

FeRFA GUIDE TO PERSONAL PROTECTIVE EQUIPMENT FOR USE WITH IN-SITU RESIN FLOORS & SURFACE PREPARATION



1. INTRODUCTION

All employers have basic duties concerning the provision and use of personal protective equipment (PPE) at work. This guide explains the type of PPE required to undertake the various operations involved with surface preparation and the installation of synthetic resin flooring systems. However, a full risk assessment should always be undertaken to determine the specific type of PPE required. The guide is based on the Personal Protective Equipment at Work Regulations 1992 (as amended) and Control of Noise at Work Regulations 2005.

2. WHAT IS PPE?

PPE is defined in the Regulations as ‘all equipment (including clothing affording protection against the weather) which is intended to be worn or held by a person at work and which protects against risks to health or safety’, e.g. safety helmets, gloves, eye protection, ear protection, high-visibility clothing, safety footwear and safety harnesses. In terms of surface preparation and resin flooring, the following items of PPE should be provided as a minimum and used by the operative where applicable:

- Safety goggles
- Safety glasses
- Gloves
- Protective clothing/Hi Visibility
- Arm shields
- Barrier creams
- Safety Shoes
- Dust masks & filters
- Hard hats

To allow the correct type of PPE to be chosen, carefully consider the different hazards in the workplace and the activity to be undertaken. The method statement and risk assessment will clearly state where and how PPE should be worn. For more specific information regarding different types of resin systems, the manufacturer’s advice should be sought as to the PPE requirements when handling these materials. The type of gloves, in particular, will vary in accordance with the resin material being installed. When selecting gloves, always ensure the glove material meets with the specific requirements of the risk assessment of the activity undertaken. To protect the wearer, gloves must be of the correct size, used properly, removed in a safe manner to avoid contaminant getting inside the glove or in contact with the skin, and disposed of in a designated waste facility.

Ensure that the PPE is “CE” marked and complies with the requirements of the Personal Protective Equipment Regulations 2002. The CE marking signifies that the PPE satisfies certain basic safety requirements and in some cases will have been tested and certified by an independent body.

Remember, the prime requirement of PPE is to protect the wearer, and to do this all items should be of the correct size for the wearer and should be worn correctly. This is particularly important with regard to respiratory protective equipment (RPE) when a face fit test should be carried out by an accredited tester.

3. MAINTENANCE OF PPE

It is essential that all equipment is well looked after, properly stored when not being used, for example eye protection should be stored in a box or case. All PPE items should be kept clean, in good repair and inspected regularly. Any damaged PPE should not be used, and should be replaced immediately. The life expectancy of PPE materials varies depending upon the item and use. For example, gloves and protective clothing such as arm shields should not be used for more than a day unless the manufacturer can guarantee extended use.

4. SKIN PROTECTION

Skin care products help to maintain the skin in good condition and retain its protective function. The main types of skin care products are pre-work creams, also known as barrier creams, skin cleansers and after-work creams. Pre-work/barrier creams are formulated to provide a semi-resistant barrier between chemicals and the skin. They DO NOT function as protective gloves, but will facilitate the cleaning process by allowing the use of less powerful cleansers. After-work creams restore the moisture content of the skin and provide a valuable contribution to reducing the risk of irritant dermatitis. These creams should be used at the end of each work shift or after washing the hands.

5. TYPES OF RESIN FLOORING

The FeRFA Classification details the types of resin flooring systems as follows:

TYPE	NAME	DESCRIPTION	DUTY	TYPICAL THICKNESS
1	Floor seal	Applied in two or more coats. Generally solvent or water borne	LD	Up to 150 µm
2	Floor coating	Applied in two or more coats. Generally solvent free.	LD/MD	150 µm to 300 µm
3	High build Floor coating	Applied in two or more coats. Generally solvent free.	MD	300 µm to 1000 µm
4	Multi-layer Flooring	Aggregate dressed systems based on multiple layers of floor coatings or flow-applied floorings, often described as 'sandwich' systems.	MD/HD	> 2 mm
5	Flow applied Flooring	Often referred to as 'self-smoothing' or 'self-levelling' flooring and having a smooth surface.	MD/HD	2 mm to 3 mm
6	Resin screed flooring	Trowel-finished, heavily filled systems, generally incorporating a surface seal coat to minimize porosity.	MD/HD	> 4 mm
7	Heavy Duty Flowable flooring	Having a smooth surface.	HD/VHD	4 mm to 6 mm
8	Heavy Duty resin flooring	Trowel-finished, aggregate filled systems effectively impervious throughout their thickness.	VHD	> 6 mm

