

NIOSH

CUMULATIVE SUPPLEMENT JUNE 1977 NIOSH CERTIFIED EQUIPMENT

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Center for Disease Control
National Institute for Occupational Safety and Health

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DISCLAIMER

Mention of company name or product does not constitute endorsement by the National Institute for Occupational Safety and Health.

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CUMULATIVE SUPPLEMENT

June 1977

NIOSH Certified Equipment

Abstract

The National Institute for Occupational Safety and Health, under authorization of the Federal Coal Mine Health and Safety Act of 1969 and the Occupational Safety and Health Act of 1970, provides a testing, approval, and certification program assuring commercial availability of safe personal protective devices and reliable industrial hazard measuring instruments. NIOSH develops improved performance regulations, tests and certifies (or approves) devices, and purchases approved and certified products on the open market to verify the quality of manufacture.

This supplement (a) lists products certified since December 15, 1975, as of June 1, 1977, (b) contains tables of useful information concerning all certified detector tube units and all approved respirators, and (c) updates the lists of approval applicants.

CONTENTS

ABSTRACT.....	iii
I. COAL MINE DUST PERSONAL SAMPLER UNITS	
Approved Coal Mine Dust Personal Sampler Units.....	1
Names and Addresses of Manufacturers and Distributors.....	1
II. GAS DETECTOR TUBE UNITS	
Compounds Announced for Gas Detector Tube Certification...	4
Certified Gas Detector Tube Units.....	5
III. RESPIRATORY PROTECTIVE DEVICES	
Approved Respiratory Protective Devices	
Self-Contained Breathing Apparatus.....	8
Gas Masks.....	13
Supplied-Air Respirators.....	15
Dust, Fume, and Mist Respirators.....	21
Chemical-Cartridge Respirators.....	27
Tables for Identification of Approved Component Parts	
Table III-1. Self-Contained Breathing Apparatus.....	37
Table III-2. Gas Masks.....	47
Table III-3. Supplied-Air Respirators.....	49
Table III-4. Dust, Fume, and Mist Respirators.....	61
Table III-5. Chemical-Cartridge Respirators.....	67
Names and Addresses of Manufacturers and Distributors.....	78
Applicable Approval Regulations Since December 15, 1975...	79
IV. APPENDIX--LIST OF AVAILABLE TEST PROCEDURES.....	83

I. APPROVED COAL MINE DUST
PERSONAL SAMPLER UNITS

The following coal mine dust personal sampler units were approved by the National Institute for Occupational Safety and Health as of June 1, 1977:

8. Bendix Model 44. Approval TC-74-022, issued to Bendix Corp., June 23, 1976.

9. RAC Model 2392 PS. Approval TC-74-023, issued to Research Appliance Company, August 18, 1976.

10. Bendix Model C-115, Approval TC-74-024, issued to Bendix Corp., May 20, 1977.

11. Bendix Micronair II, and Micronair II with Koehler Connector. Approval TC-74-025, issued to Bendix Corp., May 20, 1977.

12. Bendix Super Sampler Models 30 and 31. Approval TC-74-026, issued to Bendix Corp., May 20, 1977.

13. Bendix Super Sampler Model 44. Approval TC-74-027, issued to Bendix Corp., May 20, 1977.

The following coal mine dust personal sampler units were decertified by the National Institute for Occupational Safety and Health as of June 1, 1977:

4. Bendix Micronair II. Approval TC-74-018, issued to Bendix Corp., April 16, 1975.

5. Bendix Model C-115. Approval TC-74-019, issued to Bendix Corp., April 16, 1975.

6. Bendix Micronair II with Koehler Connector. Approval TC-74-020, issued to Bendix Corp., April 16, 1975.

7. Bendix Super Sampler Models 30 and 31. Approval TC-74-021, issued to Bendix Corp., July 7, 1975.

NAMES AND ADDRESSES OF MANUFACTURERS

Research Appliance Company, Route 8, Gibsonia, Pennsylvania 15044

II. GAS DETECTOR TUBE UNITS

The format of the tables has been modified considerably. Therefore, all units certified under the program are included rather than just the ones certified after December 15, 1975.

The first list is one of gases that NIOSH has and will accept applications for certification testing. Some gases contain more than one testing range and are listed more than once with "Range A" or "Range B" immediately following the gas name.

The second list includes all of the gas detector tube units certified by NIOSH through June 15, 1977. The units are sorted by the gas for which they are calibrated. The following provides further explanation for some of the columns.

1. "Calibrated For." This is the gas for which the tube is calibrated. If a unit is calibrated and certified for more than one gas, it would be listed more than once. If the gas was announced for more than one range, the range letter, corresponding to the previous table, will be included immediately following the gas name.

2. "Group Indicated." When a significant number of other commonly occurring compounds are also indicated at concentrations near their OSHA 29 CFR 1910 exposure limits, the general group(s) of compounds indicated is noted. It should not be inferred that (a) the unit will give an indication for all of the compounds within the group or (b) the unit will yield an accurate indication for these other compounds. Furthermore, the general group is presented as a guideline and compounds outside of it could interfere with accurate indication of the unit.

3. "Operating Restrictions." These are the temperature and humidity operating limits specified by the manufacturer and certified by NIOSH. The unit is not certified for operation outside of these limits.

4. "Accessories." A unit consists of a tube or tube assembly, an aspirating pump, and possibly other accessories packaged separately. The tube or tube assembly is listed under "Tube Model." The aspirating pump will be listed under this heading. If the tube is certified for use with more than one pump model, each model will be listed. Other accessories, some of which are necessary for the unit operation, are also listed under this heading. These accessories include such items as orifices, clamps, stroke counters or pyrolyzers. The Gastec Model 400 pump is Bendix Part Number 2417535 and the Kitagawa Model 400 pump is Matheson Part Number 8014-400.

COMPOUNDS ANNOUNCED FOR GAS DETECTOR TUBE CERTIFICATION

Gas	CAS Registry No.	Test Conc. (ppm)	Certified Range (ppm)	Common Synonyms
Acetic Acid	000064197	10	5 to 50	
Acetone	000067641	1000	500 to 5000	
Acrolein	000107028	.1	.05 to .5	Acrylaldehyde
Ammonia	007664417	50	25 to 250	
Aniline (Range A)	000062533	5	2.5 to 25	
Benzene (Range B)	000071432	10	5 to 25	
Benzene (Range A)	000071432	1	0.5 to 5	
Carbon Dioxide	000124389	5000	2500 to 25000	
Carbon Disulfide	000075150	20	10 to 100	
Carbon Monoxide (Range A)	000630080	50	25 to 250	
Carbon Monoxide (Range B)	000630080	500	250 to 2500	
Carbon Tetrachloride	000056235	10	5 to 25	
Chlorine	007782505	1	0.5 to 5	Chlorobutadiene, *10/77
Chloroprene*	000126998	25	12.5 to 125	
Ethyl Benzene	000100414	100	50 to 500	
Ethylene Dichloride	000107062	50	25 to 250	Dichloroethylene, dichlorethane
Formaldehyde	000050000	2	1 to 10	
Hexane	000110543	500	250 to 2500	
Hydrogen Chloride	007647010	5	2.5 to 25	Hydrochloric Acid
Hydrogen Cyanide	000074908	10	5 to 50	Hydrocyanic Acid
Hydrogen Fluoride	007664393	3	1.5 to 15	Hydrofluoric Acid
Hydrogen Sulfide (Range A)	007783064	10	5 to 25	
Hydrogen Sulfide (Range B)	007783064	100	50 to 500	
Mercury	007439976	.05mg/cu.m	.025 to .25mg/cu.m	
Methyl Bromide	000074839	15	7.5 to 75	Bromo Methane
Methyl Ethyl Ketone	000078933	200	100 to 1000	MEK, 2-Butanone
Methylene Chloride	000075092	500	250 to 2500	Dichloromethane
Nitric Oxide	010102439	25	12.5 to 125	Nitrogen Monoxide
Nitrogen Dioxide	010102440	5	2.5 to 25	
Perchloroethylene	000127184	100	50 to 500	Tetrachloroethylene, PCE
Phosgene	000075445	.1	.05 to .5	
Phosphine	007803512	.3	.15 to 1.5	
Styrene	000100425	100	50 to 500	
Sulfur Dioxide	007446095	5	2.5 to 25	
Toluene	000108883	100	50 to 500	
Trichloroethylene	000079016	100	50 to 500	TCE
Vinyl Chloride	000075014	1	0.5 to 5	Chloroethylene
Xylene	001330207	100	50 to 500	Xylol

NIOSH Certified Gas Detector Tube Units

Calibrated For	TC No. 84-	Manufacturer	Tube Model	Group Indicated	Operating Temp (°C)	Restrictions Humidity	Accessories
Acetone	054	MSA	460423	Hydrocarbon	0-40	0-100% RH	83499 Pump
Ammonia	031	Dräger	CH 20501	Amines	10-50	3-12 mg/l	31 Pump
Ammonia	023	Gastec	3M	Amines	0-40	10-90% RH	400 Pump
Ammonia	032	Kitagawa	105 Sc	Amines	0-40	0-100% RH	400 Pump
Ammonia	033	Kitagawa	105 c	Amines	0-40	0-100% RH	400 Pump
Ammonia	034	MSA	460103	Amines	4-49	20-80% RH	83499 Pump
Benzene (A)	044	Dräger	67-28071	Hydrocarbon	0-40	0-50 mg/l	31 Pump
Benzene (A)	043	Gastec	121	Hydrocarbon	0-40	10-90% RH	400 Pump
Carbon Dioxide	047	Bacharach	19-0359	Acid Gases	0-40	0-100% RH	19-7025 Pump, 19-0176 Orifice
Carbon Dioxide	029	Dräger	CH 23501	-----	-10-40	0-50 mg/l	31 Pump
Carbon Dioxide	021	Gastec	2L	-----	0-40	0-90% RH	400 Pump
Carbon Dioxide	027	Kitagawa	126 a	-----	0-40	0-100% RH	400 Pump
Carbon Dioxide	026	Kitagawa	126 Sa	-----	0-40	0-100% RH	400 Pump
Carbon Dioxide	025	MSA	85976	-----	4-38	0-100% RH	83499 Pump
Carbon Monoxide (A)	012	Dräger	CH 25601	-----	-10-90	0-50 mg/l	31 Pump
Carbon Monoxide (A)	013	Dräger	CH 20601	-----	-10-90	0-50 mg/l	31 Pump
Carbon Monoxide (A)	014	Gastec	1 La	-----	0-40	20-90% RH	400 Pump
Carbon Monoxide (A)	045	Kitagawa	100	-----	0-40	0-100% RH	400 Pump
Carbon Monoxide (A)	019	Kitagawa	106 S	-----	0-40	0-100% RH	400 Pump
Carbon Monoxide (A)	015	MSA	91229	-----	-18-51	0-100% RH	83499 Pump
Carbon Tetrachloride	036	Gastec	134	-----	5-30	0-25 mg/l	400 Pump
Chlorine	041	Gastec	8 La	Strong Oxidants	0-40	10-90% RH	400 Pump
Chlorine	042	MSA	460225	Strong Oxidants	4-38	0-90% RH	83499 Pump
Ethyl Benzene	064	Dräger	67-28381	Hydrocarbon	10-30	5-12 mg/l	31 Pump
Ethylene Dichloride	058	MSA	461863	Halogenated HC	10-38	0-80% RH	83499 Pump
Hexane	063	Dräger	67-28391	Hydrocarbon	15-35	5-12 mg/l	31 Pump
Hydrogen Cyanide	051	Dräger	CH 25701	-----	0-30	0-20 mg/l	31 Pump
Hydrogen Cyanide	052	Kitagawa	112 Sb	Strong Acid Gases	0-40	0-100% RH	400 Pump
Hydrogen Sulfide (A)	024	Dräger	67-19001	-----	0-40	0-50 mg/l	31 Pump
Hydrogen Sulfide (B)	062	Dräger	CH 29801	-----	0-60	3-30 mg/l	31 Pump
Hydrogen Sulfide (A)	020	Gastec	4 LL	-----	0-50	20-90% RH	400 Pump
Hydrogen Sulfide (A)	037	Kitagawa	120 b	-----	0-40	0-100% RH	400 Pump
Hydrogen Sulfide (A)	022	MSA	460058	-----	-18-38	0-95%	83499 or 463998 pump
Methyl Bromide	056	Dräger	67-28211	Halogenated HC	0-40	5-12 mg/l	31 Pump
Methylene Chloride	061	Dräger	67-28331	Hydrocarbon	10-30	5-12 mg/l	31 Pump
Nitric Oxide	048	Dräger	CH 31001	Strong Oxidants	10-30	0-30 mg/l	31 Pump
Nitric Oxide	049	Gastec	10	Strong Oxidants	0-40	10-90% RH	400 Pump
Nitric Oxide	059	MSA	460424	Strong Oxidants	0-43	0-95% RH	83499 or 463998 pump
Nitrogen Dioxide	048	Dräger	CH 31001	Strong Oxidants	10-30	0-30 mg/l	31 Pump
Nitrogen Dioxide	016	Dräger	CH 30001	Strong Oxidants	0-40	0-50 mg/l	31 Pump
Nitrogen Dioxide	040	MSA	83099	Strong Oxidants	10-43	10-90% RH	83499 Pump
Nitrogen Dioxide	018	Gastec	9L	Strong Oxidants	0-40	10-100% RH	400 Pump
Perchloroethylene	065	MSA	460467	Halogenated HC	4-38	20-80% RH	83499 or 463998 pump, 58283 clamp
Sulfur Dioxide	030	Dräger	CH 31701	-----	15-25	3-30 mg/l	31 Pump
Sulfur Dioxide	017	Gastec	5 LA	Acid Gases	0-40	10-90% RH	400 Pump
Sulfur Dioxide	035	Kitagawa	103 d	-----	0-40	0-100% RH	400 Pump
Sulfur Dioxide	028	Kitagawa	103 Sd	-----	0-40	0-100% RH	400 Pump
Sulfur Dioxide	046	MSA	92623	Acid Gases	4-32	10-90% RH	83499 Pump
Toluene	053	Gastec	122	Hydrocarbon	0-40	10-90% RH	400 Pump
Toluene	050	Dräger	CH 23001	Hydrocarbon	10-30	5-12 mg/l	31 Pump
Toluene	057	MSA	461371	Hydrocarbons	10-38	0-80% RH	83499 Pump

