Fire & Safety

Datasheet

3M™ Scott™ Enforcement Cartridge

Description

Part Number . .. .045123
Shelf Life . .. .10 years (from date of manufacture)
Diameter. .. .. .4.25 inches (10.8 cm)
Height. .. ..3 inches (7.6 cm)
Weight. .. ..0.71 lbs (323 g)
Connection. .. ..40 mm thread
Body Material. .. ..Black polyamide
Breathing Resistance @ 85 lpm.. .. .. .. 36 mmWC

NIOSH Approved for protection against*		
Acid Gases (AG)	Chlorine (CL)	X
	Chlorine Dioxide (CD)	X
	Hydrogen Chloride (HC)	X
	Hydrogen Fluoride (HF)	X
	Sulfur Dioxide (SD)	X
Base Gases	Ammonia (AM)	X
	Methylamine (MA)	X
Aldehydes	Formaldehyde (FM)	X
Hydrides	Phosphine (PH)[1]	X
Organic Vapors (OV)[2]	Organic Vapors (OV)[2]	X
Particulates	Particulates (P100/HE)[4]	X
Tear Gases[3]	o-chlorobenzylidene malononitrile (CS)[1]	X
	Mace® (CN)[1]	X

*NIOSH only approves complete respirators. Please refer to the approval label that comes with your cartridge for the complete respirator configuration.

Note 1 - Not approved with loose fitting hoods

Note 2 - Non-powered APR approval only

Note 3 - Scott recommends the Enforcement Cartridge for use against Pepper Spray (OC)

Note 4 - Particulate filter effective against all particulate aerosols for (APR/PAPR). This filter has an efficiency level of 99.97%.

Service life available through 3M Scott Fire & Safety at www.scottsurelife.com

NIOSH Testing Conditions and Results					
Test Agent	**Test Concentration**	**Flow Rate[1]**	**Breakthrough Concentration**	**Required Breakthrough Time (min)[2]**	**Tested Breakthrough Time (min)[3]**
Ammonia (AM)	1000 ppm	64 lpm	50 ppm	25 (12.5[4])	35
Chlorine (CL)	500 ppm	64 lpm	5 ppm	17.5	175
Chlorine Dioxide (CD)	500 ppm	64 lpm	0.1 ppm	30	>60
Formaldehyde (FM)	100 ppm	64 lpm	1 ppm	50	>100
Hydrogen Chloride (HC)	500 ppm	64 lpm	5 ppm	25 (12.5[4])	>60
Hydrogen Fluoride (HF)	70 ppm	64 lpm	3 ppm	30	>60
Methylamine (MA)	1000 ppm	64 lpm	10 ppm	12.5	>30
Organic Vapors (OV)[5]	1000 ppm	64 lpm	5 ppm	25	>50
o-chlorobenzylidene malononitrile (CS)	3 ppm	64 lpm	0.05 ppm	480	>480
Mace® (CN)	16 ppm	64 lpm	0.05 ppm	480	>480
Phosphine (PH)	1500 ppm	64 lpm	1 ppm	12	>30
Sulfur Dioxide (SD)	500 ppm	64 lpm	5 ppm	15 (7.5[4])	>25

Note 1 - APR test flow rate is 64 lpm for as received and 32 lpm for equilibrated cartridges. For PAPR tests the flow rate is divided by the least number of cartridges used on the configuration for service life. Flow rate for tight fitting configurations is 115 lpm and 170 lpm for loose fitting configurations.

Note 2 - The cartridges are tested: as received and pre-equilibrated to 25% and 85% RH. In both cases, the test condition is 25 C and 50% RH. The minimum time for both conditions is the same unless otherwise stated. APR cartridges are equilibrated at 25 l/min and PAPR cartridges are equilibrated at the test flow rate as determined per note 1.

Note 3 - Unless otherwise stated the breakthrough time provided is for the worst-case test condition. Tested breakthrough time is for the specific chemical cartridge when tested under controlled laboratory conditions. The times provided apply only to Scott Safety cartridges and canisters at the specified conditions. Breakthrough time under actual use conditions may differ based upon the encountered contaminant and environmental conditions.

Note 4 - Required breakthrough time for this test agent is half when testing equilibrated PAPR cartridges.

Note 5 - APR approval only.

The Enforcement Cartridge from Scott Safety was tested by independent test labs to verify its performance against a range of chemical agents. NIOSH has not approved the Enforcement Cartridge for these test agents with any respirator.

Enforcement Cartridge Testing Conditions and Results				
Test Agent	**Test Concentration**	**Flow Rate**	**Breakthrough Concentration**	**Required Breakthrough Time (min)**
Chloropicrin (PS)[6]	15000 mg/m^3	30 lpm	0.7 mg/m^3	70
Cyanogen Chloride (CK)[6]	4000 mg/m^3	32 lpm	8.0 mg/m^3	30
DMMP (simulant for GB)[6]	3000 mg/m^3	50 lpm	0.04 mg/m^3	210
Hydrogen Cyanide (AC)[6]	5500 mg/m^3	30 lpm	5.0 mg/m^3	45
Sarin (GB)[6]	4000 mg/m^3	32 lpm	0.04 mg/m^3	215
Hydrogen Sulfide (HS)	1000 ppm	64 lpm	10.0 ppm	60

Note 6 - These tests are part of the performance specifications for the C2A1 canister, as specified in military specification MIL-PRF-51560A (EA), 1 July 1997, Performance Specification: Canister, Chemical-Biological Mask: C2A1. The Enforcement Cartridge meets or exceeds the performance requirements of the C2A1 canister for these gases.

Air purifying respirators are for use only in environments which are not immediately dangerous to life or health (IDLH) where the oxygen levels are above 19.5%. Do not exceed maximum use concentrations established by regulatory standards. In the absence of a contaminant standard, refer to the NIOSH Respirator Decision Logic publications. Warning: Improper use of these respirators may result in personal injury or death. Improper use includes, but is not limited to, use without adequate training, disregard of the warnings and instructions and failure to inspect and maintain these respirators. These respirators are intended to be used in conjunction with an organized respiratory protection program which complies with the requirements of American National Standard for Respiratory Protection, Z88.2-1992, available from American National Standards Institute Inc., 11 West 42nd Street, New York, NY 10036 or the requirements of OSHA Safety and Health Standard 29 CFR 1910.134 and/or 29 CFR 1910.139 available from the U.S. Department of Labor, Occupational Safety and Health Administration or other pertinent nationally recognized standards, such as those promulgated by the U.S. Coast Guard or the Department of Defense or in Canada, CSA Z94.4.1993. These respirators are not intended for use in atmospheres which are, or may become, immediately dangerous to life or health (IDLH) or in atmospheres where the identity and/or concentration of the contaminant is unknown.

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