Light duty	(LD)	light foot traffic, occasional rubber tyred vehicles
Medium duty	(MD)	regular foot traffic, frequent fork lift truck traffic, occasional hard plastic-wheeled trolleys
Heavy duty	(HD)	constant fork lift truck traffic, hard plastic wheeled trolleys, some impact
Very heavy duty	(VHD)	severe heavily loaded traffic and impact

6. GENERAL TIPS & ADVICE

DO

- Check the health/hazard risk of the activity involved and always wear the PPE specified for each operation
- Always follow advice in the Method Statement and Risk Assessment
- Replace worn out PPE immediately
- Make sure replacement PPE is readily available
- Ensure PPE items fit correctly
- Regularly inspect PPE and store correctly
- Stop work activity if PPE is not adequate
- Use tools and methods which will prevent skin contact with hazardous substances
- Seek medical advice if there are concerns about the condition of the skin

DO NOT

- Do not commence work activity without the correct PPE being worn
- Do not borrow PPE from colleagues
- Do not wear damaged PPE
- Do not use barrier creams as a replacement for protective gloves
- Do not allow skin to come into contact with contaminated tools, clothing and surfaces.

7. SELECTING SUITABLE PPE

The following tables give guidance on the items of PPE to be worn whilst undertaking various activities, with particular reference to the specific type of synthetic resin flooring material being applied.

RESIN FLOORING	ACTIVITY	PPE ITEMS	BS REF	COMMENT
EPOXY SYSTEMS				
FeRFA Types 1-8	Mixing	Hard Hat Safety goggles/face shield Dust mask FFP3 Gloves Protective/Hi Vis Clothing Arm shields Safety Shoes Barrier cream	BS EN 397 BS EN 166 BS EN 149:2001+ A1:2009 BS EN 374 BS EN 471:2003+ A1:2007 BS EN ISO 20345	Observe site hard hat policy at all times Chemical resistant
FeRFA Types 1-8	Laying	Hard Hat Safety glasses Gloves Protective/Hi Vis Clothing Safety Shoes Barrier Cream	BS EN 397 BS EN 166 BS EN 374 BS EN 471:2003+ A1:2007 BS EN ISO 20345	Observe site hard hat policy at all times Chemical resistant
FeRFA Type 8 Epoxy Terrazzo	Grinding Polishing	Hard Hat Safety glasses Hearing protection Gloves Protective/Hi Vis Clothing Face mask FFP3 Particle Filters Safety Shoes	BS EN 397 BS EN166 BS EN 352 BS EN 374 BS EN 471:2003+ A1:2007 BS EN 149:2001+ A1:2009 BS EN ISO 20345	Observe site hard hat policy at all times Chemical resistant
POLYURETHANE SYSTEMS				
FeRFA Types 1-8	Mixing	Hard Hat Safety goggles/face shield Dust mask FFP3 Gloves Protective/Hi Vis Clothing Arm shields Safety Shoes Barrier cream	BS EN 397 BS EN 166 BS EN 149:2001+ A1:2009 BS EN 374 BS EN 471:2003+ A1:2007 BS EN ISO 20345	Observe site hard hat policy at all times Chemical resistant
FeRFA Types 1-8	Laying	Hard Hat Safety glasses Gloves Protective/Hi Vis Clothing Safety Shoes Barrier Cream	BS EN 397 BS EN 166 BS EN 374 BS EN 471:2003+ A1:2007 BS EN ISO 20345	Observe site hard hat policy at all times Chemical resistant
FeRFA Type 8 Terrazzo systems	Grinding & Polishing	Hard Hat Safety glasses Hearing protection Gloves Protective/Hi Vis Clothing Face mask FFP3 Particle Filters Safety Shoes	BS EN 397 BS EN166 BS EN 352 BS EN 374 BS EN 471:2003+ A1:2007 BS EN 149:2001+ A1:2009 BS EN ISO 20345	Observe site hard hat policy at all times Chemical resistant