NIOSH Certified Gas Detector Tube Units

Calibrated For	TC No. 84-	Manufacturer	Tube Model	Group Indicated	Operating Restrictions Temp (°C)	Humidity	Accessories
Trichloroethylene	039	Drager	CH 24401	Halogenated HC	0-40	7-12 mg/l	31 Pump
Trichloroethylene	038	Gastec	132H	Halogenated HC	0-40	0-100% RH	400 Pump
Trichloroethylene	055	MSA	460328	Halogenated HC	4-38	20-90% RH	83499 or 463098 Pump, 58283 Clamp
Vinyl Chloride	060	Gastec	131 L	Halogenated HC	0-40	10-90% RH	400 Pump

III. RESPIRATORY PROTECTIVE DEVICES

The following respiratory protective devices have been approved by the U.S. Department of the Interior, Mining Enforcement and Safety Administration, and the U.S. Department of Health, Education, and Welfare, National Institute for Occupational Safety and Health, as of June 15, 1977.

SELF-CONTAINED BREATHING APPARATUS APPROVED BY MESA/NIOSH

Approval number TC-13F-	Approval issued to	Model number(s)	Breathing gas	Service life	Facepiece type	Apparatus type	Regulator position	Hose length, ft.	Pressure range, psi.
27	BioMarine	45-600 45-100	O	45 min.	FF	CC	Bm	--	--
28	Robertshaw Controls	900-002-268 -11, -12 Model 5000	A	5 min.	H/H	ES, CF	Fm	--	--
28A	Lear Siegler	5500	A	5 min.	H/H	ES, CF	Bm	--	--
29	MSA	457152, 457154 457153, 463827, 463830 95066, 96363 463832, 463828	A	30 min.	FF	ODM	Bm	--	--
30	MSA	95069, 96338 461696, 461946 461947, 463814 463815, 461704 463831, 463833	A	30 min.	FF	OPD	Bm	--	--
32	Siebe Gorman	013831.04	O	3 hr.	FF	ODM	Bm	--	--
33	SurvivAir	9081-14 9881-14	A	5 min.	FF	ES, ODM, SAR	Fm	4-250	50-125
34	SurvivAir	9081-12 9881-12	A	5 min.	FF	ES, ODM, SAR	Fm	4-250	50-125
35	SurvivAir	9065-03, 9865-03,	A	15 min.	FF	ES, ODM	Fm	--	--
36	SurvivAir	9069-02 9069-11 9869-02 9869-11	A	5 min.	FF	ES, ODM	Fm	--	--
38	Drager	BG-174A/3	O	3 hr.	FF	CC	Bm	--	--

SELF-CONTAINED BREATHING APPARATUS APPROVED BY MESA/NIOSH

Approval number TC-13F-	Approval issued to	Model number(s)	Breathing gas	Service life	Facepiece type	Apparatus type	Regulator position	Hose length, ft.	Pressure range, psi.
39	Scott	900000-00	A	30 min.	FF	ODM	Bm	--	--
40	Scott	900014-00	A	30 min.	FF	OPD	Rm	--	--
41	Scott	900002-00	A	15 min.	FF	ODM	Bm	--	--
42	Scott	900015-00	A	15 min.	FF	OPD	Rm	--	--
43	Globe	2540-W, 2540-B, 2550-W, 2550-B, 2526-W, 2526-B, 2552-W, 2552-B	A	30 min.	FF	ODM	Bm	--	--
44	SurvivaAir	9038-00 9038-02, 9838-00, 9838-02	A	30 min.	FF	ODM	Bm	--	--
45	SurvivaAir	9038-20 9038-22 9838-20 9838-22	A	30 min.	FF	OPD	Bm	--	--
46	MSA	457150 95061, 457151, 95068	A	15 min.	FF	ODM	Bm	--	--
47	MSA	95063, 461697 460262, 461703	A	15 min.	FF	OPD	Bm	--	--
48	Scott	900006	A	3 or 5 min.	FF	ES, ODM, SAR	Bm	25-300	350-450

SELF-CONTAINED BREATHING APPARATUS APPROVED BY MESA/NIOSH

Approval number TC-13F-	Approval issued to	Model number(s)	Breathing gas	Service life	Facepiece type	Apparatus type	Regulator position	Hose length, ft.	Pressure range, psi.
49	Scott	900007	A	3 or 5 min.	PF	ES, OPD, SAR	Rm	25-300	350-450
52	MSA	457156	A	5 min.	PF	ES, ODM	Bm	--	--
53	SurvivAir	9081-13 9881-13	A	5 min.	PF	FS, OPD, SAR	Fm	4-250	50-125
54	SurvivAir	9081-15 9881-15	A	5 min.	PF	ES, OPD, SAR	Fm	4-250	50-125
55	MSA	76753	A	5 min.	ON	ES, ODM	Bm	--	--
56	MSA	96395, 455994	A	10 min.	PF	FS, OPD, SAR	Bm	25-300	75-90
56A	MSA	304213 304194	A	10 min.	PF	FS, OPD, SAR	Bm	25-300	75-90
57	Drager	BG-174A/4	O	4 hr.	PF	CC	Rm	--	--
58	Siebe-Gorman	014422.10	A	30 min.	PF	ODM	Fm	--	--
59	Siebe-Gorman	014422.11	A	30 min.	PF	OPD	Fm	--	--
60	Scott	900050	O	4 hr.	PF	CC	Bm	--	--
61	MSA	456989	A	5 min.	ON	ES, ODM	Bm	--	--
62	MSA	458178, 458479	A	5 min.	PF	FS, ODM, SAR	Bm	25-300	50-90
63	Robertshaw Controls	900-002-267 -01, -11	A	15 min.	ON, PF	ES, OPD, SAR	Fm	25-250	50-125

SELF-CONTAINED BREATHING APPARATUS APPROVED BY MESA/NIOSH

Approval number TC-13F-	Approval issued to	Model number(s)	Breathing gas	Service life	Facepiece type	Apparatus type	Regulator position	Hose length, ft.	Pressure range, psi.
64	Robertshaw Controls	900-002-266 -01, -02, -03 -04, -11, -12 -13, -14	A	5 min.	ON, FF	ES, OPD, SAR	Fm	25-250	50-125
65	Robertshaw Controls	900-002-267 -21, -31	A	15 min.	ON, FF	OPD	Fm	--	--
66	Scott	900055-01 900055-03 900055-04	A	5 min.	ON, FF	ES, ODM	Fm	--	--
67	Scott	900055-09 900055-10 900055-17 900055-18	A	5 min.	ON, FF	ES, ODM, SAR	Fm	10-250	60-125
68	Scott	900055-13 900055-14	A	5 min.	FF	ES, OPD, SAR	Fm	10-250	60-125
69	MSA	457159	A	5 min.	FF	ES, ODM, SAR	Fm	25-300	50-100
70	MSA	460713 461698	A	5 min.	FF	ES, OPD, SAR	Bm	25-300	50-100
71	Globe	2508	A	5 min.	FF	ES, ODM	Fm	--	--
72	Globe	2509	A	5 min.	FF	ES, ODM, SAR	Fm	25-100	50-70
73	Scott	900450	A	30 min.	FF	ODM	Fm	--	--
74	Globe	2505, 2505-4	A	15 min.	FF	ES, ODM, SAR	Fm	25-100	50-70
75	Globe	2503	A	15 min.	FF	ES, ODM	Fm	--	--
76	Scott	900455	A	30 min.	FF	OPD	Fm	--	--

Breathing Gas

A - Compressed Air
O - Compressed Oxygen

Service Life

3 min. - 3 minutes
1 hr. - 1 hour

Facepiece Type

ON - Orinasaal
FF - Full facepiece
H/H - Hood or helmet

Apparatus Type

CF - Continuous flow
CC - Closed circuit
ODM - Open circuit demand type
OPD - Open circuit pressure demand type
GEN - Oxygen generating
ES - Escape only
SAR - Supplied-air respirator

Fm - Facepiece mounted
Bm - Belt, chest, or side mounted

Hose Length and Pressure Range

These columns apply only to combination devices with supplied air respirators (airline)

GAS MASKS APPROVED BY MESA/NIOSH

Approval number TC-14G-	Approval issued to	Model number(s)	Respirator type1/	Face- piece- type2/	Type of respiratory protection3/						
					OV	Cl	SO2	CO	NP3	MA	VC PEST DPM
82	MSA	455299	Es	M						X	
83	Drager	810	Es	M						X	
84	MSA	461481, 461482, 461483, 461484, 461485, 461486	Bm	FF							X
85	Scott	601211-17 601221-17 601111-17, 601121-17 601511-17, 601521-17	Bm	FF							X
86	MSA	448983, 448984, 448985, 448986	Fm	FF							X
87	MSA	448975, 448976, 448977, 448978	Fm	FF			X				D,M
88	MSA	448979, 448980 448981, 448982	Fm	FF					X		D,M
89	MSA	460131, 460132 460133, 460134	Fm	FF			X				D,M
91	Norton	7820, 7820S, 7820N 7829, 7829S, 7820SN 7829N, 7829SN	Bm	FF						X	
92	MSA	461133, 461134 461140, 461141	Fm	FF				X			D,M
93	Willson	2164F, 2264F	Fm	FF					X	X	D,F,M
94	Willson	2161F, 2261F	Fm	FF			X				X D,F,M

1/ Fm - facepiece mounted canister (chin type)
Bm - belt mounted canister (including chest and back)
Es - escape only

2/ FF - full facepiece
M - mouthpiece

3/ Ov - organic vapor
Cl - chlorine
SO₂ - sulfur dioxide
CO - carbon monoxide
NH₃ - ammonia
MA - methyl amine
VC - vinyl chloride
PEST - pesticide
DFM - (as indicated below):

D - Respirators, either with replaceable or reusable filters, designed as respiratory protection against dusts (1) having an air contamination level not less than 0.05 milligram per cubic meter of air; or (2) dusts having an air contamination level not less than 2 million particles per cubic foot of air.

