Colour code system

The Ansell Chemical Guardian tool is designed to offer the user our permeation breakthrough times against our chemical protective materials. This is to allow the customer to make the most informed decision when selecting PPE.

Ansell Chemical Guardian uses a colour code system to help distinguish between different levels of protection offered by our materials. The colour code system is loosely based around breakthrough times but it is designed to also be read as levels of protection offered against certain chemicals.
The terms used are to keep our wording in line with the terminology used in chemical guardian, the full scale is “no barrier” (red), “limited/splash Barrier” (orange), “medium barrier” (yellow) and “good barrier” (green). This is similar wording to what you will see in a Chemical Guardian hand protection report and we intend it to be interpreted similarly.

Suit Type				Non-Gastight	Non-Gastight	Non-Gastight
Brand				MICROCHEM	MICROCHEM	MICROCHEM
Type	CAS	Chemical name	%	3000	4000	5000
sgl	1310-73-2	Sodium Hydroxide	50	>480'	>480'	>480'
sgl	1336-21-6	Ammonium hydroxide	35		356'	>480'
sgl	75-09-2	Dichloromethane	100	0'	9'	59'
sgl	7697-37-2	Nitric acid, fuming	100		>480'	>480'
sgl	84649-84-3	C12-14-alkyldimethylamines	100			

- “No barrier” is where we would expect to detect breakthrough immediately (usually we use $BT_{1.0}$ as the end criteria but this will depend on which standard has been selected when making the enquiry). We would not expect this to be a suitable barrier for permeation protection under normal conditions.
- “Limited” is when we would not expect immediate breakthrough but this may only be short term protection (e.g. splash). So where only small amounts of contact is expected or a short exposure time a “limited” barrier may be suitable. Depending on the hazards associated with the chemicals being used we would usually suggest with this sort of barrier to replace it straight away if contamination occurs.
- “Medium” barrier is the step up from limited, we would use this term if we wouldn’t expect breakthrough to occur quickly but we would expect it to occur within an 8 hour permeation test. This may be suitable where longer contact times are expected or if contamination does occur the user may not be able to leave immediately. However this may not be suitable for prolonged heavy contact.
- “Good barrier” is one where we would not expect to detect breakthrough for at least several hours when in constant contact with the challenge chemical. This may be suitable if prolonged heavy contact is expected or the user may not be able to leave the area after contamination has occurred. This sort of barrier may also be suitable for particularly hazardous chemicals.

The final Chemical Guardian report is designed to aid in the selection of chemical PPE, however it should be used along with an health and safety assessment. The final selection of PPE should not be based only on the chemical guardian assessment as the hazards associated with the chemicals and handling and working conditions will also play a key role in the suitability of a material. For example a splash barrier may not be suitable for hazardous chemicals or a lower level suit may not have the physical properties suitable for particularly manual work.
No matter which of our materials are selected for use, upon contamination we would always suggest leaving the area as soon as possible to replace (limited use) or decontaminate (reusable) the garment.

Estimations of the barrier properties of fabrics are based on extrapolations from laboratory test results and information regarding the composition of the chemicals. Synergistic effects of mixing chemicals have not been accounted for. Estimations are subject to change if new testing is carried out providing better grounds for extrapolations. For these reasons, any information in this report

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must be advisory only and Ansell fully disclaims any liability including warranties related to any statement contained herein.