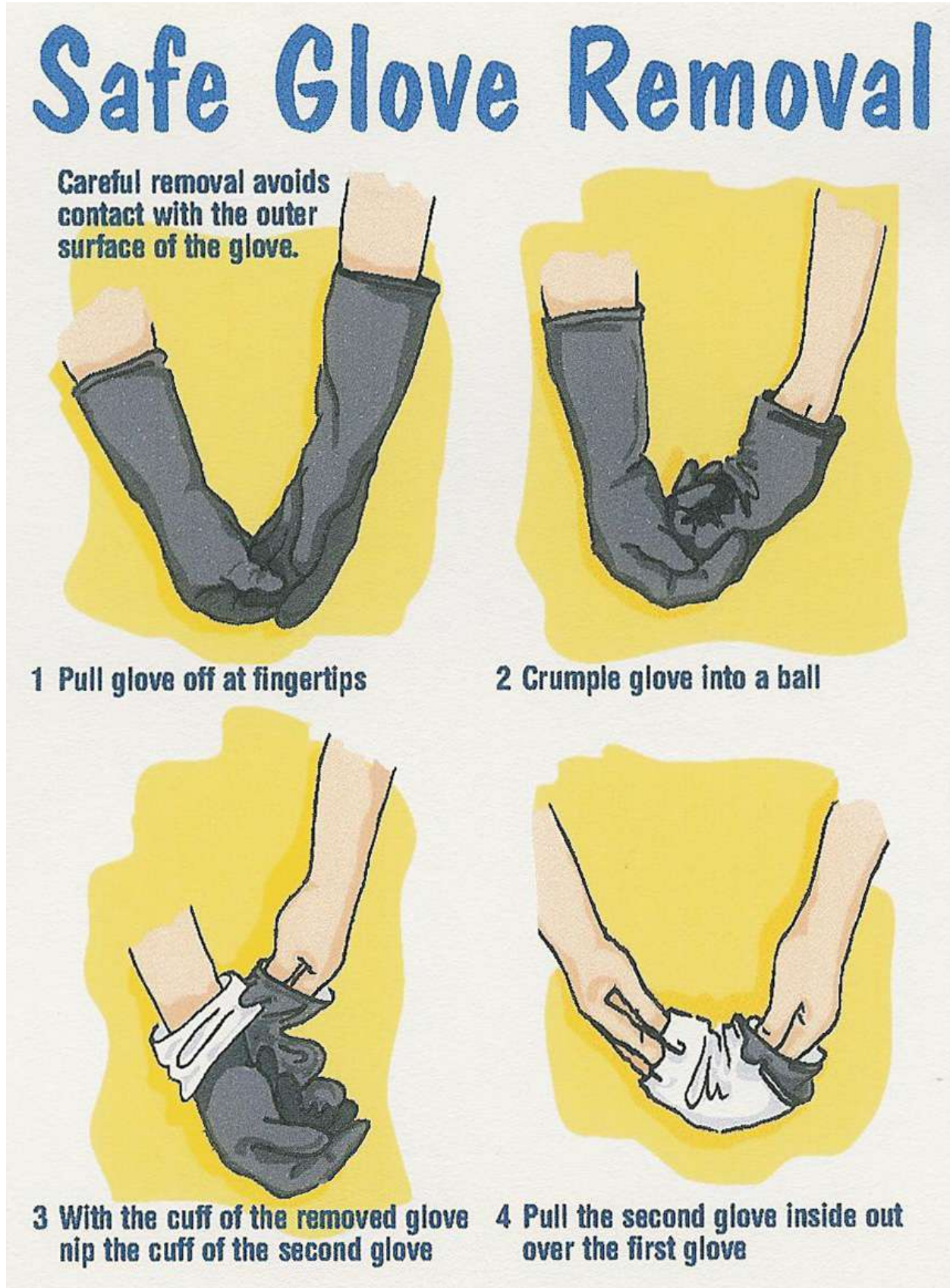
RESIN FLOORING	ACTIVITY	PPE ITEMS	BS REF	COMMENT
MMA SYSTEMS				
FeRFA Types 1-7	Mixing	Hard Hat Safety goggles/face shield Dust mask FFP3 Gloves Protective/Hi Vis Clothing Arm shields Safety Shoes Barrier Cream Ventilation Equipment	BS EN 397 BS EN 166 BS EN 149:2001+ A1:2009 BS EN 374 BS EN 471:2003+ A1:2007 BS EN ISO 20345 BS EN141/405	Observe site hard hat policy at all times Chemical resistant Training required for user
	Laying	Hard Hat Safety glasses Gloves Protective/Hi Vis Clothing Safety Shoes Barrier Cream	BS EN 397 BS EN 166 BS EN 374 BS EN 471:2003+ A1:2007 BS EN ISO 20345	Observe site hard hat policy at all times Chemical resistant