F - Respirators, with replaceable filters, designed as respiratory protection against fumes of various metals having an air contamination level not less than 0.05 milligram per cubic meter.

M - Respirators, with replaceable filters, designed as respiratory protection against mists of materials having an air contamination level not less than 0.05 milligram per cubic meter or 2 million particles per cubic foot.

H - Respirators, with replaceable filters, designed as respiratory protection against dusts, fumes, and mists having an air contamination level less than 0.05 milligram per cubic meter.

R - Respirators, with replaceable filters, designed as respiratory protection against radon daughters, and radon daughters attached to dusts, fumes, and mists.

A - Respirators, with replaceable filters, designed as respiratory protection against pneumoconiosis- and fibrosis-producing dusts, or dusts and mists.

SUPPLIED-AIR RESPIRATORS APPROVED BY MESA/NIOSH

Approval number TC-19C-	Approval Issued to	Model number(s)	Respirator type	Air flow class	Regulator or valve location	Face- piece type	Hose length, ft.	Pressure range, psi.
64	Cesco	PI-800	C, CE	Cf	Rm	HH	15-50 75-100	6-17 7-20
64	U.S. Safety	PI-800	C, CE	Cf	Bm	HH	15-50 75-100	6-17 7-20
65	SurvivAir	9011-12 9811-12	C	Dm	Pm	FF	4-250	50-125
66	SurvivAir	9011-14 9811-14	C	Dm	Pm	FF	4-250	50-125
67	SurvivAir	9011-13 9811-13	C	Pd	Pm	FF	4-250	50-125
68	SurvivAir	9011-15 9811-15	C	Pd	Pm	FF	4-250	50-125
69	3M	W-810 W-840 W-856 W-858 W-870 W-275 W-280	C, CE	Cf	Bm	HH	25-300	50-90
70	3M	W-820 W-880 W-881 W-888 W-890 W-276 W-281	C, CE	Cf	Bm	HH	25-100	65-90
71	Scott	4616-11, -12, -15, -21, -22, -25, 4622 -11, -12, -15, -21, -22, -25	C	Cf	Pm	ON, FF	15-50 50-250	12-25 25-40

SUPPLIED-AIR RESPIRATORS APPROVED BY MESA/NIOSH

Approval number TC-19C-	Approval Issued to	Model number(s)	Respirator type	Air flow class	Regulator or valve location	Face- piece type	Hose length, ft.	Pressure range, psi.
72	Scott	4616-18, -19, -28 -29, 4622 -18, -19, -28, -29	C	Cf	Fm	ON,FF	15-50 50-250	6-16 16-22
73	Scott	802230	C	Cf,DM	Fm	FF	25-250	60-125
74	Scott	801548	C	Pd	Fm	FF	3-250	60-125
75	MSA	457165, 84283, 46539, 457164, 93928, 94988	C	Dm	Bm	ON,FF	25-300	50-125
77	MSA	457623	B	Cf	N/A	FF	Up to 75	N/A
78	MSA	460862, 460863, 460864, 460865, 461708, 461717, 461718, 461719	C	Cf	Bm	ON,FF	25-300	35-40
79	Encon	6400	C, CE	Cf	Bm	HH	25-50	70-90
80	MSA	460903, 460904, 460905, 460906, 461709, 461710, 461711, 461712	C	Cf	Bm	HH	25-300	55-60

SUPPLIED-AIR RESPIRATORS APPROVED BY MESA/NIOSH

Approval number TC-19C-	Approval Issued to	Model number(s)	Respirator type	Air flow class	Regulator or valve location	Face- piece type	Hose length, ft.	Pressure range, psi.
81	MSA	460907, 460908, 460909, 460910 461713, 461714, 461715, 461716	CE	Cf	Bm	HH	25-300	55-60
82	Pulmosan	AL180-10168	C	Cf	Bm	FF	15-50	10-20
83	Willson	1810 1820	C	Cf	Bm	ON	15-100 100-300	10-32 21-50
84	Bullard	46, 77	C, CE	Cf	Bm	HH	25-200	80-95
84	Anderson	46, 77,	C, CE	Cf	Bm	HH	25-200	80-95
84	Sanstorm	46, 77	C, CE	Cf	Bm	HH	25-200	80-95
84	Pauli and Griffin	46, 77	C, CE	Cf	Bm	HH	25-200	80-95
84	Empire	46, 77	C, CE	Cf	Bm	HH	25-200	80-95
84	Kelco	46, 77	C, CE	Cf	Bm	HH	25-200	80-95
84	Quaker State Machine and Supply	46, 77	C, CE	Cf	Bm	HH	25-200	80-95
84	Deane & Co.	46, 77	C, CE	Cf	Bm	HH	25-200	80-95
84	Bowen Tools	46, 77	C, CE	Cf	Bm	HH	25-200	80-95
85	Clemco	PCE	C, CE	Cf	Bm	HH	25-200	80-95

SUPPLIED-AIR RESPIRATORS APPROVED BY MESA/NIOSH

Approval number TC-19C-	Approval Issued to	Model number(s)	Respirator type	Air flow class	Regulator or valve location	Face- piece type	Hose length, ft.	Pressure range, psi.
86	AO	R6099	C	Cf	Bm	ON	12.5-75 100-175 200-300	7-15 13-25 18-35
87	3M	W-270, W-271 W-272, W-274 W-277, W-282	C, CE	Cf	Bm	HH	25-100	60-70
88	Binks	40-160	C	Cf	Bm	ON	25-300	35-40
89	AO	R56001	C	Cf	Bm	HH	12.5-25 50-100 125-200 225-300	10-18 18-30 25-40 35-60
90	Robertshaw Controls	900-002-264 -01, -02, -03, -04, -11, -12, -13, -14	C	Pd	Fm	ON, FF	25-250	50-125
91	MSA	457157 93224 93225	C	Dm	Fm	ON, FF	25-300	50-90
92	Globe	2185-6 2185-4	C	Dm, Cf	Fm	FF	25-200	60-70
93	MSA	89104, 461669, 461699, 461700	C	Pd	Bm	FF	25-300	80-100
94	Willson	1850, 1860	C	Cf	Bm	FF	15-100 100-300	11-32 21-50
95	Pulmosan	AL330	C	Cf	Bm	ON	15-50	20-40

SUPPLIED-AIR RESPIRATORS APPROVED BY MESA/NIOSH

Approval number TC-19C-	Approval Issued to	Model number(s)	Respirator type	Air flow class	Regulator or valve location	Face- piece type	Hose length, ft.	Pressure range, psi.
96	Cesco	801	C,CE	Cf	Bm	HH	15-100	60-100
96	U.S. Safety	801	C,Ce	Cf	Bm	HH	15-100	60-100
97	Scott	802280-01 -02, -05, -06, -09, -10, -13, -14	C	Dm,CF	Fm	ON	3-250	60-125
98	Scott	802280-03 -04, -07, -08, -11, -12, -15, -16	C	Pd	Fm	ON	3-250	60-125

Respirator Type:

A - Hose mask with blower
AE- Hose mask with blower--abrasive
B - Hose mask without blower
BE- Hose mask without blower--abrasive
C - Airline
CE- Airline--abrasive

Airflow Class:

Cf - Continuous flow
Dm - Demand
Pd - Pressure-demand

Regulator or valve location:

Fm - Facepiece mounted
Bm - Belt, chest, or side mounted

Facepiece Type:

ON - Orinasal
FF - Full facepiece
HH - Hood or helmet

DUST, FUME, AND MIST RESPIRATORS APPROVED BY MESA/NIOSH

Approval number TC-21C-	Approval issued to	Model number(s)	Respirator type1/	Face- piece type2/	No. of filters	Type of respiratory protection3/ D F M H R A S AB						
						D	F	M	H	R	A	S AB
132	3M	8710	Su	ON	1							X
133	MSA	459440	Rp	ON	2		X		X		X	
134	MSA	459438 461011	Rp/Bm	ON	2		X	X	X	X	X	X
135	MSA	459439 461010	Rp/Bm	ON	2						X	
136A	3M	W250, W252 W254 W255, W260 W261, W266 W267, W278	Pw	H/H	1					X	X	
137	3M	W251 W265	Pw	H/H	1							X
138	MSA	96000 457344	Rp	ON	1		X		X			
139	Willson	560	Rp	ON	1		X		X			
140	Willson	1210	Rp	ON	2		X		X		X	
141	Willson	1211	Rp	ON	2		X	X	X		X	
142	Willson	1212	Rp	ON	2					X		
143	Willson	1400	Su	ON	1							X
144	A0	R5030	Rp	ON	2		X		X		X	
145	A0	R6030	Rp	ON	2		X		X		X	

DUST, FUME, AND MIST RESPIRATORS APPROVED BY MESA/NIOSH

Approval number TC-21C-	Approval issued to	Model number(s)	Respirator type1/	Face- piece type2/	No. of filters	Type of respiratory protection3/									
						D	F	M	H	R	A	S	A B		
147	AO	R1050	Su	ON	1									X	
149	Scott	662-1 662-2	Rp	FF	1								X		
150	MSA	88479 457117	Rp	FF	1								X		
151	Norton	7506 7506M	Rp	ON	2		X		X					X	
152	Norton	7580 7580M	Rp	ON	2								X		
153	Norton	7406L 7406LM	Rp	ON	1		X		X					X	
154	Sellstrom Cover	315-F100	Rp	ON	2		X							X	
154	Safe-Tex	1482-F100	Rp	ON	2		X							X	
154	Eastern	236-F100	Rp	ON	2		X							X	
154		E-450	Rp	ON	2		X							X	
155	MSA	460185	Rp	FF	2								X		
156	MSA	461683	Rp	ON	1		X		X						
157	Pulmosan	C264	Rp	ON	1		X		X						
158	Pulmosan	C263	Rp	ON	1								X		
159	MSA	460357	Rp	ON	1		X		X						
160	AO	R5057 R6057	Rp	ON	2									X	

DUST, FUME, AND MIST RESPIRATORS APPROVED BY MESA/NIOSH

Approval number TC-210-	Approval issued to	Model number(s)	Respirator type1/	Face- piece type2/	No. of filters	Type of respiratory protection3/						
						D	F	M	H	R	A	S AB
161	AO	R5056 R6056	Rp	ON	2	X	X	X	X			X
162	AO	R8100	Rp	ON	1	X	X	X				
163	Cesco	94R20	Rp	ON	2	X	X	X				X
164	Glendale	GR2000 GR4000	Rp	ON	2	X	X	X				
165	Pulmosan	L800	Rp	ON	1	X	X	X				
166	AO	R2090N	Rp	ON	1	X	X	X				
167	DeVilbiss	MSD-507	Rp	ON	1	X	X	X				
168	Norton	75BP80	Rp, Rm	ON	2							X
169	AO	R8156	Rp	ON	1	X	X	X				
170 170A	Norton Norton	7170 7170	Ru Su	ON ON	1 1		X					X
171	Norton	7680 7680N	Rp	FF	2						X	
172	Glendale	GR1000 GR3000	Rp	ON	1	X	X	X				
173	3M	8800	Su	ON	1							X
174	Binks	40-150	Su	ON	1							X
175	Norton	7100 7100V	Rp	ON	1	X	X	X				

DUST, FUME, AND MIST RESPIRATORS APPROVED BY MESA/NIOSH

Approval number TC-21C-	Approval issued to	Model number(s)	Respirator type1/	Face- piece type2/	No. of filters	Type of respiratory protection3/						
						D	F	M	H	R	A	S AB
176	3M	9900	Ru	ON	1	X						
177	Scott	604035-00 6411-2100 6411-3100 6413-2100 6413-3100	Rp	ON	2	X						
178	Scott	604022-50 6411-2050 6411-3050 6413-2050 6413-3050	Rp	ON	2					X	X	
179	U.S. Safety	150T10	Rp	ON	2	X				X		
180	Cesco	95RC15	Rp	ON	2	X				X		
181	MSA	462240	Rp/Bm	ON	2	X				X		
182	Willson	1610 1710	Rp	FF	2	X				X		
183	Willson	1611 1711	Rp	FF	2	X				X		
184	Willson	1612 1712	Rp	FF	2					X		
186	MSA	463353 463354 463355	Pw	ON,FF	2					X		
187	MSA	461847	Rp	FF	2	X				X	X	
188	MSA	461845	Rp	FF	2	X				X		
189	Glendale	GR-2026	Rp	ON	2	X				X	X	

1/ Rp - replaceable filter

Ru - reusable filter

Su - single-use filter

Bm - belt or back mounted

Pw - powered

2/ ON - orinasal

FF - full facepiece

H/H - hood or helmet

3/ D - Respirators, either with replaceable or reusable filters, designed as respiratory protection against dusts (1) having an air contamination level not less than 0.05 milligram per cubic meter of air; or (2) dusts having an air contamination level not less than 2 million particles per cubic foot of air.

