





SHOWA is the global leader in hand protection solutions for THE MINING INDUSTRY

minerals, metals and iron ore. Mines and guarries are found significant players. Canada owns the most active mineral exploration sites, while more than 50% of the silver and copper produced

worldwide comes from South America. South Africa is home to and even our smallest continent, Australia, employed over 132,000 people in the

brand of choice for mining workers



NUMBER OF ACTIVE MINERAL EXPLORATION SITES WORLDWIDE IN 2017. BY REGION AND TYPE*



For every job and application in the mining and guarry industry **THERE'S A SHOWA GLOVE TO PROTECT YOUR HANDS**



The highest quality with 100% integrated manufacturing

Being the only company with complete control over the design and manufacture of its protective gloves. SHOWA has always boasted an unmatched capacity for innovating and developing major

technological advancements. It means we are able to anticipate clients' needs and provide maximum safety to professionals in every field. Compared to similar protection gloves, SHOWA gloves

A complete and optimised range of hand protection

With the multitude of different extraction and mining jobs in mind, SHOWA offers a range of gloves that were designed to meet the needs of each trade and application within the mining and quarry industry. To make it easier to choose the correct glove for the task at hand, we have identified a range of no more than 20 tradespecific gloves and separated them into 8 main working environments

within the mine. This ensures the WORK number of reference materials is ENVIRONMENT optimized and purchase costs are reduced to a minimum, with gloves HAND that meet the specific needs of each MOVEMENTS different type of work. Grouped into these work types, they TYPES OF consider three key factors: work PROTECTION environment, the different hand movements to be performed and the types of protection required.

EXTRACTION & EXPLORATION



CRUSHING & GRINDING



GENERAL PURPOSE

SAMPLE COLLECTION &



RESCUE & EMERGENCY RESPONSE

offer enhanced comfort and greater dexterity for hand movements. This helps cut down work-related afflictions or injuries, improves productivity and ultimately leads to savings for the company in the long run.

There are dangers for mining workers both above and underground **UNDERSTANDING THE RISKS**, PREVENTING THE DAMAGE

The mining and quarrying industry is one of the most important, yet also comes with a dramatically high level of health and safety risks. Workers in open and underground extraction environments regularly deal with the dangers of heavy loads and equipment, unstable ground conditions, as well as hazardous materials.

Technological advancements and increased regulations have led to improvements in mine safety, however, workers in manual, semiautomatic and even automatic applications still use their hands for a large part of the tasks. Without glove protection, the only remaining barrier is the skin. Even the toughest skin is still

sensitive to the dangers of cold, chemicals, micro-trauma, injury and musculoskeletal disorders, etc., all of which are possible sources of permanent future disability. So choosing the right hand protection is an essential factor in risk prevention.

NUMBER OF FATAL JOB INJURIES IN MINERAL, OIL AND GAS EXTRACTION IN THE US, 2003-18



European standards

COMMITMENTS TO HEALTH AND SAFETY

PPE Regulation (EU) 2016/425

To help identify the correct product to use, personal protective equipment is categorized by the severity of risks involved in the application or environment.

Category I Minor risks **Category II Reversible risks** (Injury), certified as being compliant by a notified body **Category III Irreversible risks**

(Corrosion), certified as being compliant and tested by a notified body whose identity number is specified

EN 407

Risks related to heat

The glove's tested performance levels against the following risks: a) Flame resistance (0 to 4) b) Contact heat resistance (0 to 4) | c) Convective heat resistance (0 to 3) | d) Radiant heat resistance (0 to 4) | e) Resistance to small splashes of molten metal (0 or 1) | f) Resistance to large quantities of molten

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EN 374-5: 2016

Protection against micro-organisms

The glove is considered to be micro-organism resistant if it has successfully passed penetration tests (water and/or breathability test) and at least complies with penetration test level 2. If the glove passes ISO 16604: 2004 (method B) test it can claim resistance to viruses as well

Without the proper hand protection, your body's most vital tools will suffer WHAT ARE THE RISKS INVOLVED **FOR YOUR HANDS?**



Open-pit mines are fully exposed to the sun and without proper protection, so is our skin. Unfortunately, over-exposure to UV-rays causes melanomas to form, which in turn can lead to skin cancer.