FLOOR PREPARATION













ACTIVITY	PPE ITEMS	BS REF	COMMENT
Shotblasting	Safety glasses Hearing protection Safety shoes Gloves Hi Visibility clothing	BS EN 166 BS EN 352 BS EN ISO 20345 BS EN 374 BS EN 471:2003+ A1:2007	Impact grade 2 Must match attenuation of sound source Includes steel mid-sole Industrial grade gloves
	Hard hat Face mask FFP3 Particle filters	BS EN 397 BS EN 149:2001+ A1:2009	Heavy duty Half/quarter mask
Grinding	Safety Glasses/Dust goggles Hearing protection Safety shoes Gloves Hi Visibility clothing	BS EN166 BS EN 352 BS EN ISO 20345 BS EN 374 BS EN 471:2003+ A1:2007	Must match attenuation of sound source Includes steel mid-sole Industrial grade gloves
	Hard hat Face mask FFP3 Particle filters	BS EN 397 BS EN 149:2001+ A1:2009	Heavy duty Half/quarter mask
Planing	Safety Glasses/Dust goggles Hearing protection Safety shoes Gloves Hi Visibility clothing	BS EN166 BS EN 352 BS EN ISO 20345 BS EN 374 BS EN 471:2003+ A1:2007	Must match attenuation of sound source Includes steel mid-sole Industrial gloves
	Hard hat Face mask FFP3 Particle filters	BS EN 397 BS EN 149:2001+ A1:2009	Heavy duty Half/quarter mask
Multi-Stripping	Safety Glasses/Dust goggles Hearing protection Safety shoes Gloves Hi Visibility clothing	BS EN166 BS EN 352 BS EN ISO 20345 BS EN 374 BS EN 471:2003+ A1:2007	Must match attenuation of sound source Includes steel mid-sole Industrial gloves
	Hard hat Face mask FFP3 Particle filters	BS EN 397 BS EN 149:2001+ A1:2009	Heavy duty Half/quarter mask

8. SAFE GLOVE REMOVAL

To avoid contaminants coming into contact with the skin, it is essential that gloves are removed and disposed of correctly:



QUICK REFERENCE SHEET

PRODUCT	ACTIVITY	PPE REQUIRED								DO NOT			
													
FeRFA types													
Type 1&2 Seals & Coatings	Mixing		✓	✓	✓	✓	✓	✓		✓	✓	✓	
	Laying			✓	✓		✓	✓		✓	✓		
Type 3 High Build	Mixing		✓	✓	✓	✓	✓	✓		✓	✓	✓	
	Laying			✓	✓		✓	✓		✓	✓		
Type 4 Multi Layer	Mixing		✓	✓	✓	✓	✓	✓		✓	✓	✓	
	Laying			✓	✓		✓	✓		✓	✓		
Type 5 Flow Applied	Mixing		✓	✓	✓	✓	✓	✓		✓	✓	✓	
	Laying	✓		✓	✓		✓	✓		✓	✓		
Type 6 Resin Screed	Mixing		✓	✓	✓	✓	✓	✓		✓	✓	✓	
	Laying	✓		✓	✓		✓	✓	✓	✓	✓		
Type 7 Heavy Duty	Mixing		✓	✓	✓	✓	✓	✓		✓	✓	✓	
	Laying	✓		✓	✓		✓	✓	✓	✓	✓		
Type 8 Heavy Duty	Mixing		✓	✓	✓	✓	✓	✓		✓	✓	✓	
	Laying	✓		✓	✓		✓	✓	✓	✓	✓		
Surface preparation	Shotblasting Grinding Planing Multistripping		✓	✓	✓	✓	✓	✓		✓	✓		

KEY

	SAFETY GLASSES		SAFETY GOGGLES		OVERALLS		NO EATING/DRINKING
	CHEMICAL RESISTANT GLOVES		DUST MASK		OBSERVE HARD HAT POLICY		NO SMOKING
	SAFETY SHOES		KNEE PADS		ARM SHIELDS		NO NAKED FLAMES

This sheet is a quick general guide and is not exhaustive. It does not cover all products and does not replace advice given by your product producer. Always undertake a full risk assessment to ascertain specific PPE requirements. If in doubt you should consult your manufacturer/supplier for more information.



The Resin Flooring Association

9. STANDARDS AND PUBLICATIONS

- The Health and Safety at Work Act 1974
- HMSO 1974 ISBN 0 10 543774 3
- Personal protective equipment at work. The Personal Protective Equipment at Work Regulations 1992 Guidance on Regulations L25 1992 HSE Books ISBN 0 7176 0415

10. FeRFA PUBLICATIONS

All FeRFA publications (listed below) are freely downloadable from FeRFA's web site at www.ferfa.org.uk

- Guide to the Specification and Application of Synthetic Resin Flooring (RIBA CPD Approved)
- Guide to the Selection of Synthetic Resin Flooring
- Assessing the Slip Resistance of Resin Floors (TGN 01)
- Osmosis in Resin Flooring (TGN 02)
- Chemical Resistance of Resin flooring (TGN 03)
- Static Controlled Flooring (TGN 04)
- Guide to Installing Resin Flooring Systems onto Substrates with a high moisture content (TGN 05)
- Guide to Cleaning Resin Floors (TGN 06)
- Guide to Seamless Resin Terrazzo (TGN 07)
- Guide to flowable polymer screeds as underlayments for resin floor finishes (TGN08)
- Guide to the selection of deck waterproofing and wearing surfaces for car parks (TGN09)
- FeRFA Environmental Guide (TGN10)
- FeRFA Guide to Preparing Substrates to receive resin flooring and finishing of resin terrazzo systems (TGN11)
- Guide to Personal Protective Equipment for use with In Situ Resin Floors and Surface Preparation

References:

- 1 The Health and Safety at Work etc Act 1974 HMSO 1974 ISBN 0 10 543774 3
- 2 The Personal Protective Equipment at Work Regulations 1992
- 3 The Control of Substances Hazardous to Health Regulations 1999 (COSHH)
- 4 BS 8204-6:2008 Screeds, bases and in situ floorings – Part 6 Synthetic resin floorings – Code of practice

FeRFA

FeRFA, the Resin Flooring Association, represents the major product manufacturers, specialist contractors and surface preparation companies, raw material suppliers and specialist service providers within the UK Resin Flooring Industry. Established in 1969, FeRFA now represents over 90 UK based companies. The Association has established Codes of Practice for full members. It takes an active role in promoting resin flooring and in developing both national and international standards.

*All FeRFA publications are freely downloadable from the website at www.ferfa.org.uk for further information, contact FeRFA at: PO Box 3716, Stone, Staffordshire, ST15 9EU
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