5" - 4' 9"	80 - 100	34" - 36"	27"	31"	23"	27"
Junior Extra Large	4' 7" - 4' 11"	90 - 120	35" - 37"	28"	32"	25"	29"