EXPOSURE TO HARMFUL DUST

Mining dust from coal and finely powdered materials can cause contact dermatitis; the finer particles can penetrate the skin and enter the blood stream, causing systemic toxicity, infections or allergic reactions.

ABRASIONS, CUTS AND LACERATIONS

Hands in the mining industry are exposed to pinch points, sharp edges, splinters, blades and heavy impact from moving parts or machines. The long-term consequences can be serious for victims facing crushed or amputated fingers, hands or arms.

EN 511

Risks related to cold

The glove's tested performance levels against the following risks: a) Climatic or industrial cold transmitted by convection (0 to 4) | b) Climatic or industrial cold transmitted by contact (0 to 4) | c) Imperviousness to water (0 or 1)

EN ISO 374-1: 2016 **Chemical risks**



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Classifies level of protection (A to C) against permeation by chemicals. The standard defines a list of 18 chemicals. **Type A:** breakthrough time of 30 mins for 6 chemicals Type B: breakthrough time of 30 mins for 3+ chemicals **Type C:** breakthrough time of 10 mins for 1+ chemicals



Visit www.ChemRest.com for more info or to search through our chemical resistant directory

CHEMICAL HAZARDS

There is a multitude of irritant or hazardous substances that miners can encounter; fossil fuels and their by-products, cleaning and organic solvents, metalworking fluids, etc. Contact with the skin may

cause burns, dermatitis, irritation and even poisoning.

THERMAL STRESS

Temperatures inside and outside the

mine can cause major risks. Cold hands becoming numb will lose their dexterity - scary when handling equipment or tools! Heat is also dangerous for naked hands handling tools or hot laboratory samples.

MUSCULOSKELETAL DISORDERS

Mining workers risk musculoskeletal disorders if their hands are overexerted, or frequently struck by objects like stones or tools. The right glove protects when handling materials, performing maintenance and repair tasks, or getting on or off equipment or machines.

EN 388: 2016 **Mechanical risks**

Cut resistance

Tested and specified levels of resistance to the following risks: a) Abrasion resistance (0 to 4) | b) Cut resistance by Coup Test (0 to 5) | c) Tear resistance (0 to 4) | d) Puncture resistance (0 to 4) | e) Blade cut resistance by ISO 13997 test (A-F) | f) Impact resistance (P)

Level of protection you need against cuts and lacerations with ISO 13997						
Level of protection	А	В	с	D	Е	F
Force in newtons	>2	>5	>10	>15	>22	>30

LOW MEDIUM



HIGH











GENERAL PURPOSE CUT				CHEMICAL						HEAT	COLD	BIODEGE SINGL	RADABLE					
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376/ 377	330	381	306	386	546	S-TEX 377	S-TEX 581	257	660	NSK 26	NSK 24	Cut E 3416	731	6784R	8814	406	7585	7500
				, C	С	D	E	F,	В	В	Α	Α	Α	Α			Α	C

EN 388:2016 Cut Levels

CONSTRUCTION OF		General/ Material Handling	•	•	•	•	•	•		•		•							•		
INFRASTRUCTURE		Construction	•	•						•		•	•								•
		Drilling / Auxiliary	•									•			•						
		Chemical Leaching & Handling										•		•	•		•				•
EXTRACTION & EXPLORATION	-(Electro Winning									•				•		•				
		Refining								•					•		•				
		Handling of Copper Cathodes					•		•	•	•										
											1			1	1						
CRUSHING &		Grinding					•			•	•	•		•							
GRINDING		Screening	•									•									
													1	1	i						
TRANSPORT &		Transporting		•	•				•		•										
LOGISTICS		Transport and Storage of Chemicals										•		•			•				
	_ (%)_	Tool Operation			•			•													
GENERAL PURPOSE		General Purpose	•	•	•	•															
MAINTENANCE &		Mechanical Maintenance	•						•					•							•
CLEANING	Swr S	Electrical Maintenance						•			•										•
	_ 凢 _	Laboratory of Analysis														•		•		•	•
ANALYSIS		Geology			•																•
																					ليجعه
RESCUE &		Emergency Rescue Team							•											•	•
RESPONSE		Clinic																		•	•

