



Model IC 458 B WH 00

Tyvek® IsoClean®

DuPont™ Tyvek® IsoClean® slip-retardant boot cover model IC458B00. Tunnelled elastication at shin. Ties. Elasticated ankle. Gripper™ sole. Bound internal seams. Not clean-processed and not sterilized. White.

| Name | Description |
|------------------|---|
| Full Part Number | IC0458BWH00 |
| Fabric/Materials | Tyvek® 500 |
| Design | Slip-retardant boot cover |
| Seam | Bound |
| Color | White |
| Sizes | MD, LG |
| Quantity/Box | 100 per box, bulk packed. 2 polyethylene liners. Cardboard box. |

FEATURES & PRODUCT DETAILS

DuPont™ Tyvek® IsoClean® slip-retardant boot cover, model IC 458B00. Available and in sizes MD and LG. Not clean-processed and not sterilized. Bound internal seams. Tunnelled elastication at shine and ankles. Ankle ties. Gripper™ soles provide enhanced slip-retardance and robustness.

Tyvek® IsoClean® delivers an ideal balance of protection, durability and comfort. Made of high density polyethylene using a patented flash spinning process. Tyvek® IsoClean® provides an inherent barrier to particles, microorganisms and non-hazardous water-based light liquid splash. Tyvek® IsoClean® is also breathable and exceptionally low linting.

Tyvek® IsoClean® (option codes 0B, 00 and BH) garments and accessories are neither clean-processed nor gamma-irradiated but manufactured in a controlled environment.

Garments and accessories made of Tyvek® IsoClean® are typically used in cleanrooms within the biotech, pharmaceutical, medical device manufacturing, food processing, cosmetics industry, electronic industries as well as in other critical or controlled environments.

- Certified according to Regulation (EU) 2016/425
- Partial body chemical protective clothing, Category III, Type PB [6-B]
- EN 14126 (barrier to infective agents)
- Suitable for use in GMP class C/D (ISO Class 6-9) clean rooms

Physical Properties



Data relating to mechanical performance of the fabrics used in DuPont chemical protective clothing, listed for the selected garment according to the test methods and relevant European standard, if applicable. Such properties, including abrasion and flex-cracking resistance, tensile strength and puncture resistance can help in the assessment of protective performance.

| Property | Test Method | Typical Result | EN |
|---------------------------------------|----------------------|----------------|------------------|
| Abrasion Resistance ⁷ | EN 530 Method 2 | >100 cycles | 2/6 ¹ |
| Colour | N/A | White | N/A |
| Flex Cracking Resistance ⁷ | EN ISO 7854 Method B | >100000 cycles | 6/6 ¹ |
| Puncture Resistance | EN 863 | >10 N | 2/6 ¹ |
| Tensile Strength (MD) | DIN EN ISO 13934-1 | >30 N | 1/6 ¹ |
| Tensile Strength (XD) | DIN EN ISO 13934-1 | >30 N | 1/6 ¹ |
| Trapezoidal Tear Resistance (MD) | EN ISO 9073-4 | >10 N | 1/6 ¹ |
| Trapezoidal Tear Resistance (XD) | EN ISO 9073-4 | >10 N | 1/6 ¹ |

1 According to EN 14325 2 According to EN 14126 3 According to EN 1073-2 4 According to EN 14116 12
 According to EN 11612 5 Front Tyvek® / Back 6 Based on test according to ASTM D-572 7 See Instructions for
 Use for further information, limitations and warnings > Larger than < Smaller than N/A Not Applicable STD DEV
 Standard Deviation

GARMENT PERFORMANCE



Information relating to the protective performance of a garment according to European standards where applicable. Includes important characteristics such as protection against radioactive contamination, seam strength and shelf life. Inward leakage and resistance to penetration by liquids, according to the relevant Type classification, are also detailed.

| Property | Test Method | Typical Result | EN |
|------------------------------------|----------------|----------------|------------------|
| Seam Strength | EN ISO 13935-2 | >30 N | 1/6 ¹ |
| Type PB 6: Partial Body Protection | EN 13034 | Pass | N/A |

1 According to EN 14325 3 According to EN 1073-2 12 According to EN 11612 13 According to EN 11611 5 Front Tyvek® / Back 6 Based on test according to ASTM D-572 7 See Instructions for Use for further information, limitations and warnings 11 Based on the average of 10 suits, 3 activities, 3 probes > Larger than < Smaller than N/A Not Applicable * Based on lowest single value

