



BECAUSE YOU TAKE **SAFETY** PERSONALLYSM

NITRILE CHEMICAL-RESISTANT GLOVES

Chemical Degradation & Permeation



CHEMICAL	CHEMICAL ABSTRACTS SERVICE (CAS) NUMBER	CONCENTRATION	D0488: 2YEJ3, 2YEJ4, 2YEJ5, 2YEJ6, 2YEJ7 15 MIL, UNLINED, SMOOTH FINISH			D0487: 2YEH7, 2YEH8, 2YEH9, 2YEJ1, 2YEJ2 11 MIL, UNLINED, SMOOTH FINISH		
			DEGRADATION RATING	BREAKTHROUGH TIME	PERMEATION RATE	DEGRADATION RATING	BREAKTHROUGH TIME	PERMEATION RATE
ACETIC ACID	64-19-7	99%	F	65	0.35	F	36	0.37
ACETONE	67-64-1	99%	G	6	0.38	G	4	0.54
AMMONIA GAS	7664-41-7	100%	E	>480	ND	E	>480	ND
DIESEL FUEL	68476-34-6	99%	E	>480	ND	E	>480	ND
ETHYL ALCOHOL	64-17-5	96%	E	410	0.09	E	109	0.15
ETHYLENE GLYCOL	107-21-1	99%	E	>480	ND	E	>480	ND
FORMALDEHYDE	50-00-0	37%	E	>480	ND	E	>480	ND
FUEL OIL (PETROLEUM)	68815-10-1	10W-30	E	>480	ND	E	>480	ND
GASOLINE	8006-61-9	87-89%	E	110	0.1	E	47	0.19
HYDROCHLORIC/MURIATIC ACID	7647-01-0	38%	E	>480	ND	E	>480	0.04
HYDROFLUORIC ACID	7664-39-3	48%	E	137	0.78	E	57	0.77
HYDROGEN PEROXIDE	7722-84-1	30%	E	>480	ND	E	>480	ND
ISOBUTYL ACETATE	110-19-0	99%	P			P		
ISOPROPYL ALCOHOL	67-63-0	99%	E	>480	ND	E	>480	ND
JET FUEL A-1 (KEROSENE)	8008-20-6	99%	E	>480	ND	E	>480	ND
METHYL ACETATE	79-09-4	99%	F	12	0.57	F	9	0.39
METHYL CHLORIDE	74-87-3	99%	E	>480	ND	E	>480	ND
METHYL ETHYL KETONE	78-93-3	99%	P			NR		
METHYLENE CHLORIDE	75-09-2	99%	P			P		
METHYLENE DIPHENYL DIISOCYANATE (MDI)	101-68-8	99%	E	>480	ND	E	>480	ND
NAPHTHA: V, M & P	8030-30-6	99%	E	>480	ND	E	>480	ND
NITRIC ACID (10%)	7697-37-2	10%	E	>480	ND	E	>480	ND
NITRIC ACID (70%)	7697-37-2	70%	F	49	1.96	F	39	1.95
PHOSPHORIC ACID (75%)	7664-38-2	75%	E	>480	ND	E	>480	ND
PHOSPHORIC ACID (85%)	7664-38-2	85%	E	>480	ND	E	>480	ND
SODIUM HYDROXIDE	1310-73-2	50%	E	>480	ND	E	>480	ND
SULFURIC/BATTERY ACID (47%)	7664-93-9	47%	E	>480	NA	E	>425	NA
SULFURIC ACID (93%)	7664-93-9	93%	F	100	0.7	F	109	0.7
TOLUENE	108-88-3	99%	F	21	0.53	F	10	0.63
TRICHLOROETHYLENE	79-01-6	99%	P			P		
XYLENE	1330-20-7	99%	F	33	0.52	F	24	0.51