EN ISO 374-1:2016 Types



MINING GLOVES FOR LIGHT **ABRASION AND EXCELLENT GRIP NEEDS**



SHOWA 376R/377

3/4 dipped or fully dipped nitrile with extra foam over nitrile coating on palm, over polyester/nylon liner

BENEFITS: Engineered grip technology platform for applications exposed to oils, greases & lubricants

- A flexible and robust glove that absorbs perspiration to increase comfort
- Foam nitrile protects the hand from oils, hydrocarbons and grease penetration
- Designed for optimal long lasting grip in oil and grease
- Advanced dual coating provides flexibility and tactility while offering abrasion resistance EN 388 level 4
- Excellent level of dexterity and tactility
- Designed for easy movement and continuous wear
- Seamless knit designed to prevent irritation
- No latex allergy risks

APPLICATIONS:

Construction work Drilling/auxiliary Screening General purpose Mechanical maintenance Dry and wet environments

	376R	377
SIZE	LENGTH	LENGTH
6/S	230mm	220mm
7/M	250mm	230mm
8/L	260mm	250mm
9/XL	270mm	255mm
10/XXL	280mm	265mm

Cat. II EN 388:2016



Microporous nitrile coating

over engineered microfibre liner

BENEFITS:

APPLICATIONS:

General construction work Transporting Tool operation General purpose Geology

SIZE	LENGTH
6/S	220mm
7/M	230mm
8/L	250mm
9/XL	260mm
10/XXL	270mm



ENHANCED BOOST VAPOUR

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GRIP DISPERSES LIQUID AWAY

INCREASED

PERMEATION

ΖE	LENGTH	
S	220mm	
1	230mm	
	250mm	
XL	260mm	
'XXL	270mm	





SHOWA 330

Latex palm coating over polyester/cotton liner with reinforced coating at thumb crotch

BENEFITS: Designed for scaffoldings and metal tube handling

- Latex coating protects the hand in damp environments and against aggressive detergents or alcohols
- Reinforced coating at thumb offer more resistance and durability Low-soil colour
- Excellent level of dexterity and tactility
- A flexible glove that absorbs perspiration to increase comfort
- Seamless knit designed to prevent irritation
- Designed for easy movement and extended wear

APPLICATIONS:

General construction work Handling metal parts Transporting General purpose

SIZE	LENGTH
7/S	230mm
8/M	240mm
9/L	250mm
10/XL	260mm

Cat. II EN 388:2016



- BENEFITS: One solution for all purposes, whatever the outdoor conditions are • Aerated latex foam for breathability and reduced perspiration 2 Impermeability protects from liquid penetration **3** Latex coating offer high level of grip and abrasion resistance **4** Soft comfort and premium fit thanks to SHOWA ergonomic design G High level of flexibility through engineered coating **G** Ergonomic design that replicates the natural curvature of the human hand, reducing hand fatigue

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APPLICATIONS:

General construction work Dry and wet environments General purpose

SIZE	LENGTH
6/S	230mm
7/M	240mm
8/L	260mm
9/XL	266mm
10/XXL	270mm

EN 388:20

CE





Full foam latex coating doubled with latex on palm over nylon/polyester liner

PROTECTION ALL YEAR ROUND, NO MATTER THE WEATHER 306



MINING GLOVES FOR CUT **AND ABRASION RISKS**

Cut Level C



SHOWA **DURACoil®** 546

Polyurethane foam coating over engineered DURACoil liner reinforced with HPPE

BENEFITS: Ultra-comfortable multi-purpose glove with durable cut resistant properties for precision handling

- Increased cut resistance performance due to engineered DURACoil* liner
- PU foamed coating protects the hand from oils and abrasions while
- remaining breathable Maximum comfort when performing delicate tasks
- Breathable back of hand reduces
- perspiration and keeps hands dry • Cost-efficient gloves that can be
- laundered and re-used

APPLICATIONS:

Construction material handling Tool operation Electrical maintenance Handling metal objects Engineering Manufacturing

SIZE	LENGTH
6/S	220mm
7/M	230mm
8/L	240mm
9/XL	250mm
10/XXL	270mm





Cut Level C

SHOWA **DURACoil®** 386

Microporous nitrile coating over engineered DURACoil[®] liner reinforced with HPPE

