

# PERSONAL PROTECTIVE EQUIPMENT (PPE)

## PRODUCT TESTING SERVICES

**MUHAMMAD TASHRIFF SHAH BIN HELMY SYAMZA**  
TESTING SERVICES DEPARTMENT

18 MAY 2022



*Best Partner for Innovation*

# TESTING SERVICES DEPARTMENT

1. Civil & Construction

2. Mechanical & Automotive

3. Chemical, Polymer & Composite

4. Material Integrity

5. Electrical & Electronics

6. Radio Frequency & EMC

7. Fire Protection

## Schedule

Issue date: 20 January 2021  
Valid until: 7 December 2023



**NO: SAMM 085**

Page: 1 of 45

**LABORATORY LOCATION:**  
(PERMANENT LABORATORY)



**TESTING SERVICES DEPARTMENT**  
(CCST, **MAST**, FPST & MIST)  
SIRIM QAS INTERNATIONAL SDN. BHD.  
BUILDING 8, SIRIM COMPLEX  
1, PERSIARAN DATO' MENTERI  
SECTION 2, P.O. BOX 7035  
40700 SHAH ALAM  
SELANGOR, MALAYSIA

**FIELDS OF TESTING:**

**MECHANICAL AND THERMAL**

This laboratory has demonstrated its technical competence to operate in accordance with MS ISO/IEC 17025:2017 (ISO/IEC 17025:2017).

This laboratory's fulfillment of the requirements of ISO/IEC 17025 means the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations. The management system requirements in ISO/IEC 17025 are written in language relevant to laboratory operations and operate generally in accordance with the principles of ISO 9001 (see Joint ISO-ILAC-IAF Communiqué dated April 2017).



## Schedule

Issue date: 29 March 2022  
Valid until: 31 January 2024



**NO: SAMM 087**

Issue 3, 29 March 2022 replacement  
of SAMM 087 dated 13 July 2021)

Page: 1 of 14

**LABORATORY LOCATION:**  
(PERMANENT LABORATORY)



**CHEMICAL, POLYMER & COMPOSITE SECTION (CPCT)**  
**TESTING SERVICES DEPARTMENT**  
SIRIM QAS INTERNATIONAL SDN. BHD.  
BUILDING 8, NO 1, PERSIARAN DATO' MENTERI  
P.O.BOX 7035, SECTION 2  
40700 SHAH ALAM, SELANGOR  
MALAYSIA

**FIELDS OF TESTING:**

**CHEMICAL AND MECHANICAL**

This laboratory has demonstrated its technical competence to operate in accordance with MS ISO/IEC 17025:2017 (ISO/IEC 17025:2017).

This laboratory's fulfillment of the requirements of ISO/IEC 17025 means the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations. The management system requirements in ISO/IEC 17025 are written in language relevant to laboratory operations and operate generally in accordance with the principles of ISO 9001 (see Joint ISO-ILAC-IAF Communiqué dated April 2017).

# PPE

## HELMET & PERSONAL PROTECTIVE EQUIPMENT TESTING

# PERSONAL PROTECTIVE EQUIPMENTS



**BREATHING  
PROTECTION**



**EYE  
PROTECTION**



**HEAD  
PROTECTION**



**HAND  
PROTECTION**



**HEAR  
PROTECTION**



**FOOT  
PROTECTION**



**BODY  
PROTECTION**



# PERSONAL PROTECTIVE EQUIPMENTS



## Head Protection

- MS 183 & EN 397
- EN 812

## Eye Protection

- MS 2050, EN 166
- ANSI Z87.1



## Hearing Protection

- EN 352



## Breathing Protection

- MS 2323, EN 140, EN 143, EN 149 & EN 14387



# PERSONAL PROTECTIVE EQUIPMENTS

## Hand Protection

- EN 388, EN ISO 21420



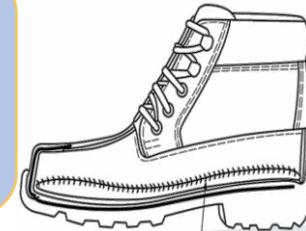
## Body Protection

- MS 2308, MS 2309, MS 2310, MS 2311, MS 2312, MS 2313, MS 2314, MS, 2315
- EN 353-2, EN 354, EN 355, EN 358,
- EN 360, EN 361, EN 362, EN 795 & EN 813