PENETRATION AND REPELLENCY



A specific test method, EN ISO 6530, is used to measure the indexes of penetration, absorption and repellency of protective clothing material exposed to liquid chemicals. Results listed here reflect the penetration resistance and repellency of DuPont fabrics to 30% sulphuric acid and 10% sodium hydroxide.

| Property | Test Method | Typical Result | EN |
|--|-------------|----------------|------------------|
| Repellency to Liquids, Sodium Hydroxide (10%) | EN ISO 6530 | >95 % | 3/3 ¹ |
| Repellency to Liquids, Sulphuric Acid (30%) | EN ISO 6530 | >95 % | 3/3 ¹ |
| Resistance to Penetration by Liquids, Sodium Hydroxide (10%) | EN ISO 6530 | <1 % | 3/3 ¹ |
| Resistance to Penetration by Liquids, Sulphuric Acid (30%) | EN ISO 6530 | <1 % | 3/3 ¹ |

¹ According to EN 14325 > Larger than < Smaller than

BIOLOGICAL BARRIER



Detailed information on the protective performance (resistance to penetration) of DuPont clothing when exposed to biologically contaminated aerosols, liquids and dusts as well as blood, body fluids and blood-borne pathogens. Sorted by relevant European standard.

| Property | Test Method | Typical Result | EN |
|---|--------------------------|-------------------|-----------------------------------|
| Resistance to Penetration by Biologically Contaminated Aerosols | ISO/DIS 22611 | Pass | 1/3 ² |
| Resistance to Penetration by Blood and Body Fluids using Synthetic Blood | ISO 16603 | 3,5 kPa | 3/6 ² |
| Resistance to Penetration by Blood-borne Pathogens using Bacteriophage Phi-X174 | ISO 16604 Procedure C | No classification | No classification ₂ |
| Resistance to Penetration by Contaminated Liquids | EN ISO 22610 | ≤ 15 min | 1/6 ² |
| Resistance to Penetration by Contaminated Solid Particles | ISO 22612 | Pass | 1/3 ² |

² According to EN 14126 > Larger than < Smaller than

Warning

- The information provided herein corresponds to our knowledge on the subject at the date of its publication. This information may be subject to revision as new knowledge and experience becomes available. The data provided fall within the normal range of product properties and relate only to the specific material designated; these data may not be valid for such material used in combination with any other materials or additives or in any process, unless expressly indicated otherwise. The data provided should not be used to establish specification limits or used alone as the basis of design; they are not intended to substitute for any testing you may need to conduct to determine for yourself the suitability of a specific material for your particular purposes. Since DuPont cannot anticipate all variations in actual end-use conditions DuPont makes no warranties and assumes no liability in connection with any use of this information. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent rights.
- The intended use for Tyvek® IsoClean Accessories, that are not CE certified or certified as PPE Category I, does not include applications that may cause very serious consequences such as irreversible damage to health or death. The user should make the risk assessment to determine the protection required.

PERMEATION DATA



Permeation is the process by which a solid, liquid or gaseous chemical moves through a protective clothing fabric at a molecular level. Permeation data assist in the selection of the most appropriate protective garment for a particular application and in the estimation of how long it can be safely worn. Standardised test methods are used to determine the resistance of DuPont materials to permeation, the results of which can be selected according to a specific chemical, chemical class or fabric.