F - Respirators, with replaceable filters, designed as respiratory protection against fumes of various metals having an air contamination level not less than 0.05 milligram per cubic meter.

M - Respirators, with replaceable filters, designed as respiratory protection against mists of materials having an air contamination level not less than 0.05 milligram per cubic meter or 2 million particles per cubic foot.

H - Respirators, with replaceable filters, designed as respiratory protection against dusts, fumes, and mists having an air contamination level less than 0.05 milligram per cubic meter, and against radionuclides.

R - Respirators, with replaceable filters, designed as respiratory protection against radon daughters, and radon daughters attached to dusts, fumes, and mists.

A - Respirators, with replaceable filters, designed as respiratory protection against asbestos-containing dusts and mists.

S - Single-use dust respirators designed as respiratory protection against pneumoconiosis- and fibrosis-producing dusts, or dusts and mists.

AB - Abrasive blasting.

CHEMICAL-CARTRIDGE RESPIRATORS APPROVED BY NESA/NIOSH

Approval number TC-23C-	Approval issued to	Model number(s)	Respirator type/	Face- piece type2/	No. of cartridges	Type of respiratory protection3/ OV C1 S02 HCl NH3 NA PLE PEST DPM
40	MSA	459433 461005	Rp, Fu, Bm	ON	2	X D, M, A
41	MSA	459434 461006	Rp, Fu, Bm	ON	2	X X X D, M, A
43	MSA	459436 461008	Rp, Fu, Bm	ON	2	X X D, M, A
47	MSA	459435 461007	Rp, Fu, Bm	ON	2	X X X X D, M, A
49	Norton	7501 7501M	Rp, Fu	ON	2	X
50	Willson	1221	Rp, Fu	ON	2	X X X D, F, M, A
51	Willson	122110	Rp, Fu	ON	2	X D, M, A
52	Willson	122113	Rp, Fu	ON	2	X D, F, M, A
54	Willson	122115	Rp, Fu	ON	2	X X X D, M
55	Scott	70-CL	Rp, Fu	M	1	X
56	AO	R5051	Rp, Fu	ON	2	X
57	AO	R6051	Rp, Fu	ON	2	X
59	DeVilbiss	MSE-502	Rp, Fu	ON	2	X
60	AO	R5052	Rp, Fu	ON	2	X X X
61	AO	R6052	Rp, Fu	ON	2	X X X

CHEMICAL-CARTRIDGE RESPIRATORS APPROVED BY MESA/NIOSH

Approval number TC-23C-	Approval issued to	Model number(s)	Respirator type1/	Face- piece type2/	No. of cartridges	Type of respiratory protection3/ OV Cl SO2 HCl NH3 MA PLE PEST DM
63	Norton	7504 7504M	Rp,Fm	ON	2	X
64	Norton	7514 7514M	Rp,Fm	ON	2	X D,M,A
65	Norton	7503 7503M	Rp,Fm	ON	2	X X X X
66	Norton	7513 7513M	Rp,Fm	ON	2	X X X X D,M,A
70	Willson	1224	Rp,Fm	ON	2	X X
71	Willson	122410	Rp,Fm	ON	2	X X D,M,A
73	Norton	7511 7511M	Rp,Fm	ON	2	X D,M,A
74	Norton	7549 7549M	Rp,Fm	ON	2	X
75	Norton	7531 7531M	Rp,Fm	ON	2	X
75	Acme Automotive Finishes	27	Rp,Fm	ON	2	X
76	Willson	1225	Rp,Fm	ON	2	X X X X
77	Willson	122510	Rp,Fm	ON	2	X X X X D,M,A
78	3M	W-262 W-264 W-268 W-279 W-263	Pw,Fm	H/H	1	X

CHEMICAL-CARTRIDGE RESPIRATORS APPROVED BY MESA/NIOSH

Approval number TC-23C-	Approval issued to	Model number(s)	Respirator type/	Face- piece type2/	No. of cartridges	Type of respiratory protection3/ OV C1 SO2 HCl NH3 MA PLE PEST DM
79	MSA	448848 461009	Rp,Fm,Bm	ON	2	X
80	MSA	448849 462241 460853	Rp,Fm,Bm	ON	2	X
81	Pulmosan	C256	Rp,Fm	ON	1	X
82	AO	R5053 R6053	Rp,Fm	ON	2	X X X X
83	AO	R5055 R6055	Rp,Fm	ON	2	X D,M
84	AO	R8151	Rp,Fm	ON	1	X
85	AO	R8153	Rp,Fm	ON	1	X X X X
86	Binks	40-129	Rp,Fm	ON	2	X
87	Binks	40-128	Rp,Fm	ON	2	X X
88	Glendale	GR2021	Rp,Fm	ON	2	X
89	Glendale	GR2021-10	Rp,Fm	ON	2	X D,M
90	Glendale	GR2021-20	Rp,Fm	ON	2	X
91	Pulmosan	C259	Rp,Fm	ON	1	X D,M
92	AO	R8191P	Rp,Fm	ON	1	X D,M
93	AO	R8151P	Rp,Fm	ON	1	X D,M

CHEMICAL-CARTRIDGE RESPIRATORS APPROVED BY NIOSH/MSA

Approval number TC-23C-	Approval issued to	Model number(s)	Respirator type1/ piece type2/	No. of cartridges	Type of respiratory protection3/ OV C1 SO2 HCl NH3 MA PLE PFST DFM	
94	AO	R5051P	Rp, Fm	2	X	D, M
95	AO	R6051P	Rp, Fm	2	X	D, M
96	DeVilbiss	MSP-505	Rp, Fm	2	X	D, M
97	AO	R5091P	Rp, Fm	2	X	D, M
98	AO	R6091P	Rp, Fm	2	X	D, M
99	Cesco	94R40	Rp, Fm	2	X	
100	Pulmosan	C-251	Rp, Fm	1	X	X
100	Fiber Metal	C-251	Rp, Fm	1	X	X
101	Norton	7401L 7401LM	Rp, Fm	1	X	
102	Norton	75BP01	Rp, Bm	2	X	
103	Norton	75BP11	Rp, Bm	2	X	D, M, A
104	Norton	75BP03	Rp, Bm	2	X X X X	
105	Norton	75BP13	Rp, Bm	2	X X X X	D, M, A
106	AO	R5058 R6058	Rp, Fm	2		X
107	Cover	1482-G100	Rp, Fm	2	X	
107	Sellstrom	315-G100	Rp, Fm	2	X	
107	Eastern Safety	E451	Rp, Fm	2	X	
107	Safe-Tex	236-G100	Rp, Fm	2	X	
108	MSA	460400	Rp, Fm	1	X	

CHEMICAL-CARTRIDGE RESPIRATORS APPROVED BY MESA/NIOSH

Approval number TC-23C-	Approval issued to	Model number(s)	Respirator type/ type2/	Face- piece type2/	No. of cartridges	Type of respiratory protection3/ OV C1 SO2 HCl NH3 MA PLE PEST DM
109	AO	RS054 R6054	Rp, Fm	ON	2	X X
110	Pulmosan	C-241	Rp, Fm	ON	1	X
110	Fiber Metal	C-241	Rp, Fm	ON	1	X
111	AO	R9722	Rp, Fm	M	1	X X X D,M
113	Scott	604022-13 6411-2013 6411-3013 6413-2013 6413-3013	Rp, Fm	ON	2	X
114	Scott	604032-13 6411-2113 6411-3113 6413-2113 6413-3113	Rp, Fm	ON	2	X D,M
115	Scott	604022-01 6413-2001 6413-3001 6411-2001 6411-3001	Rp, Fm	ON	2	X X X
116	Scott	604032-01 6411-2101 6411-3101 6413-2101 6413-3101	Rp, Fm	ON	2	X X X D,M
117	Scott	604032-00 6411-2213 6411-3213 6413-2213 6413-3213	Rp, Fm	ON	2	X X
118	U.S. Safety	150T20	Rp, Fm	ON	2	X
119	Casco	95NC25	Rp, Fm	ON	2	X

CHEMICAL-CARTRIDGE RESPIRATORS APPROVED BY MESA/NIOSH

Approval number TC-23C-	Approval issued to	Model number(s)	Respirator type1/ type2/ piece	No. of cartridges	Type of respiratory protection3/ OV Cl SO2 HCl NH3 VA PLF PEST DEM
120	U.S. Safety	158T23	Rp, Fm	2	X
			ON		D, M, A
121	Cesco	95RC45	Rp, Fm	2	X
			ON		D, M, A
122	Norton	7542, 7542M	Rp, Fm	2	X
			ON		D, A
123	3M	8712 8717	Su	1	X
			ON		D, M
124	Cover	1482-G100- F102	Rp, Fm	2	X
			ON		X
124	Eastern	E454	Rp, Fm	2	X
			ON		X
124	Sellstrom	315-G100- F102	Rp, Fm	2	X
			ON		X
125	U.S. Safety	150T24	Rp, Fm	2	X
			ON		X
126	Cesco	95RC35	Rp, Fm	2	X
			ON		X
127	Stewart-Warner	7931	Rp, Fm	2	X
			ON		X
128	Northcott	70-450	Rp, Fm	2	X
			ON		X
129	3M	8714 8720	Su	1	X
			ON		D, M
130	Willson	1621 1721	Rp, Fm	2	X
			FF		
131	Willson	162113 172113	Rp, Fm	2	X
			FF		D, M, F
133	Willson	162115 172115	Rp, Fm	2	X
			FF		D, M

CHEMICAL-CARTRIDGE RESPIRATORS APPROVED BY MESA/NIOSH

Approval number TC-23C-	Approval issued to	Model number(s)	Respirator type1/	Face- piece type2/	No. of cartridges	Type of respiratory protection3/ OV C1 SO2 HCl NH3 NA PLE PEST DM
134	Willson	162110 172110	Rp,Fm	PF	2	X D,M,A
139	Willson	1624 1724	Rp,Fm	PF	2	X X
140	Willson	162410 172410	Rp,Fm	PF	2	X X D,M,A
141	Willson	1625 1725	Rp,Fm	PF	2	X X X X
142	Willson	162510 172510	Rp,Fm	PF	2	X X X X D,M,A
143	Scott	70-AG	Es,Fm	M	1	X X X
144	MSA	461848	Rp,Fm	PF	2	X D,M,A
145	MSA	461849	Rp,Fm	PF	2	X X X X D,M,A
146	MSA	461850	Rp,Fm	PF	2	X X X X D,M,A
147	MSA	461851	Rp,Fm	PF	2	X X D,M,A
148	MSA	461858	Rp,Fm	PF	2	X
149	MSA	461846	Rp,Fm	PF	2	X X
150	MSA	461854	Rp,Fm	PF	2	X X X H
151	MSA	461852	Rp,Fm	PF	2	X D,M,A
152	MSA	461857	Rp,Fm	PF	2	X X H