## Foot Protection

- MS ISO 20345 & EN ISO 20345



# TEST LOCATION

**SIRIM  
IN HOUSE  
TEST**

**TEST AT**

- **FACTORY**
- **3<sup>rd</sup> PARTY  
LAB**

# SIRIM IN-HOUSE TEST

## SAFETY FOOTWEAR

- MS ISO 20345 & EN ISO 20345

## INDUSTRIAL SAFETY HELMET & BUMP CAP

- MS 183 & EN 397
- EN 812

## PROTECTIVE GLOVE

- EN 388, EN 420 @ EN ISO 21420

# TEST EQUIPMENTS



# TEST EQUIPMENTS



# TEST EQUIPMENTS

## **Universal Tensile Machine (UTM)**

- Compression Test
- Tensile Test
- Tear Strength Test
- Upper/outsole Bond Strength Test
- Interlayer Bond Strength
- Retention System Strength Test

## **Impact Test for Toe Cap of Safety Footwear**

## **Impact Test for Safety Helmet**

## **Penetration Test**

## **Stiffness Test**

## **Temperature & Humidity Chamber**

## **Abrasion Test**

## **Flexing Test**

## **Water Absorption & Desorption Test**

## **Flame Resistance Test**

## **Corrosion Test**

## **Artificial Ageing Test**

## **pH Test**

# NEW TESTING EQUIPMENTS



SLIP RESISTANCE TESTER  