| Hazard / Chemical Name | Physical State | CAS | BT Act | BT 0.1 | BT 1.0 | EN | SSPR | MDPR | Cum 480 | Time 150 | ISO |
|---|----------------|------------|--------|--------|--------|----|---------|--------|---------|----------|-----|
| Acetic acid (30%) | Liquid | 64-19-7 | imm | imm | imm | | 13.5 | 0.001 | | | |
| Ammonium hydroxide (16%) | Liquid | 1336-21-6 | imm | imm | imm | | 20.3 | 0.005 | | | |
| Ammonium hydroxide (28% - 30%) | Liquid | 1336-21-6 | imm | imm | imm | | 16.7 | 0.014 | | | |
| Carboplatin (10 mg/ml) | Liquid | 41575-94-4 | >240 | >240 | >240 | 5 | <0.001 | 0.001 | | | |
| Carmustine (3.3 mg/ml, 10 % Ethanol) | Liquid | 154-93-8 | imm | imm | >240 | 5 | <0.3 | 0.001 | | | |
| Caustic ammonia (16%) | Liquid | 1336-21-6 | imm | imm | imm | | 20.3 | 0.005 | | | |
| Caustic ammonia (28% - 30%) | Liquid | 1336-21-6 | imm | imm | imm | | 16.7 | 0.014 | | | |
| Caustic soda (10%) | Liquid | 1310-73-2 | >240 | >480 | >480 | 6 | <0.005 | 0.005 | | | |
| Caustic soda (40%) | Liquid | 1310-73-2 | imm | >30 | >240 | 5 | <0.005 | 0.005 | | | |
| Caustic soda (50%) | Liquid | 1310-73-2 | imm | >30 | >240 | 5 | 0.85 | 0.01 | | | |
| Caustic soda (>95%, solid) | Solid | 1310-73-2 | >480 | >480 | >480 | 6 | <0.01 | 0.01 | | | |
| Cisplatin (1 mg/ml) | Liquid | 15663-27-1 | >240 | >240 | >240 | 5 | <0.0002 | 0.0002 | | | |
| Cyclo phosphamide (20 mg/ml) | Liquid | 50-18-0 | >240 | >240 | >240 | 5 | <0.002 | 0.002 | | | |
| Dimethyl sulfate | Liquid | 77-78-1 | imm | imm | imm | | >160 | 0.02 | | | |
| Doxorubicin HCl (2 mg/ml) | Liquid | 25136-40-9 | >240 | >240 | >240 | 5 | <0.003 | 0.003 | | | |
| Ethane 1,2-diol | Liquid | 107-21-1 | imm | imm | imm | | 6.6 | 0.002 | | | |
| Ethylene glycol | Liquid | 107-21-1 | imm | imm | imm | | 6.6 | 0.002 | | | |
| Etoposide (Toposar®, Teva) (20 mg/ml, 33.2 % (v/v) Ethanol) | Liquid | 33419-42-0 | >240 | >240 | >240 | 5 | <0.01 | <0.01 | | | |
| Fluorouracil, 5- (50 mg/ml) | Liquid | 51-21-8 | imm | imm | >30 | 2 | na | 0.001 | | | |
| Formic acid (30%) | Liquid | 64-18-6 | imm | imm | imm | | nm | 0.001 | | | |

| | | | | | | | | | | | |
|-------------------------|--------|------------|------|------|------|---|--------|-------|--|--|--|
| Ganciclovir (3 mg/ml) | Liquid | 82410-32-0 | >240 | >240 | >240 | 5 | <0.005 | 0.005 | | | |
| Gemcitabine (38 mg/ml) | Liquid | 95058-81-4 | imm | >60 | >240 | 5 | <0.4 | 0.005 | | | |
| Glycerine | Liquid | 56-81-5 | >240 | >480 | >480 | 6 | 0.03 | 0.01 | | | |
| Glycerol | Liquid | 56-81-5 | >240 | >480 | >480 | 6 | 0.03 | 0.01 | | | |
| Glycol alcohol | Liquid | 107-21-1 | imm | imm | imm | | 6.6 | 0.002 | | | |
| Hydrochloric acid (16%) | Liquid | 7647-01-0 | imm | imm | imm | | na | 0.05 | | | |
| Hydrochloric acid (32%) | Liquid | 7647-01-0 | imm | imm | imm | | na | 0.05 | | | |
| Hydrogen peroxide (10%) | Liquid | 7722-84-1 | >10 | >10 | >480 | 6 | <0.01 | 0.01 | | | |
| Hydrogen peroxide (30%) | Liquid | 7722-84-1 | imm | imm | imm | | >0.11 | 0.04 | | | |
| Ifosfamide (50 mg/ml) | Liquid | 3778-73-2 | imm | imm | >240 | 5 | <0.5 | 0.003 | | | |