CHEMICAL-CARTRIDGE RESPIRATORS APPROVED BY MESA/NIOSH

Approval number TC-23C-	Approval issued to	Model number(s)	Respirator type1/ type2/	Face- piece type2/	No. of cartridges	Type of respiratory protection3/ OV Cl SO2 HCl NH3 MA PLE PEST DM
153	MSA	461855	Rp, Fm	FF	2	X X X X H
154	MSA	461856	Rp, Fm	FF	2	X X X X DMAR
155	MSA	461853	Rp, Fm	FF	2	X H
156	MSA	461835 462239	Rp, Fm, Bm	ON	2	X X X X H
157	MSA	460965 462238	Rp, Fm, Bm	ON	2	X D, M, A
158	MSA	460849 461015	Rp, Fm, Bm	ON	2	X X H
159	MSA	460847 461013	Rp, Fm, Bm	ON	2	X X X X H
160	MSA	460848 461014	Rp, Fm, Bm	ON	2	X X X X DMAR
161	MSA	460846 461012	Rp, Fm, Bm	ON	2	X H
163	Cover	1482-Cl04	Rp, Fm	ON	2	X X X X

- 1/ Rp - replaceable filter
Su - single-use respirator
Fm - face mounted cartridges
Bm - belt- or back-mounted cartridges
Pw - powered
Es - escape only

2/ ON - orinasal
H/H- hood or helmet
FF - full facepiece
M - mouthpiece

3/ OV - organic vapor
Cl2- chlorine
So2- sulfur dioxide
HCl- hydrogen chloride
NH3- ammonia
MA - methyl amine
PE- paint, lacquer, and enamel mists
PEST-pesticides
DFM- (as indicated below):

- D - Respirators, either with replaceable or reusable filters, designed as respiratory protection against dusts (1) having an air contamination level not less than 0.05 milligram per cubic meter of air, or (2) dusts having an air contamination level not less than 2 million particles per cubic foot of air.
- F - Respirators, with replaceable filters, designed as respiratory protection against fumes of various metals having an air contamination level not less than 0.05 milligram per cubic meter.
- N - Respirators, with replaceable filters, designed as respiratory protection against mists of materials having an air contamination level not less than 0.05 milligram per cubic meter or 2 million particles per cubic foot.
- H - Respirators, with replaceable filters, designed as respiratory protection against dusts, fumes, and mists having an air contamination level less than 0.05 milligram per cubic meter, and against radionuclides.
- R - Respirators, with replaceable filters, designed as respiratory protection against radon daughters and radon daughters attached to dusts, fumes, and mists.
- A - Respirators, with replaceable filters, designed as respiratory protection against asbestos-containing dusts and mists.

Table III-L. Self-contained breathing apparatus component parts, by approval number.

Approval number TC-13F-	Approval issued to	Model number(s)	Component parts, number(s) and description
27	BioMarine	45-600 45-100	45100, rebreather assembly. 45600 or 45600-A, facepiece and breathing tube assembly. 45200, sorbent canister. (Below 32° F add 45601 cold weather adapter to the above).
28	Robertshaw	900-002-268 -11, -12 Model 5000	900-002-269-01 or 900-002-269-11, storage case. 904-003-206-01, or 904-003-206-02, compressed-air container. 595-900-084-01, face mask and exhalation valve system.
28A	Lear Siegler	5500	205301, case and harness assembly. 202356, compressed-air container. 202375, face mask and exhalation valve system.
29	MSA	457152 457153 457154 96363 95066 463827 463830 463832 463828	96680 or 95940, facepiece. 449267, breathing tube assembly. 94007 or 96337 or 460320, cylinder and valve assembly. 93184, harness. 449911, regulator assembly. (Below 32° F add 96671 or 89863 nose cup assembly to above).
30	MSA	95069 96338 461704 463831 463833 461696 461946 461947 463814 463815	96057 or 461614, facepiece. 449267, breathing tube assembly. 94007, 96337 or 460320, cylinder and valve assembly. 93184, harness. 449910, regulator assembly.
32	Siebe Gorman	013831.04	032275.00, facepiece assembly. 059994.10, harness assembly. 059994.11, evaporator, sorbent canister and breathing bag assembly. 032282.01, timer assembly. 029697.01, sorbent, (PROTOSORB)

Table III-1. Self-contained breathing apparatus component parts, by approval number.

Approval number TC-13F-	Approval issued to	Model number(s)	Component parts, number(s) and description
33	SurvivAir	9081-14, 9881-14	9404-06 or 9424-06, facepiece and regulator assembly. 9661-27, regulator assembly. 9155-22, cylinder assembly. 9304-41 through 50, 9304-70 through 73, or 9304-85, airline hose.
34	SurvivAir	9081-12, 9881-12	9404-05 or 9424-05, facepiece and regulator assembly. 9661-20, regulator assembly. 9155-22, cylinder assembly. 9304-11 through 20, 9304-68 or 9304-80 through 83, airline hose.
35	SurvivAir	9065-03, 9865-03	9421-49 or 9423-49, facepiece and regulator assembly. 9168-01, cylinder assembly. 9456-00, canvas sack. (Below 32° F add 9411-30, nosecup kit).
36	SurvivAir	9069-02, 9869-02, 9069-11, 9869-11	9421-49 or 9423-49, facepiece and regulator assembly. 9155-32, cylinder assembly. 9375-60, case assembly.
38	Drager	BG-174A/3	B174A/3, mask and hoses. B174A/3, harness and frame assembly. C174A/3, cylinder and valve. 9X18-28 CO2, canister.
39	Scott	900000-00	800020-04, harness and back-plate assembly. 800010-00 or 800010-10, -02, -12, cylinder and valve assembly. 800013-00, regulator assembly. 800029-00, hose coupling assembly. 801450-13 or 17042, facepiece and tube assembly (Below 32° F add 801432-00 or 22300-01 nosecup assembly to the above).

Table III-1. Self-contained breathing apparatus component parts, by approval number.

Approval number TC-13f-	Approval issued to	Model number(s)	Component parts, number(s) and description
40	Scott	900014-00	800020-04, harness and back-plate assembly. 800010-00 or 800010-10, -02, -12, cylinder and valve assembly. 800212-00 or 800212-03, regulator assembly. 800029-00, hose coupling assembly. 801500-15 or 40577, facepiece and tube assembly (below 32°F add 801432-00 or 22300-01 nosecup assembly to the above).
41	Scott	900002-00	800110-02, harness assembly. 800010-01, cylinder and valve assembly. 800013-00, regulator assembly. 800029-01, hose coupling assembly. 801450-13 or 17042, facepiece and tube assembly (below 32°F add 801432-00 or 22300-01 nosecup assembly to the above).
42	Scott	900015-00	800110-02, harness assembly. 800010-01, cylinder and valve assembly. 800212-00 or 800212-03, regulator assembly. 800029-01, hose coupling assembly. 801500-15 or 40577, facepiece and tube assembly (below 32°F add 801432-00 or 22300-01 nosecup assembly to the above).
43	Globe	2540-W, 2540-B, 2550-W, 2550-B	2221-3, facepiece breathing tube, and quick connect assembly. 2489-2, high-pressure hose, regulator, and demand-valve assembly. (2489-9 for models 2540-B and 2550-B). 1058-18, cylinder and valve assembly. 2644-1, back-pack and harness assembly (below 32°F add 2254 nosecup to the above).

Table III-1. Self-contained breathing apparatus component parts, by approval number.

Approval number TC-13F-	Approval issued to	Model number(s)	Component parts, number(s) and description
		2526-W, 2526-B, 2552-W, 2552-B	2221-3, facepiece breathing tube, and quick connect assembly. 2489-6, hose, regulator, demand valve, and auxiliary quick connect fitting assembly. (2489-10 for models 2526-B and 2552-B) 1058-18, cylinder and valve assembly. 2644-1, back-pack and harness assembly (Below 32°F add 2254 nosecup to above).
44	SurvivAir	9038-00, 9038-02, 9838-00, 9838-02	9411-12 or 9413-20, facepiece. 9123-00, regulator. 9602-47, low-pressure warning. 9151-45, cylinder and valve assembly. 9457-00, back pack assembly. (Below 32°F add 9038-90 low-temperature kit to above).
45	SurvivAir	9038-20, 9038-22, 9838-20, 9838-22	9411-60 or 9413-60, facepiece. 9123-01, regulator. 9602-47, low-pressure warning. 9151-45, cylinder and valve assembly. 9457-00, back-pack assembly. (Below 32°F add 9038-90 low-temperature kit to above).
46	MSA	457150, 95061, 457151, 95068	96680 or 95940, facepiece. 96065, breathing tube assembly. 456104, cylinder and valve assembly. 456066, support assembly. 460255, regulator assembly. (Below 32°F add 96671 or 89963, nosecup assembly to above).
47	MSA	95063, 460262, 461697, 461703	96057 or 461614, facepiece. 96065, breathing tube assembly. 456104, cylinder and valve assembly. 456066, support assembly. 460256, regulator assembly. (Below 32°F add 455668, nosecup to the 96057 facepiece or the 96671 nosecup to the 461614 facepiece).

Table III-1. Self-contained breathing apparatus component parts, by approval number.

Approval number TC-13F-	Approval issued to	Model number(s)	Component parts, number(s) and description
48	Scott	900006	801450-13, facepiece assembly and breathing tube assembly. 802157-00, hose and coupling assembly. 800013-01, regulator assembly. 22034-01 or 22034-02/03, harness and cylinder assembly. 22025-01, coupling hose assembly. 15319/6141, air-supply hose. (Below 32° F add 801432-00 nose cup assembly to the above).
49	Scott	900007	801500-15, facepiece and breathing tube assembly. 802157-00, hose and coupling assembly. 800212-01, regulator assembly. 22034-01 or 22034-02/03, harness and cylinder assembly. 22025-01, coupling hose assembly. 15319/6141, air-supply hose. (Below 32° F add 801432-00 nose cup assembly to the above).
52	MSA	457156	96680, facepiece. 96065, breathing tube assembly. 455943, cylinder and valve assembly. 456041, regulator. 460744, carrier assembly. (Between 32° F and 25° F add 96671, nose cup to above).
53	SurvivaAir	9081-13, 9881-13 (Foster Couplings)	9425-23 or 9405-23, facepiece and regulator assembly. 9156-36, cylinder assembly. 9304-11 through 20, 9304-68, 9304-80 through 83, air-line hose. (Below 32° F add 9413-30 or 9411-30, nose cup assembly to the above).
54	SurvivaAir	9081-15, 9881-15 (Schrader Coupling)	9425-24 or 9405-24, facepiece and regulator assembly. 9155-35, cylinder assembly. 9304-41 through 50, 9304-70 through 73, 9304-85, air-line hose. (Below 32° F add 9413-30 or 9411-30, nose cup assembly to the above).

Table III-1. Self-contained breathing apparatus component parts, by approval number.

Approval number TC-13F-	Approval issued to	Model number(s)	Component parts, number(s) and description
55	MSA	76753	76760, breathing tube and mouthpiece assembly. 77140, cylinder and regulator assembly. 460743, carrier assembly.
56	MSA	96395, 455994	455862 or 455995, facepiece. 460623, breathing tube assembly. 460673, regulator-connector and pressure switch assembly. 455847, harness. 455021 and/or 455022, air-supply hose. 454081, cylinder and valve assembly.
56A	MSA	304213, 304194	304187, facepiece and breathing tube assembly. 454081, cylinder and valve assembly. 304182, regulator assembly. 304191, pressure switch assembly. 304199, carrier and harness assembly. 455021 and/or 455022, air-supply hose.
57	Drager	BG-174A/4	B174A, mask and hoses. B174A, harness and frame assembly. C174A/4, cylinder and valve. 9X18-28C02, canister.
58	Siebe Gorman	014422.10	014080.21, facepiece assembly. 032298.00, regulator and breathing tube assembly. 059976.03, harness and back plate assembly. 041382.01 or 041382.02, cylinder and valve assembly.
59	Siebe Gorman	014422.11	014080.22, facepiece assembly. 041388.00, regulator and breathing tube assembly. 059976.03, harness and back plate assembly. 041382.01 or 041382.02, cylinder and valve assembly.

Table III-1. Self-contained breathing apparatus component parts, by approval number.