EN ISO 20345



BLADE CUT RESISTANCE  
EN 388



TDM CUT RESISTANCE  
EN 388



# TEST 3<sup>rd</sup> PART LAB

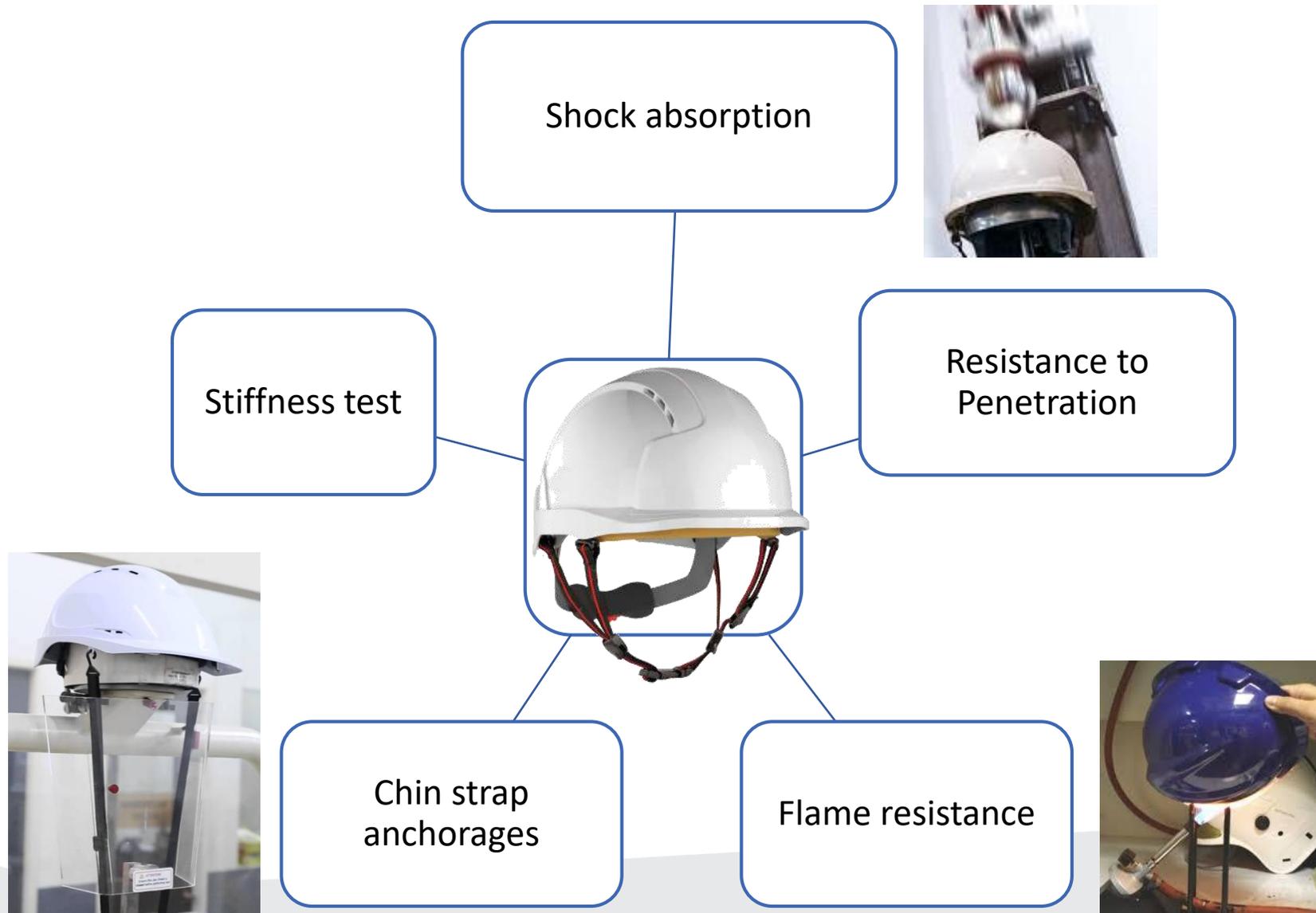
## FALL PROTECTION DEVICES

- EN 353-2, EN 354, EN 355, EN 358, EN 360, EN 361, EN 362, EN 795 and EN 813

## RESPIRATORY PROTECTIVE DEVICES

- EN 140, EN 143, EN 149 and EN 14387

# INDUSTRIAL SAFETY HELMET



# SAFETY EYEWEAR

## EN 166 & ANSI Z87.1

- Design & material
- Field of vision
- Spherical, astigmatic and prismatic refractive powers
- Transmittance
- Diffusion of light
- Quality of material and surface
- Robustness
- Increased robustness
- Resistance to ageing
- Resistance to corrosion
- Ignition
- Protection against high-speed particles

# EARMUFF & EARPLUG

## EN 352-1, EN 352-2, EN 352-3

- Sizing and adjustability
- Materials and construction
- Performance
- Cup rotation
- Headband force
- Cushion pressure
- Resistance to damage when dropped
- Insertion loss
- Resistance to leakage
- Cleaning and disinfection
- Ignitability
- Minimum attenuation