| Hazard / Chemical Name | Physical State | CAS | BT Act | BT 0.1 | BT 1.0 | EN | SSPR | MDPR | Cum 480 | Time 150 | ISO |
|--|----------------|-------------|--------|--------|--------|----|---------|---------|---------|----------|-----|
| Irinotecan (20 mg/ml) | Liquid | 100286-90-6 | imm | >240 | >240 | 5 | <0.1 | 0.0028 | | | |
| Methotrexate (25 mg/ml, 0.1 N NaOH) | Liquid | 59-05-2 | >240 | >240 | >240 | 5 | <0.001 | 0.001 | | | |
| Mitomycin (0.5 mg/ml) | Liquid | 50-07-7 | >240 | >240 | >240 | 5 | <0.0009 | 0.0009 | | | |
| Nicotine (9 mg/ml) | Liquid | 54-11-5 | >480 | >480 | >480 | 6 | <0.08 | 0.08 | | | |
| Nitric acid (10%) | Liquid | 7697-37-2 | >60 | >120 | >480 | 6 | na | 0.05 | | | |
| Nitric acid (30%) | Liquid | 7697-37-2 | imm | imm | imm | | 4.6 | 0.001 | | | |
| Oxaliplatin (5 mg/ml) | Liquid | 63121-00-6 | imm | imm | imm | | na | 0.006 | | | |
| Paclitaxel (Hospira) (6 mg/ml, 49.7 % (v/v) Ethanol) | Liquid | 33069-62-4 | >240 | >240 | >240 | 5 | <0.01 | <0.01 | | | |
| Phosphoric acid (50%) | Liquid | 7664-38-2 | >480 | >480 | >480 | 6 | <0.05 | 0.05 | | | |
| Potassium chromate (sat) | Liquid | 7789-00-6 | >480 | >480 | >480 | 6 | <0.005 | 0.005 | | | |
| Potassium hydroxide (40%) | Liquid | 1310-58-3 | imm | imm | >30 | 2 | 0.7 | 0.001 | | | |
| Propane -1,2,3-triol | Liquid | 56-81-5 | >240 | >480 | >480 | 6 | 0.03 | 0.01 | | | |
| Sodium acetate (sat) | Liquid | 127-09-3 | imm | >480 | >480 | 6 | <0.1 | 0.05 | | | |
| Sodium chloride (9 g/l) | Liquid | 7647-14-5 | >240 | >240 | >240 | 5 | <0.02 | 0.02 | | | |
| Sodium hydroxide (10%) | Liquid | 1310-73-2 | >240 | >480 | >480 | 6 | <0.005 | 0.005 | | | |
| Sodium hydroxide (40%) | Liquid | 1310-73-2 | imm | >30 | >240 | 5 | <0.005 | 0.005 | | | |
| Sodium hydroxide (50%) | Liquid | 1310-73-2 | imm | >30 | >240 | 5 | 0.85 | 0.01 | | | |
| Sodium hydroxide (>95%, solid) | Solid | 1310-73-2 | >480 | >480 | >480 | 6 | <0.01 | 0.01 | | | |
| Sodium hypochlorite (10-15 % active chlorine) | Liquid | 7681-52-9 | >240 | >240 | >480 | 6 | <0.6 | 0.05 | | | |
| Sodium hypochlorite (5.25-6%) | Liquid | 7681-52-9 | >480 | >480 | >480 | 6 | <0.025 | 0.025 | | | |
| Sulfuric acid (18%) | Liquid | 7664-93-9 | >240 | >240 | >480 | 6 | <0.05 | 0.05 | | | |
| Sulfuric acid (30%) | Liquid | 7664-93-9 | >10 | >240 | >240 | 5 | <0.05 | 0.05 | | | |
| Sulfuric acid (50%) | Liquid | 7664-93-9 | imm | >30 | >60 | 3 | 38 | 0.01 | | | |
| Sulfuric acid dimethyl ester | Liquid | 77-78-1 | imm | imm | imm | | >160 | 0.02 | | | |
| Thiotepa (10 mg/ml) | Liquid | 52-24-4 | imm | imm | imm | | na | 0.001 | | | |
| Vincristine sulfate (1 mg/ml) | Liquid | 2068-78-2 | >240 | >240 | >240 | 5 | <0.001 | 0.001 | | | |
| Vinorelbine (0.1 mg/ml) | Liquid | 71486-22-1 | >240 | >240 | >240 | 5 | <0.0209 | 0.00209 | | | |

BTAct (Actual) Breakthrough time at MDPR [mins] BT0.1 Normalized breakthrough time at 0.1 µg/cm²/min [mins] BT1.0 Normalized breakthrough time at 1.0 µg/cm²/min [mins] EN Classification according to EN 14325 SSPR Steady state permeation rate [µg/cm²/min] MDPR Minimum detectable permeation rate [µg/cm²/min] CUM480 Cumulative permeation mass after 480 mins [µg/cm²] Time150 Time to reach cumulative permeation mass of 150 µg/cm² [mins] ISO Classification according to ISO 16602 CAS Chemical abstracts service registry number min Minute > Larger than

< Smaller than imm Immediate (< 10 min) nm Not tested sat Saturated solution N/A Not Applicable na Not attained GPR grade General purpose reagent grade * Based on lowest single value 8 Actual breakthrough time; normalized breakthrough time is not available DOT5 Degradation after 5 min DOT30 Degradation after 30 min DOT60 Degradation after 60 min DOT240 Degradation after 240 min BT1383 Normalized breakthrough time at 0.1 µg /cm²/min [mins] acc. ASTM F1383

Important Note.