Approval number TC-13F-	Approval issued to	Model number(s)	Component parts, number(s) and description
60	Scott	900050	801450-10, mask assembly. 801709-00, breathing tube assembly. 801685-00, manifold assembly. 801713-00, cylinder and valve assembly. 66220-00, canister assembly. 801738-00, housing cover assembly. 900050-10, housing assembly.
61	NSA	456989	94331, facepiece. 461998, regulator. 456660, cylinder and valve assembly. 460616, carrier assembly. 460614, regulator and hose assembly.
62	NSA	458178, 458479	96680, facepiece. 461998, regulator. 456660, cylinder and valve assembly. 460615, carrier assembly. 460613, regulator-connector assembly. 455021 and/or 455022, supply hose assemblies. (Between 32°F and -25°F add 96671 noseclip to the above).
63	Robertshaw	900-002-267 -01, -11	595-900-073-01, full facepiece or 595-900-074-01, half facepiece. 535-900-075, hose and quick-disconnect assembly. 900-002-231, regulator assembly. 535-900-068 or 535-900-069, air-supply hose. 904-003-197-01, container assembly.
64	Robertshaw	900-002-266-01 -02, -03, -04, -11, -12, -13 -14	595-900-068-05, full facepiece assembly or 595-900-065-05, half facepiece assembly. 904-003-190-01, -02, -03, -04, air reservoir and harness assembly, with 535-900-069, air-supply hose and additional lengths of 535-900-068, air-supply hose to a maximum length of 250 feet. 900-002-269-01 or 900-002-269-11, storage case. 904-003-206-01 or 904-003-206-02, compressed air container. 595-900-084-01, face mask and exhalation valve system.

Table III-1. Self-contained breathing apparatus component parts, by approval number.

Approval number TC-13F-	Approval issued to	Model number(s)	Component parts, number(s) and description
65	Robertshaw	900-002-267 -21, -31	595-900-073-01, full facepiece or 595-900-074-01, half-facepiece. 904-003-197-11, container assembly with line gage. 900-002-231, regulator.
66	Scott	900055-01, 900055-03, 900055-04	801450-40 or 8130, facepiece assembly. 802173-00, regulator assembly. 26037-01, hose assembly. 800298-01, regulator and coupling assembly. 801935-03, cylinder and valve assembly. 802200 or 800300, harness assembly. (Below 32° add 801432-00 nosecup assembly to the above).
67	Scott	900055-09, 900055-10, 900055-17 900055-18	801450-40 or 8130-6, facepiece assembly. 802173-00, regulator assembly. 26037-01, hose assembly. 800298-02 or 800298-03, regulator and coupling assembly. 801935-03, cylinder and valve assembly. 802200, harness assembly. 30010 and/or 30020, supply hose assemblies. (Below 32° add 801432-00 nosecup to the above).
68	Scott	900055-13, 900055-14	801450-05, facepiece assembly. 802236-01, regulator assembly. 902235-01, exhalation valve assembly. 26037-01, hose assembly. 900298-02 or 900298-03, regulator and coupling assembly. 801935-03, cylinder and valve assembly. 802200, harness assembly. 30010 and/or 30020, hose assemblies. (Below 32° add 801432-00 nosecup to the above).

Table III-1. Self-contained breathing apparatus component parts, by approval number.

Approval number TC-13F-	Approval issued to	Model number(s)	Component parts, number(s) and description
69	MSA	457159	96680, facepiece. 96065, breathing tube assembly. 455943, cylinder and valve assembly. 46707, regulator and hose assembly. 460710, harness and back-plate assembly. 455021 and/or 455022, air-supply hose. (Below 32°F add 96671 nosecup to above).
70	MSA	460713, 461698	96057 or 461614, facepiece. 96065, breathing tube assembly. 455943, cylinder and valve assembly. 460706, regulator hose assembly. 460710, harness and back-plate assembly. 455021 and/or 455022, air-supply hose. (Below 32°F add 96671 or 89863 nosecup to above).
71	Globe	2508	2217-2, facepiece and demand valve assembly with bypass. 1149-9, pressure regulator. 1058-24, cylinder, valve, and gage assembly. 1786-2, holster. (Below 32°F add 2254 nosecup assembly to above).
72	Globe	2509	2217-1, facepiece and demand valve assembly. 1783-10, manifold assembly. 1149-9, pressure regulator. 1058-24, cylinder, valve, and gage assembly. 1786-2, holster. 1783-10, manifold assembly with 1840-25 and/or 1840-50 and/or 1840-100, air-supply hose or 1783-6, manifold assembly with 1850-25, 1850-50, 1850-100, air-supply hose.

Table III-1. Self-contained breathing apparatus component parts, by approval number.

Approval number TC-13F-	Approval issued to	Model number(s)	Component parts, number(s) and description
73	Scott	900450	802181-01, back-pack assembly. 802167-01, mask facepiece assembly. 802240-01, harness assembly. 802239-01, cylinder and valve assembly. 802220-01, pressure reducer. 802202-01, demand regulator. 802228-01, high-pressure hose and coupling assembly. (Below 32°F add 60158-00 lens preparation to above).
74	Globe	2505, 2505-4	2217-1, facepiece and demand valve assembly. 1149-8, pressure regulator. 1058-24, cylinder, valve and gage assembly. 1552, bag. 1783-4, manifold assembly with 1840-25, 1840-50, and/or 1840-100 air-supply hose; or 1783-11 manifold assembly with 1850-25, 1850-50, or 1850-100 air-supply hose. (Below 32°F add 2254 noseclip assembly to the above).
75	Globe	2503	2217-2, facepiece and demand valve assembly with bypass. 1149-8, pressure regulator. 1058-24, cylinder, valve, and gage assembly. 1552, bag. (Below 32°F add 2254 noseclip assembly to the above).
76	Scott	900455	802181-01, back-pack assembly. 802167-01, mask facepiece assembly. 802240-01, harness assembly. 802239-01, cylinder and valve assembly. 802220-01, pressure reducer. 802260-01, pressure demand regulator. 802228-01, high-pressure hose and coupling assembly. (Below 32°F add 60158-00 lens preparation to above). 802256-01, gage assembly.

Table III-2. Gas masks component parts, by approval number.

Approval number TC-14G-	Approval issued to	Model number(s)	Component parts, number(s) and description
82	MSA	455299	455299, respirator assembly.
83	Drager	810	FSR810, respirator assembly.
84	MSA	461481, 461482, 461483, 461484, 461485, 461486	95940 or 96680, facepiece. 88306, 457168, or 457175, breathing tube assembly. 84937 or 84938, harness. 461480 (TC-14G-84), canister.
85	Scott	601211-17, 601221-17 60111-17 60121-17 601511-17 601521-17	742, 805, or 600121, facepiece. 6108-10 or 6110-27, breathing tube assembly. 565 or 600309-00, harness. 084-VCL (TC-14G-85), canister.
86	MSA	448983, 448984, 448985, 448986	95940 or 96680, facepiece. 448972 (TC-14G-86), canister.
87	MSA	448975, 448976, 448977, 448978	95940 or 96680, facepiece. 448974 (TC-14G-87), canister.
88	MSA	448979, 448980, 448981, 448982	95940 or 96680, facepiece. 448973 (TC-14G-88), canister.
89	MSA	460131, 460132, 460133, 460134	95940 or 96680, facepiece. 460113 (TC-14G-89), canister.
91	Norton	7820, 7820S, 7829, 7829S 7820H 7820SN 7829N 7829SN	7600-9 or 7600-9S, facepiece. 780060 or 780061, hose assembly. 780039 or 780041, harness assembly. 780062, connector. 7800-2VC (TC-14G-91), canister.

Table III-2. Gas masks component parts, by approval number.

Approval number TC-14G-	Approval issued to	Model number(s)	Component parts, number(s) and description
92	HSA	461133, 461134, 461140, 461141	95940 or 96680, facepiece. 461132 (TC-14G-92), canister.
93	Willson	2164F, 2264F	2100 or 2200, facepiece assembly. 64F (TC-14G-92), canister.
94	Willson	2161F, 2261F	2100 or 2200, facepiece assembly. 61F (TC-14G-94), canister.

Table III-3. Supplied-air respirators component parts, by approval number.

Approval number TC-19C-	Approval issued to	Model number(s)	Component parts, number(s) and description
64	Casco	PI-800	801-1-AA, 801-1-DA, or 801-1-NA, hood assembly. 800-2 or 800-21, breathing tube assembly. 800-315, 800-325, 800-350, 800-375, or 800-310, air-supply hose assembly. 800-6, quick disconnect. 800-5, harness. For Type CE add W-30-2 or W-30A cover lens or W-30SB-2, screen to the above.
64	U.S. Safety	PI-800	801-1-AA, 801-1-DA, or 801-1-NA, hood assembly. 800-2 or 800-21, breathing tube assembly. 800-315, 800-325, 800-350, 800-375, or 800-310, air-supply hose assembly. 800-6, quick disconnect. 800-5, harness. For Type CE add W-W-30-2 or W-30A cover lens or W-30SB-2, screen to the above.
65	SurvivAir	9011-12 9811-12	9404-00 or 9424-00, facepiece and regulator assembly. 9454-00, waist belt. 9304-11 through 20, 9304-68, or 9304-80 through 83, airline hose.
66	SurvivAir	9011-14 9811-14	9405-02 or 9424-02, facepiece and regulator assembly. 9454-00, waist belt. 9304-41 through 50, 9304-70 through 73, or 9304-85, airline hose.
67	SurvivAir	9011-13 9811-13	9405-00 or 9425-00, facepiece and regulator assembly. 9454-00, waist belt. 9304-11 through 20, 9304-68 or 9304-80 through 83, airline hose.
68	SurvivAir	9011-15 9811-15	9405-02 or 9425-02, facepiece and regulator assembly. 9454-00, waist belt. 9304-41 through 50, 9304-70 through 73, 9304-85, airline hose.
69	3M	W-840	W-5002, helmet. W-2800, air-regulating valve and W-5114 breathing tube assembly. W-9435, air-supply hose.

Table III-3. Supplied-air respirators component parts, by approval number.

Approval number TC-19C-	Approval issued to	Model number(s)	Component parts, number(s) and description
70	3M	W-810	W-5003, helmet.
			W-2800, air-regulating valve and W-5114 breathing tube assembly.
			W-9435, air-supply hose.
		W-870	W-5005, helmet.
			W-2800, air-regulating valve and W-5114 breathing tube assembly.
			W-9435, air-supply hose.
		W-858	W-5006, helmet.
			W-2800, air-regulating valve and W-5114 breathing tube assembly.
			W-9435, air-supply hose.
		W-856	W-5201, hood.
W-2800, air-regulating valve and W-5114 breathing tube assembly.			
W-9435, air-supply hose.			
W-275	W-2850, economy hat		
	W-2800, air-regulating valve.		
	W-9435, air-supply hose.		
W-280	W-5114, breathing tube		
	W-2800, air-regulating valve.		
	W-5201, economy hood and vest.		
W-820	W-9435, air-supply hose.		
	W-5114, breathing tube.		
	W-5003, helmet		
		W-820	W-6803, air and temperature regu- lating valve, and W-5114 breathing tube assembly.
			W-9435, air-supply hose.
			W-5006, helmet.
		W-888	W-6803, air and temperature regu- lating valve, and W-5114 breathing tube assembly.
			W-9435, air-supply hose.
			W-5005, helmet.
		W-880	W-6803, air and temperature regu- lating valve, and W-5114 breathing tube assembly.
			W-9435, air-supply hose.
			W-5003, helmet

Table III-3. Supplied-air respirators component parts, by approval number.