BENEFITS: Light, supple gloves with good resistance to punctures and nicks

- Increased cut resistance performance due to engineered DURACoil* liner
- Microporous nitrile coating protects the hand from grease, hydrocarbons, and abrasions while remaining aerated
- Embossed nitrile palm finish disperses oil for increased grip and longevity in light oily environments
- Breathable back of hand reduces perspiration
- Cost-efficient gloves that can be laundered and re-used

APPLICATIONS:

Construction material handling Handling of copper cathodes Grinding Engineering Manufacturing

SIZE	LENGTH
6/S	220mm
7/M	230mm
8/L	250mm
9/XL	260mm
10/XXL	270mm



SHOWA **INNOVATIONS:** THE TECHNOLOGIES THAT COMBINE **CUT PROTECTION** WITH

DURACoil®

Multi-purpose cut protection for cut level C/A3

The liner of every DURACoil glove is engineered by tightly wrapping multifilament polyester around a cut resistant fiber, then reinforcing it with High-Performance Polythylene (HPPE). The soft properties of HPPE combined with the unique coating styles of each model provides ultra comfortable multi-nurnose gloves with durable cut nulti-purpose gloves with durable cut resistant properties for precision hand



S-TEX[®]

Stainless steel protection for cut level D/A4 and up

Hagane Coil® technology enables us to provide high levels of cut resistance without sacrificing comfort. The key ingredient in each S-TEX glove is the unique coiling technique that binds an attending yarn to a stainless steel core. This provides better protection than any natural or synthetic fibre vet is thin enough to allow flexibility and free as the hand bends and flexes



 Polyester / nylon
Stainless steel **3** Attending yarn (depending on glove)

Cut Level D

SHOWA **S-TEX** 376

Dual nitrile coating technology, 3/4 nitrile dipped with extra nitrile foam coating on palm over Hagane Coil[®] liner (stainless steel/polyester)

SHOWA S-TEX 377

Double-dipped, fully coated nitrile, with an extra nitrile foam coating on palm over Hagane Coil[®] liner (stainless steel/polyester)

BENEFITS: Excellent cut protection performance combined with long lasting grip • Nitrile coating with a second foamed nitrile coating provides high abrasion resistance EN 388 level 4

- Protects the hand from oils, hydrocarbons, grease and abrasion, with long lasting grip performance under wet and oily conditions
- Anatomical design replicates the natural curvature of the human hand and thus reduces hand fatigue, increasing productivity and dexterity
- Seamless knitting gives no irritation
- Liquid-proof to end of coated area

APPLICATIONS:

Construction material han
Screening
General purpose

Mechanical maintenance Metal and steel handling Wet and oily applications

SIZE	LENGTH
6/S	220mm
7/M	240mm
8/L	250mm
9/XL	260mm
10/XXL	270mm





These gloves are also available with safety cuffs, for extended protection and quick removal in emergency situations. Ask your SHOWA rep or visit the website for more details.



SIZE LENGTH

JIZE	LENGIN
6/S	220mm
7/M	240mm
8/L	250mm
9/XL	260mm
10/XXL	270mm

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Cut Level D







Foam nitrile palm coating over spandex liner reinforced with stainless steel and aramid

BENEFITS: Surprisingly soft and flexible glove that can withstand the highest level of cuts and lacerations

- Exceptional cut resistant performance - EN 388 level F
- Foam nitrile coating protects palm & fingers from abrasions, snags & punctures, while offering optimum grip in both dry & oily applications
- Plated-knit liner avoids scratchy fibres touching the skin, for longlasting comfort
- Excellent dexterity thanks to flexible properties of spandex
- Lightweight, with breathable open back design that reduces sweat and keeps hands dry
- Launderable for multiple use, less waste and cost efficiency

APPLICATIONS:

Electro winning Metal, steel and copper handling Grinding Transporting materials Electrical maintenance

SIZE 6/S 7/M 8/L 9/XL 10/XXI

241mm 248mm 260mm 273mm 270mm

LENGTH







MINING GLOVES FOR **CHEMICAL APPLICATIONS**



SHOWA 660

Full PVC coating with extra rough finish over cotton liner

BENEFITS:

- Provides heavy-duty defense against chemicals and abrasion
- Soft cotton liner absorbs perspiration and prevents odors for comfortable wear
- Offers high-performance grip and tactile feel in greasy and damp environments
- Mimics the curvature of a human hand to reduce fatigue
- No skin irritation

