Exhibitbased Worksheet

SPEED Science of Racing

Machine (2) – Driver's suit



When suited up, Formula One (F1) drivers can survive for 11 seconds in temperatures of 840°C! What's so special about the suit? How much protection can the suit offer the driver?

DO YOU KNOW?

- 1. Nomex[®], a highly specialised synthetic material from DuPont has been used in F1 for over 40 years as a way to protect drivers during a crash or fire.
- 2. It is fire-resistant and lightweight and make up multiple layers of clothing for drivers overalls, long johns, protective underwear, balaclavas and fire resistant gloves.
- 3. It is the material of choice for F1 drivers, pit crew, rescue personnel and track officials.
- 4. Nomex[®] Fiber Properties:
 - Excellent flame resistance and thermal protection.
 - Stands up to flame temperatures in excess of 1093.3°C.
 - Fibers do not melt or drip.
 - Outstanding resistance to degradation by radiation.
 - Outstanding resistance to degradation at cryogenic conditions.
 - Resistant to chemicals and industrial solvents.
 - Resistant to insects and fungi.
 - Low stiffness of fiber due to chemical bonding arrangement.
 - High elongation.
 - Cut resistant.
 - Abrasion resistant.

Being trapped in a burning house is scary. Which stuff(s) below could be used to save yourself during a fire? [Discussion]



Ears

Knees

Body

SPEED Science of Racing

Machine (1) – Monocoque

The following are protective clothings and safety equipment. Pair them. [Google to find out more the materials used to make them.]



Keywords: Nomex®, fire resistant