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CHEMICAL	CHEMICAL ABSTRACTS SERVICE (CAS) NUMBER	CONCENTRATION	D0489: 6JF96, 6JF97, 6JF98, 6JF99, 6JG01 15 MIL, FLOCK LINING, SMOOTH FINISH		
			DEGRADATION RATING	BREAKTHROUGH TIME	PERMEATION RATE
ACETIC ACID	64-19-7	99%	F	109	0.25
ACETONE	67-64-1	99%	F	8	0.33
AMMONIA GAS	7664-41-7	100%	F	14	0.45
DIESEL FUEL	68476-34-6	99%	E	>480	ND
ETHYL ALCOHOL	64-17-5	96%	E	>480	NA
ETHYLENE GLYCOL	107-21-1	99%	E	>480	ND
FORMALDEHYDE	50-00-0	37%	E	>480	ND
FUEL OIL (PETROLEUM)	68815-10-1	10W-30	E	>480	ND
GASOLINE	8006-61-9	87-89%	E	>480	NA
HYDROCHLORIC/MURIATIC ACID	7647-01-0	38%	E	>480	ND
HYDROFLUORIC ACID	7664-39-3	48%	G	131	0.79
HYDROGEN PEROXIDE	7722-84-1	30%	E	>480	ND
ISOBUTYL ACETATE	110-19-0	99%	P		
ISOPROPYL ALCOHOL	67-63-0	99%	E	>480	ND
JET FUEL A-1 (KEROSENE)	8008-20-6	99%	E	>480	ND
METHYL ACETATE	79-09-4	99%	F	14	0.45
METHYL CHLORIDE	74-87-3	99%	E	>480	ND
METHYL ETHYL KETONE	78-93-3	99%	P		
METHYLENE CHLORIDE	75-09-2	99%	NR		
METHYLENE DIPHENYL DIISOCYANATE (MDI)	101-68-8	99%	E	>480	ND
NAPHTHA: V, M & P	8030-30-6	99%	E	>480	ND
NITRIC ACID (10%)	7697-37-2	10%	E	>480	ND
NITRIC ACID (70%)	7697-37-2	70%	F	53	2.04
PHOSPHORIC ACID (75%)	7664-38-2	75%	E	>480	ND
PHOSPHORIC ACID (85%)	7664-38-2	85%	E	>480	ND
SODIUM HYDROXIDE	1310-73-2	50%	E	>480	ND
SULFURIC/BATTERY ACID (47%)	7664-93-9	47%	E	>480	ND
SULFURIC ACID (93%)	7664-93-9	93%	F	159	0.7
TOLUENE	108-88-3	99%	F	34	0.44
TRICHLOROETHYLENE	79-01-6	99%	P		
XYLENE	1330-20-7	99%	F	69	0.4

DEGRADATION: A change in one or more of the physical properties of a glove due to contact with a chemical.

BREAKTHROUGH TIME: The elapsed time between initial contact of the chemical on the glove surface and the analytical detection on the inside of the glove.

PERMEATION RATE: Indicates the mass of the chemical in micrograms that can be transferred through one square centimeter of the fabric in one minute.

CAS NUMBER: The Chemical Abstracts Service identification numbers provide unique identifiers for easy cross-reference to Safety Data Sheets (SDS). Some chemicals are known by several widely used names. Some well-known synonyms appear in this guide and have the same CAS Number.

The results herein are obtained under controlled laboratory conditions and are for guidance only. It is the intention to assist the user to make the correct choice of personal protective equipment. Actual conditions of end use are not simulated and it is the responsibility of the user to determine the risk and make the appropriate choice for protection against such risk. The manufacturer, the distributor and the sales agents accept no responsibility for a user's selection against particular risk. The manufacturer, the distributor and the sales agents do not imply any guarantee or responsibility from information provided that a particular product will suit specific end use.

DEGRADATION			
	WEIGHT CHANGE	PUNCTURE RESISTANCE	CONDITION AFTER DRYING
E (EXCELLENT)	0-10%	> 3.4 lbf	SOFT
G (GOOD)	11-20%	2.2-3.4 lbf	SOFT
F (FAIR)	21-30%	1.1-2.2 lbf	SLIGHTLY HARD
P (POOR)	31-50%	< 1.1 lbf	HARD
NR (NOT RECOMMENDED)	> 50%	-	BREAK

NOTE: Chemical degradation rating for gloves reported in this table is based on a protocol considered by ASTM F23 committee.

Any glove with a degradation rating of "P" or "NR" is considered unsuitable for Chemical Permeation Test. Permeation breakthrough time is the average of three measurements, reported in minutes.

ND = Chemical permeation not detected during the 480-minute test.

NA = Steady State Permeation Rate not attained during the 480-minute test.