APPLICATIONS:

Construction material handling Drilling/auxiliary Chemical leaching and handling Grinding Screening Transport and storage of chemicals

SIZE	LENGTH
8/M	300mm
9/L	300mm
10/XL	300mm
11/XXL	300mm





SHOWA **NSK 26**

Full nitrile coating with rough finish over cotton/ polyester jersey liner with extended sleeve and elasticated border

BENEFITS:

- Double nitrile coating provides an excellent chemical and abrasion resistance to the whole arm (620+mm long)
- Nitrile protects the hand from oils, hydrocarbons and grease penetration
- · Impermeable for working in damp or greasy environments
- Extended gauntlet for upper arm protection
- · Provides easy movement and extended wear
- Cotton liner absorbs perspiration and adds comfort
- No latex allergy risks

APPLICATIONS:

Construction Handling chemicals and oily parts

SIZE	LENGTH
8/S	620mm
9/M	630mm
10/L	640mm
11/XL	650mm





SHOWA **NSK 24**

Biodegradable nitrile coating (EBT) with rough finish on the hand over cotton/polyester jersey liner

BENEFITS:

- Double nitrile coating provides an excellent chemical and abrasion resistance to the forearm (350mm long)
- Nitrile protects the hand from oils, hydrocarbons and grease penetration
- Impermeable for working in damp or greasy environments
- Provides easy movement and extended wear
- Cotton liner absorbs perspiration and adds comfort
- No latex allergy risks
- Engineered with EBT, which achieved 82.0% biodegradation in 386 days

APPLICATIONS:

Chemical leaching and handling Transport and storage of chemicals Grindina Mechanical maintenance



SHOWA 731

Unsupported, biodegradable nitrile coating (EBT) with textured finish over cotton flocked liner

BENEFITS: Chemical protection engineered with EBT

- High protection against solvents and acids
- Impermeable for working in wet,
- greasy and oily environments • World's first biodegradable chemical
- resistant glove Textured finish provides better grip
- Excellent precision for handling
- small parts
- Engineered with EBT, which achieved 82.0% biodegradation in 386 days

APPLICATIONS:

Laboratory analysis Cleaning and handling chemicals Manufacturing

SIZE	LENGTH	
7/S	355mm	
B/M	355mm	
9/L	355mm	
IO/XL	355mm	
1/XXL	355mm	





SHOWA 3416

Full neoprene coating over engineered cut resistant liner

BENEFITS:

- Neoprene protects against a wide range of chemicals including acids,
- Flexible neoprene coating provides
- great comfort and dexterity
- Rough particle finish offers good resistance to abrasion
- SHOWA 3416 offers cut protection
- EN 388 level E
- irritation

APPLICATIONS:

Drilling/auxiliary Chemical leaching and handling Electro winning Refining

SIZE	LENGTH
8/S	355mm
9/M	355mm
10/L	355mm
11/XL	355mm



SIZE LENGTH 8/S 350mm 9/M 360mm 10/L 360mm

11/XL 360mm

Type A EN 388:2016 EN 374-5:2016 € 🖻

Cut Level E

caustics, solvents, greases and oils

Seamless knit designed to prevent

Handling sharp objects and edges



SHOWA



Full neoprene coating with rough grip over cotton liner

BENEFITS: designed for comfort in hot or cold environments while providing protection against acids and caustics

- Cotton liner helps keep you cool and comfortable in hot conditions or warm in cold conditions
- Provides protection against acids. caustics, oils, greases and many solvents
- Excellent all-around protection against physical hazards such as abrasion and cut
- Rough finish is excellent for applications where a good wet grip is required

APPLICATIONS:

Chemical leaching and handling Electro winning Refining Transport and storage of chemicals

SIZE

LENGTH 355mm









MINING GLOVES TO PROTECT AGAINST HEAT AND COLD



MINING GLOVES FOR SINGLE USE NEEDS



SHOWA 8814

Full neoprene spray coating over non-woven liner

BENEFITS: Food safe approved

- A comfortable, supple glove providing effective protection against abrasion
- High mechanical resistance while insulating against cold and intermittent heat up to 260°C
- Low-soil colour
- Wrist well protected
- Easy to put on and remove
- Suitable for food processing
- No latex allergy risks