Approval number TC-19C-	Approval issued to	Model number(s)	Component parts, number(s) and description
71	Scott	W-890	W-5002, helmet.
			W-6803, air and temperature regulating valve, and W-5114 breathing tube assembly.
			W-9435, air-supply hose.
72	Scott	W-881	W-2810, helmet.
			W-6803, air and temperature regulating valve, and W5114 breathing tube assembly.
			W-9435, air-supply hose.
73	Scott	W-276	W2850, economy hat.
			W6803CA, air and temperature regulating valve.
			W9435, air-supply hose.
74	Scott	W-281	W5114, breathing tube assembly.
			W-6803CA, air and temperature regulating valve.
			W-9435, air-supply hose.
75	Scott	W-281	W5201, economy hood and vest.
			W-5114, breathing tube assembly.
			742 or 4704, facepiece.
76	Scott	W-281	6119, breathing tube.
			4196 or 4196-1, flow control valve and cartridge assembly.
			4286, air-supply hose.
77	Scott	W-281	742 or 4704, facepiece.
			6119, breathing tube.
			4199 or 4199-1, flow control valve and cartridge assembly.
78	Scott	W-281	4225, air-supply hose.
			801450-40/41, facepiece assembly.
			800227-00, regulator assembly.
79	Scott	W-281	26022-01/03, supply hose or
			26022-01/03, supply hose with
			26025-01, strap and belt assembly and 30010/30020 series extension hose.

Table III-3. Supplied-air respirators component parts, by approval number.

Approval number TC-19C-	Approval issued to	Model number(s)	Component parts, number(s) and description
74	Scott	801548	801450-05, facepiece assembly. 802236-01, regulator assembly. 802235-01, exhalation valve assembly. 26022-01/03, supply hose or 26022-01/03, supply hose with 26025-01, strap and belt assembly and 30010/30020 series extension hose.
75	MSA	457165, 84283, 457164 93928, 46539, 94988	96680, 95940, or 94331, facepiece. 457158, breathing tube assembly. 81070 or 92656, regulator-connector. 9961, web belt. 455021 or 455022, hose.
77	MSA	457623	96680, facepiece. 88306, breathing tube assembly. 460626, harness assembly. 460625, stake and funnel assembly. 17273, air-supply hose.
78	MSA	460862, 460863, 460864, 460865	94331, 95940, or 96680, facepiece with 9961, web belt or 460861 facepiece with 78362 harness. 457158, breathing tube assembly. 460814, control valve. 455021 and/or 455022, air-supply hose.
79	Encon	461708, 461717, 461718, 461719	94331, 95940, 96680, facepiece with 9961 web belt or 460861 face- piece with 78362 harness. 457158, breathing tube assembly. 461706, valve. 455021 and/or 455022, air-supply hose.
79	Encon	6400	6400-1, helmet and shroud assembly. 6400-6, 6400-6A, or 6400-6B, inner cape with 6400-5, 6400-5L, 6400-16-5 or 6400-16-5L, outer cape. 6400-10, cold tube. 6400-9, air-supply hose assembly. 6400-7 or 6400-15, air control valve. 6400-16, welder's lens adapter.
80	MSA	460903	460886, hood. 94379, cape. 95302, filter. 460893, filter holder. 9961, web belt. 460814, valve. 455021 or 455022, air-supply hose.

Table III-3. Supplied-air respirators component parts, by approval number.

Approval number TC-19C-	Approval issued to	Model number(s)	Component parts, number(s) and description
		460904	460886, hood. 94029, collar. 95302, filter. 460893, filter holder. 9961, web belt. 460814, valve. 455021 or 455022, air-supply hose.
		460905	460886, hood. 94379, cape. 95302, filter. 460893, filter holder. 9961, web belt. 460829, connector. 455021 or 455022, air-supply hose.
		460906	460886, hood. 94029, collar. 95302, filter. 460893, filter holder. 9961, web belt. 460829, connector. 455021 or 455022, air-supply hose.
		461709	460886, hood. 94379, cape. 95302, filter. 460893, filter holder. 9961, web belt. 461706, valve. 455021 or 455022, air-supply hose.
		461710	460886, hood. 94029, collar. 95302, filter. 460893, filter holder. 9961, web belt. 461706, valve. 455021 or 455022, air-supply hose.
		461711	460886, hood. 94379, cape. 95302, filter. 460893, filter holder. 9961, web belt. 461707, connector. 455021 or 455022, air-supply hose.

Table III-3. Supplied-air respirators component parts, by approval number.

Approval number TC-19C-	Approval issued to	Model number(s)	Component parts, number(s) and description
81	MSA	461712	460886, hood.
			94029, collar.
			95302, filter.
			460893, filter holder.
			9961, web belt.
		460907	461707, connector.
			455021 or 455022, air-supply hose.
			72800 or 460885, hood.
			94029, collar.
			460814, valve.
		460808	9961, web belt.
			455021 or 455022, air-supply hose.
			460885, hood.
			94417, cape.
			460814, valve.
		460909	9961, web belt.
			455021 or 455022, air-supply hose.
			460885, hood.
			450924, cape.
			460814, valve.
		460910	9961, web belt.
			455021 or 455022, air-supply hose.
			460885, hood.
			94488, collar.
			460814, valve.
		461713	9961, web belt.
			455021 or 455022, air-supply hose.
			72800 or 460885, hood.
			94029, collar.
			461706, valve.
		461714	9961, web belt.
			455021 or 455022, air-supply hose.
			460885, hood.
			94417, cape.
			461706, valve.
		461715	9961, web belt.
			455021 or 455022, air-supply hose.
			460885, hood.
			450924, cape.
			461706, valve.
		461715	9961, web belt.
			455021 or 455022, air-supply hose.
			460885, hood.
			450924, cape.
			461706, valve.
		461715	9961, web belt.
			455021 or 455022, air-supply hose.
			460885, hood.
			450924, cape.
			461706, valve.

Table III-3. Supplied-air respirators component parts, by approval number.

Approval number TC-19C-	Approval issued to	Model number(s)	Component parts, number(s) and description
82	Pulmosan	461716	460885, hood.
			94488, collar.
			461706, valve.
			9961, web belt.
			455021 or 455022, air-supply hose.
83	Willson	AL180 #10168	10939, facepiece and breathing tube assembly.
			10942, belt with orifice coupler assembly.
			20138, 20141, or 20144, air-supply hose.
			R726 or R727, facepiece.
			R728, breathing tube subassembly.
84	Bullard	46, 77	R729, airline belt subassembly.
			R714, air-supply hose.
			46-0 or 77-0, helmet assembly.
			77-2, inner cuff.
			77-3-HY, or 46-3HG, or 77-3-LY, or 46-3-LG, or 77-3-LR, outer cape.
84	Anderson	46, 77	46-4-HP or 77-AC, or HCE, flow control valve.
			V-10-25-EXT, V-10-50-EXT or V-10-100-EXT air-supply hose.
			46-0 or 77-0, helmet assembly.
			77-2, inner cuff.
			77-3-HY, or 46-3-HG, or 77-3-LY, or 46-3-LG, or 77-3-LR, outer cape.
84	Sanstorm	46, 77	46-4-HP or 77-AC, or HCE, flow control valve.
			V-10-25-EXT, V-10-50-EXT or V-10-100-EXT, air-supply hose.
			46-0 or 77-0, helmet assembly.
			77-2, inner cuff.
			77-3-HY, or 46-3-HG, or 77-3-LY, or 46-3-LG, or 77-3-LR, outer cape.
84	Sanstorm	46, 77	46-4-HP or 77-AC, or HCE, flow control valve.
			V-10-25-EXT, V-10-50-EXT or V-10-100-EXT, air-supply hose.
			46-0 or 77-0, helmet assembly.
			77-2, inner cuff.
			77-3-HY, or 46-3-HG, or 77-3-LY, or 46-3-LG, or 77-3-LR, outer cape.

Table III-3. Supplied-air respirators component parts, by approval number.

Approval number TC-19C-	Approval issued to	Model number(s)	Component parts, number(s) and description
84	Pauli & Griffin	46, 77	46-0 or 77-0, helmet assembly. 77-2, inner cuff. 77-3-HY, or 46-3-HG, or 77-3-LY, or 46-3-LG, or 77-3-LR, outer cape. 46-4-HP or 77-AC, or HCE, flow control valve. V-10-25-EXT, V-10-50-EXT or V-10-100-EXT, air-supply hose.
84	Empire	46, 77	46-0 or 77-0, helmet assembly. 77-2, inner cuff. 77-3-HY, or 46-3-HG, or 77-3-LY, or 46-3-LG, or 77-3-LR, outer cape. 46-4-HP or 77-AC, or HCE, flow control valve. V-10-25-EXT, V-10-50-EXT or V-10-100-EXT, air-supply hose.
84	Kelco	46, 77	46-0 or 77-0, helmet assembly. 77-2, inner cuff. 77-3-HY, or 46-3-HG, or 77-3-LY, or 46-3-LG, or 77-3-LR, outer cape. 46-4-HP or 77-AC, or HCE, flow control valve. V-10-25-EXT, V-10-50-EXT or V-10-100-EXT, air-supply hose.
84	Quaker State	46, 77	46-0 or 77-0, helmet assembly. 77-2, inner cuff. 77-3-HY, or 46-3-HG, or 77-3-LY, or 46-3-LG, or 77-3-LR, outer cape. 46-4-HP or 77-AC, or HCE, flow control valve. V-10-25-EXT, V-10-50-EXT or V-10-100-EXT, air-supply hose.
84	Deane & Co.	46, 77	46-0 or 77-0, helmet assembly. 77-2, inner cuff. 77-3-HY, or 46-3-HG, or 77-3-LY, or 46-3-LG, or 77-3-LR, outer cape. 46-4-HP or 77-AC, or HCE, flow control valve. V-10-25-EXT, V-10-50-EXT or V-10-100-EXT, air-supply hose.

Table III-3. Supplied-air respirators component parts, by approval number.

Approval number TC-19C-	Approval issued to	Model number(s)	Component parts, number(s) and description
84	Bowen Tools	46, 77	46-0 or 77-0, helmet assembly. 77-2, inner cuff. 77-3-HY, or 46-3-HG, or 77-3-LY, or 46-3-LG, or 77-3-LR, outer cape. 46-4-HP or 77-AC, or HCE, flow control valve. V-10-25-EXT, V-10-50-EXT or V-10-100-EXT, air-supply hose.
85	Clemco	PCE	46-0, helmet assembly. 77-2, inner cuff. 46-3-HG or 46-3-LG, outer cape. 46-4-HP or HCE, flow control valve. V-10-25, -50, or -100, extension.
86	AO	R6099	51282, respirator subassembly. 51281, valve and belt assembly. 56030, 56031, or 56032, air-supply hose.
87	3M	W-272 W-270, W-271 W-274 W-277 W-282	For Type C: W5003, W5003RA, or W5005, helmet, or W2810, W2850, or W5201, hood. W2817, air and temperature regula- ting valve. W5114, breathing tube assembly. W9435, air-supply hose.
88	Binks	40-160	For Type CE: W5006 or W5006RA, helmet. W2817, air and temperature regula- ting valve. W5114, breathing tube assembly. W9435, air-supply hose. 40-159, facepiece. 40-158, breathing tube assembly. 40-157, control valve. 40-156, web belt. 40-154 and/or 40-155, air-supply hose.
89	AO	R56001	56001, hood assembly. 56017, canopy assembly. 56016, belt. 56013, coupling. 56030, 56031, or 56032, air-supply hose.

Table III-3. Supplied-air respirators component parts, by approval number.

Approval number TC-19C-	Approval issued to	Model number(s)	Component parts, number(s) and description
90	Robertshaw	900-002-264-01 900-002-264-11	595-900-068-01, full facepiece assembly, or 595-900-065-01, half facepiece assembly. 904-003-244 or 904-003-245, harness assembly. 900-002-231, regulator assembly. 595-900-202, hose quick disconnect assembly. 535-900-068 or 535-900-069, air- supply hose.
		900-002-264-02 900-002-264-12	595-900-068-02, full facepiece assembly, or 595-900-065-02, half facepiece assembly. 904-003-244 or 904-003-245, harness assembly. 535-900-252, hose quick disconnect assembly. 900-002-231, regulator assembly. 535-900-068 or 535-900-069, air- supply hose.
		900-002-264-03 900-002-264-13	595-900-068-03, full facepiece assembly or 595-900-065-03, half facepiece assembly. 904-003-244 or 904-003-245, harness assembly. 535-900-253, hose quick disconnect assembly. 900-002-231, regulator assembly. 535-900-068 or 535-900-069, air- supply hose.
		900-002-264-04 900-002-264-14	595-900-068-04, full facepiece assembly or 595-900-065-04, half facepiece assembly. 904-003-244 or 904-003-245, harness assembly. 535-900-255, hose quick disconnect assembly. 900-002-231, regulator assembly. 535-900-068 or 535-900-069, air- supply hose.
91	MSA	457157, 93224, 93225	96680, 95940, or 94431, facepiece assembly. 93207, regulator hose assembly. 461998, regulator. 455021 or 455022, air-hose assembly. 93210, belt assembly.