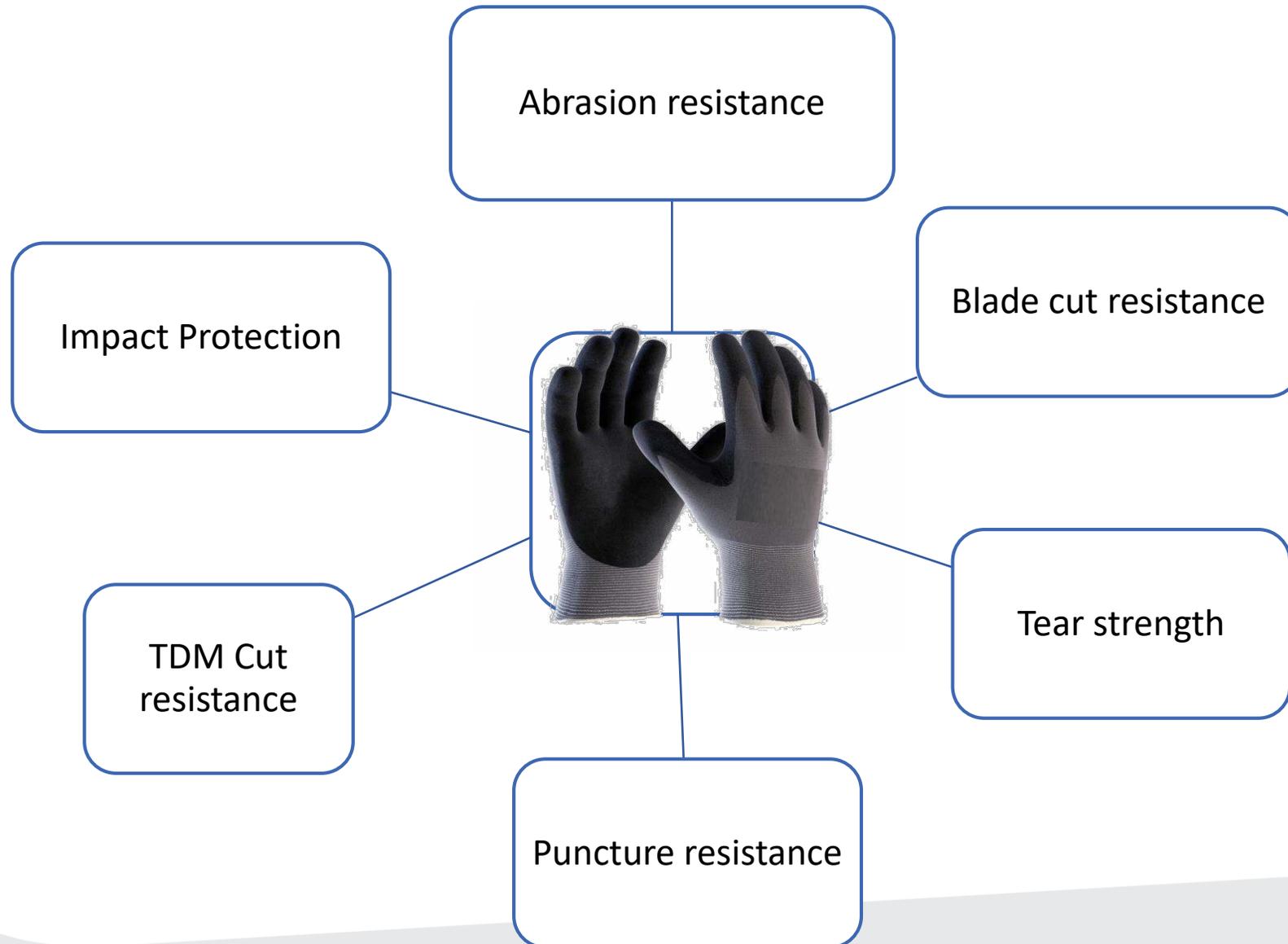


# RESPIRATORY PROTECTIVE DEVICE

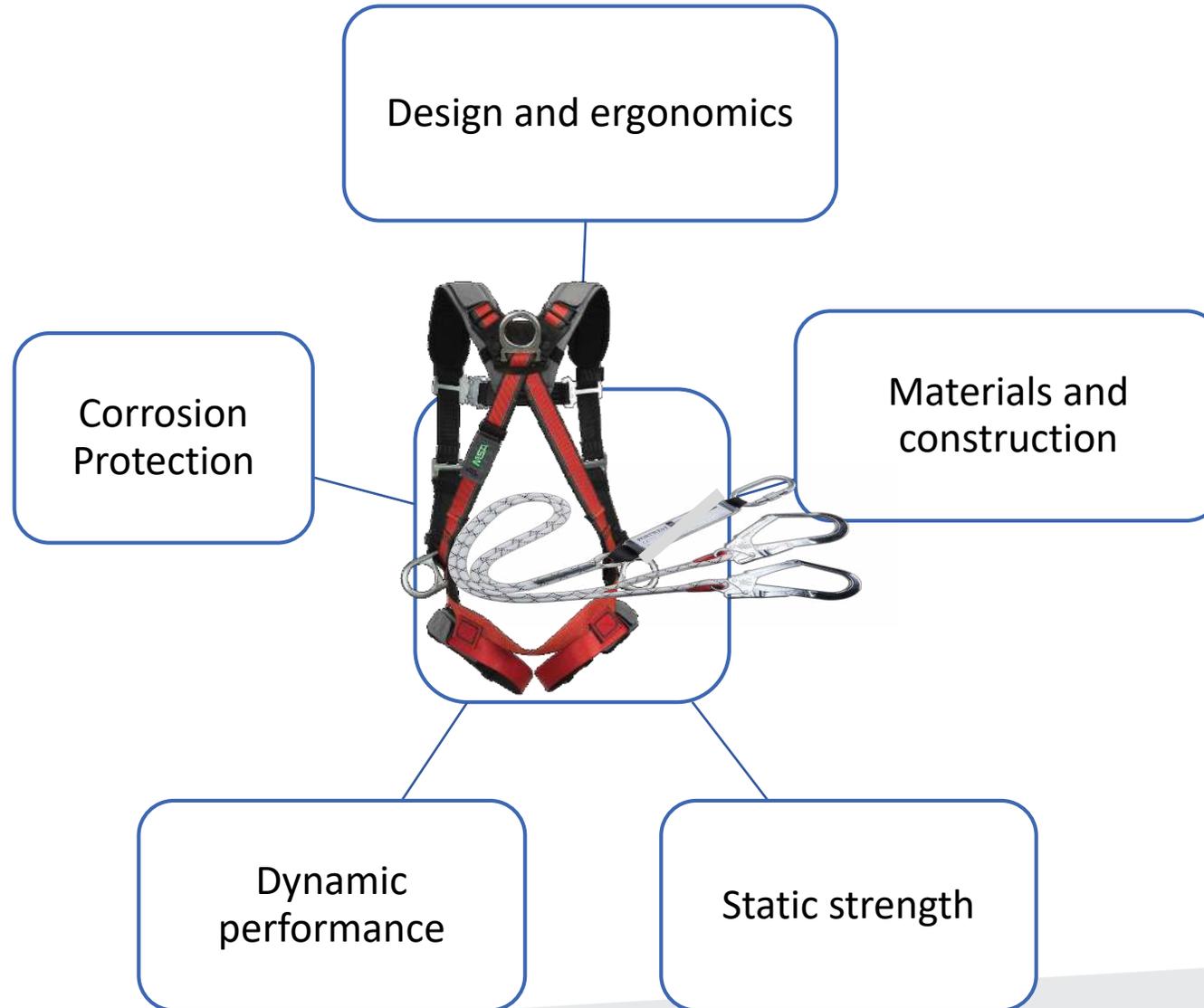
## EN 140, EN 143, EN 149 & EN 14387

- Visual inspection
- Packaging
- Material
- Cleaning and disinfecting
- Practical performance
- Finish of parts
- Penetration of filter material
- Total inward leakage
- Compatibility with skin
- Flammability
- Carbon dioxide content of the inhalation air
- Head harness
- Field of vision
- Exhalation valve(s)
- Breathing resistance