APPLICATIONS:

Handling hot equipment and tools Handling hot metals and materials Laboratory analysis

SIZE	LENGTH	
7/S	355mm	
8/M	355mm	
9/L	355mm	
10/XL	355mm	



SHOWA 406

Full foam latex coating doubled with latex on palm coating over nylon outer liner with insulated acrylic/nylon inner liner

BENEFITS: Triple protection and comfort improves productivity and reduces cost

APPLICATIONS:

General construction work Outdoor general purpose Logistics and warehousing

SIZE	LENGTH
7/M	250mm
3/L	270mm
9/XL	290mm
0/XXL	290mm



RETAINS THE WARMTH, WITHOUT THE SWEAT



7585

Biodegradable single use glove, 100% nitrile, powderfree, silicone-free, 300mm long and 0.20mm thick

BENEFITS:

- 0.20mm thickness provides great resistance to chemicals
- Avoids latex allergies risks type I and type IV
- High protection performance against penetration and projection of chemicals
- Chlorinated glove offers more comfort and to reduce tackiness
- Second skin feel, softer texture and easy donning
- Low-modulus formulation to improve fit and reduce fatigue
- Textured finish on fingertips to enhance grip
- Dual labelling: PPE and medical device
- Engineered with EBT, which achieved 82.0% biodegradation in 386 days

APPLICATIONS:

Laboratory analysis Emergency rescue Healthcare and clinic work

IZE	LENGTH
/S	300mm
s/M	300mm
/L	300mm
0/XL	300mm
I/XXL	300mm





SHOWA **7500PF**

Biodegradable single use glove, 100% nitrile, siliconefree, powder-free, 240mm long and 0,10mm thick

BENEFITS:

• Protects from a wide array of I and type IV latex allergies

- Extremely lightweight without
- compromising performance
- Low-modulus formulation to improve
- fit and reduce fatigue
- Easy to put on and remove • No latex allergy-risks

APPLICATIONS:

Construction of infrastructure Chemical leaching and handling Mechanical maintenance Electrical maintenance Laboratory analysis Geology sample handling Emergency rescue Healthcare and clinic work

SIZE	LENGTH
5-6/XS	240mm
6-7/S	240mm
7-8/M	240mm
8-9/L	240mm
9-10/XL	240mm
10-11/XXL	240mm

EN 374-5:2016

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chemical hazards while avoiding type Engineered with EBT, which achieved 82.0% biodegradation in 386 days





OUR ECO BEST TECHNOLOGY OFFERS A GLOVE THAT PERFORMS THE SAME AS REGULAR **NITRILE, BUT IS BETTER** FOR THE PLANET







Reducing costs by

Adopting new technologies



reducing stock and

capital bonding in PPE



Consolidating

products

WEEK TRIAL PROGRAM

The SHOWA 4WTP consists of a strategic plan whereby glove trials can be managed effectively through 4 timed processes.

These processes evaluate the performance of SHOWA a glove vs. an existing glove and indicate user preferences and advantages in terms of comfort, dexterity, fit and longevity.

After 4 weeks a cost-efficient custom-made plan for your hand protection needs will be presented.



WEEK 1 INITIAL 1EETING

- Visit customer to discuss glove requirements and attributes, assess risks and evaluate protection required.
- Present suggestions together with pertinent information on the product and the features and benefits.
- Once product suggestions are agreed upon, the trial can take place.



WEEK 2 PROVIDING SAMPLES FOR TRIAL

- Personally hand out samples to the individuals selected for trial.
- Test the user for fit and educate on glove qualities
- Advise user on the timescale of the trial (generally 1 week).
- Each person is encouraged to keep the trialled glove samples for inspection in week 3.



WEEK 3 SAMPLES TRIAL EVALUATION

- SHOWA staff interviews each user who trialled the gloves.
- Glove inspection.
- Complete questionnaire about the current glove vs the new SHOWA glove, to compare wear and features.
- User signs trial form.



WEEK 4 HAND PROTECTION PROGRAM

- Recorded feedback on glove trial are presented and evaluated with the customer contact point.
- Following success on glove trial, SHOWA provides an offer to the customers with the recommended products, technical information and datasheet.

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