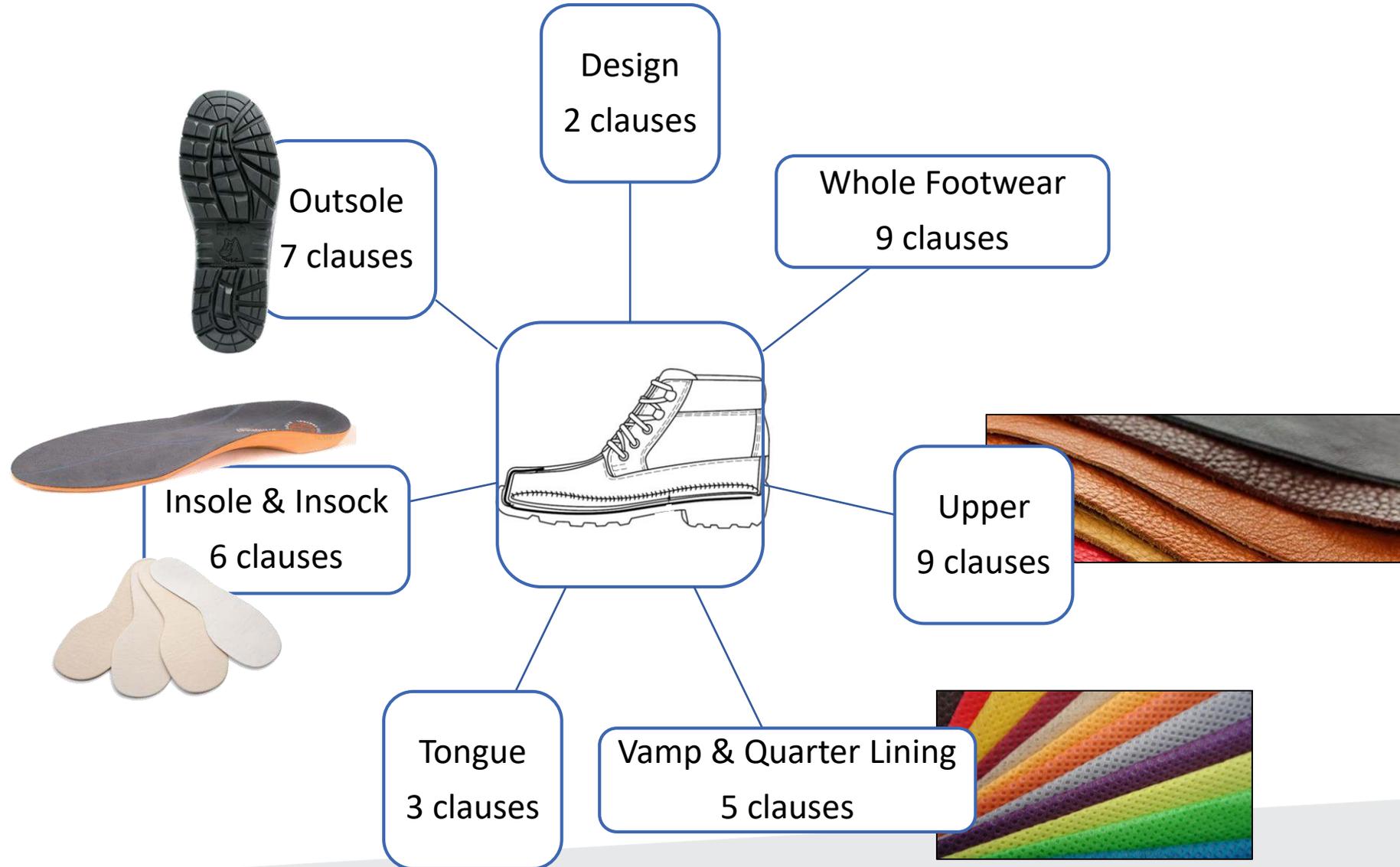
# PROTECTIVE GLOVE



# BODY HARNESS & DEVICES



# SAFETY FOOTWEAR



# ACCREDITATION AND RECOGNITION BY THE AUTHORITIES

	 JABATAN KESELAMATAN DAN KESIHATAN PEKERJAAN MALAYSIA	  <small>Suruhanjaya Perkhidmatan Air Negara</small>	
MOTORCYCLE HELMET, ELECTRIC BIKE, ELECTRIC MOTORCYCLE, HEAD LAMP HPPE & AVCL LAB, MAST	PERSONAL PROTECTIVE EQUIPMENT (PPE), HPPE LAB, MAST	GAS REGULATOR & WATER PRODUCT FGA LAB, MAST	PACKAGING PUI LAB, MAST
		 	
	AVIATION LIGHT AVC LAB, MAST	MECHANICAL & AUTOMOTIVE SECTION, MAST	

# Thank You!

You can find us at:

[cserviceqas@sirim.my](mailto:cserviceqas@sirim.my)

Tel: +603-5544 6400

Any enquiry you may email to:-

**Product Certification:**

[jailani@sirim.my](mailto:jailani@sirim.my)/[farihan@sirim.my](mailto:farihan@sirim.my)/[ramzi@sirim.my](mailto:ramzi@sirim.my)

**Testing :**

[tashriff@sirim.my](mailto:tashriff@sirim.my)