Table III-3. Supplied-air respirators component parts, by approval number.

Approval number TC-19C-	Approval issued to	Model number(s)	Component parts, number(s) and description
92	Globe	2185-6 2185-4	2217-4, facepiece and demand valve with continuous-flow control. 1947-5, airline fitting. 1461-2, waist belt. 1840-25 and/or 1840-50 and/or 1840-100, air-supply hose assemblies; or, 1947-2, airline fitting with 1850-25 or 1850-50 or 1850-100 or 1850-200, air-supply hose assemblies.
93	MSA	89104, 461669, 461699, 461700	96057 or 461614, facepiece assembly. 457158, breathing tube. 46228 or 461670, regulator assembly. 9961, belt assembly. 455021 or 455022, air hose assembly. R740 or R741, full facepiece assembly. R728, breathing tube assembly. R729, belt assembly. R714, air-supply hose.
94	Willson	1850 1860	10783, facepiece and breathing tube assembly. 10942, belt with orifice coupler assembly. 20138, 20141, or 20144, air-supply hose (with 10924 or 10954 cushion).
95	Pulmosan	AL330	801-AA, 801-3A, or 801-NA, hood assembly. 801-2, breathing tube assembly. 801-5, harness assembly. 800-6, quick disconnect assembly. 800-315, 800-325, 800-350, 800-375, or 800-310, air-supply hose assembly. For Type CE add W-30-2 or W-30A, cover lens or W-30SB-2, screen to the above.
96	Cesco	801	801-AA, 801-3A, or 801-NA, hood assembly. 801-2, breathing tube assembly. 801-5, harness assembly. 800-6, quick disconnect assembly. 800-315, 800-325, 800-350, 800-375, or 800-310, air-supply hose assembly. For Type CE add W-30-2, cover lens or W-30SB-2, screen to the above.
96	U.S. Safety	801	801-AA, 801-3A, or 801-NA, hood assembly. 801-2, breathing tube assembly. 801-5, harness assembly. 800-6, quick disconnect assembly. 800-315, 800-325, 800-350, 800-375, or 800-310, air-supply hose assembly. For Type CE add W-30-2, cover lens or W-30SB-2, screen to the above.

Table III-3. Supplied-air respirators component parts, by approval number.

Approval number TC-19C-	Approval issued to	Model number(s)	Component parts, number(s) and description
97	Scott	802280-01 -02, -05, -06, -09, -10, -13, -14	802281-01 or 802281-02, facepiece assembly. 800227-00, regulator assembly. 64152-02, exhalation valve assembly. 26022-01 or 26022-03, supply hose, or 26022-01 or 26022-03, supply hose with 26025-01, strap and belt assembly and 30010 or 30020, extension hose.
98	Scott	802280-03, -04, -07, -08, -11, -12, -15, -16	802281-01 or 802281-02, facepiece assembly. 802236-01, regulator assembly. 802275-01, exhalation valve assembly. 26022-01 or 26022-03, supply hose, or 26022-01 or 26022-03, supply hose with 26025-01, strap and belt assembly, and 30010 or 30020, extension hose.

Table III-4. Dust, fume, and mist respirators component parts, by approval number.

Approval number TC-21C-	Approval issued to	Model number(s)	Component parts, number(s) and description
132	3M	8710	8710 (TC-21C-132), respirator assembly.
133	MSA	459440	7-201 or 449703, facepiece. 459032 (TC-21C-133), filter. 459027, filter covers.
134	MSA	459438 461011	7-201 or 449703, facepiece. 459321 (TC-21C-134), filters. For belt mounted, 7-202 facepiece, breathing tube and plenum assembly and 459321 filters.
135	MSA	459439 461010	7-201 or 449703, facepiece 459322 (TC-21C-135), filters. For belt mounted, 7-202 facepiece, breathing tube, and plenum assembly and 459322 filters.
136A	3M	W-250 W-252 W-254 W-255 W-260 W-261 W-267 W-266 W-278	W-2031 (TC-21C-136A), filter W-2009AA or W-2009AD, back pack harness, or W-2008 or W-2008BA, machine mounting. W-5005, W-5003, W-5002, W-5201, W-2810, or W-2850, helmet.
137	3M	W-251 W-265	W-2031 (TC-21C-136A), filter. W-2090, breathing tube. W-2009AD or W-2009AA, back pack harness. W-2008 or W2008BA, machine mounting. W5006BA, sandblasting helmet.
138	MSA	96000 457344	96042 (TC-21C-138), filter. 96000 or 457344, facepiece.
139	Willson	560	AR699, respirator component. R707, filter/cartridge holder assembly. R60 (TC-21C-139), filter. R635, filter retainer.
140	Willson	1210	AR700, basic respirator assembly. R10 (TC-21C-140), filters. R682, filter retainers.
141	Willson	1211	AR700, basic respirator assembly. R11 (TC-21C-141), filters.
142	Willson	1212	AR700, basic respirator assembly. R12 (TC-21C-142), filters.

Table III-4. Dust, fume, and mist respirators component parts, by approval number.

Approval number TC-21C-	Approval issued to	Model number(s)	Component parts, number(s) and description
143	Willson	1400	1400 (TC-21C-143), respirator assembly.
144	AO	R5030	50206, basic respirator sub-assembly. R30 (TC-21C-144/145), filters. 51062, filter covers.
145	AO	R6030	51071, basic respirator sub-assembly. R30 (TC-21C-144/145), filters. 51062, filter covers.
147	AO	R1050	R1050 (TC-21C-147), respirator assembly.
149	Scott	662-1, 662-2	805 or 742, facepiece. 502-R (TC-21C-149), filter.
150	MSA	88479, 457117	96680 or 95940, facepiece. 88480 (TC-21C-150), filter.
151	Norton	7506 7506M	7500-30, 7500-30M or 75BP30, facepiece assembly. 7500-6 (TC-21C-151), filter. 7500-14, filter cover. 7500-13, filter holders.
152	Norton	7580 7580M	7500-30, facepiece assembly. 7500-8 (TC-21C-152), filter.
153	Norton	7406L 7406LM	7400-30 or 7400-30M, facepiece assembly. 7400-6 (TC-21C-151), filter. 7400-14, filter cover.
154	Sellstrom	315-F100	B222, respirator assembly. F100 (TC-21C-154), filter.
154	Cover	1482-F100	B222, respirator assembly. F100 (TC-21C-154), filter.
154	Safe-Tex	236-F100	B222, respirator assembly. F100 (TC-21C-154), filter.
154	Eastern	E-450	B222, respirator assembly. F100 (TC-21C-154), filter.
155	MSA	460185	7-204 or 460560, facepiece. 459322 (TC-21C-135), filter.

Table III-4. Dust, fume, and mist respirators component parts, by approval number.

Approval number TC-21C-	Approval number issued to	Model number(s)	Component parts, number(s) and description
156	MSA	461683	461683, facepiece. 457481 (TC-21C-156), filter.
157	Pulmosan	C-264	10768, body assembly, with either 10924, 10795, or 10954, face cushion. C-264-8, adapter and filter cap. C-264-7 (TC-21C-157), filter.
158	Pulmosan	C-263	10768, body assembly. 10924, 10954, face cushion. C-263-7 (TC-21C-158), filter.
159	MSA	460357	460357, facepiece. 457481 (TC-21C-156), filter.
160	A0	R5057, R6057	50206 or 51071, basic respirator subassembly. R57 (TC-21C-160), filter.
161	A0	R5056, R6056	50206 or 51071, basic respirator subassembly. R56 (TC-21C-161), filter.
162	A0	R8100	51294, basic respirator sub-assembly. R100 (TC-21C-162), filter. 51347, filter cover.
163	Casco	94R20	94, facepiece assembly. R20 (TC-21C-163), filter. 94R9, filter screen.
164	Glendale	GR2000, GR4000	F-200 or F-400, facepiece. F-10 (TC-21C-164), filter. F-14, filter cover.
165	Pulmosan	L800	10771, body assembly. 10924, 10954, or 10795, face cushion. C-24-7 (TC-21C-157), filter. L-800-8, filter cap.
166	A0	R2090N	51460, basic respirator sub-assembly. R90N (TC-21C-166), filter. 51062, filter cover.

Table III-4. Dust, fume, and mist respirators component parts, by approval number.

Approval number TC-21C-	Approval issued to	Model number(s)	Component parts, number(s) and description
167	DeVilbiss	MSD-507	51461, basic respirator sub-assembly. MSD-508 (TC-21C-167), filter, 51062, filter cover.
168	Norton	75BP80	75BP30, facepiece assembly. 7500-8 (TC-21C-152), filter.
169	AO	R8156	51294, basic respirator sub-assembly. R156 (TC-21C-169), filter.
170	Norton	7170	7170 (TC-21C-170), respirator.
170A	Norton	7170	7170 (TC-21C-170A), respirator.
171	Norton	7680, 7680N	7600-8, facepiece assembly. 7500-8 (TC-21C-152), filter. 7600-10, noseclip assembly.
172	Glendale	GR1000, GR3000	F-100 or F-300, facepiece. F-10A (TC-21C-172), filter. F-14, filter cover.
173	3M	8800	8800 (TC-21C-173), respirator.
174	Binks	40-150	40-150 (TC-21C-174), respirator assembly.
175	Norton	7100, 7100V	7100-30, facepiece assembly. 7100-7 (TC-21C-175), filter.
176	3M	9900	9900 (TC-21C-176), respirator.
177	Scott	604035-00, 6411-2100, 6411-3100, 6413-2100 6413-3100	600131-03 or 600131-01, facepiece with 600109-00 or 600118-00, head straps, or 600126-00, facepiece assembly. 64134-00, filter holder. 64100-00, filter retainer. 64127-00 (TC-21C-177), filter.
178	Scott	604022-50, 6411-2050, 6411-3050, 6413-2050, 6413-3050	600131-03 or 600131-01, facepiece with 600109-00 or 600118-00, head straps, or 600126-00, facepiece assembly. 60412-50 (TC-21C-178), filter.

Table III-4. Dust, fume, and mist respirators component parts, by approval number.

Approval number TC-21C-	Approval issued to	Model number(s)	Component parts, number(s) and description
179	U.S. Safety	150T10	150, facepiece assembly. PI 159T58, filter holder. 159T59, filter cover. 158T10 (TC-21C-179), filter.
180	Casco	95RC15	95, facepiece assembly. PI159T58, filter holder. 95R8, filter cover. RC15 (TC-21C-180), filter.
181	MSA	462240	7-202, facepiece, breathing tube and plenum assembly. 459032 (TC-21C-133), filter. 459027, filter cover.
182	Willson	1610, 1710	AR1600 or AR1700, facepiece. R10 (TC-21C-140), filter. R682, filter retainer.
183	Willson	1611, 1711	AR1600 or AR1700, facepiece. R11 (TC-21C-141), filter.
184	Willson	1612, 1712	AR1600 or AR1700, facepiece. R12 (TC-21C-142), filter.
186	MSA	463353, 463354, 463355	463352, 463246, or 463356, facepiece. 463380, motor-blower and hose assembly. 463284 (TC-21C-186), filter. 463239, battery. 463469, belt.
187	MSA	461847	7-204, facepiece. 459321 (TC-21C-134), filter.
188	MSA	461845	7-204, facepiece. 459032 (TC-21C-133), filter. 459027, filter cover.
189	Glendale	GR-2026, GR-4026	F-200 or F-400, facepiece. C-26 (TC-21C-189), filter.

Table III-5. Chemical-cartridge respirators component parts, by approval number.

Approval number TC-23C-	Approval issued to	Model number(s)	Component parts, number(s) and description
40	MSA	459433 461005 460852	449703 or 7-201, facepiece. 459315 (TC-23C-40), cartridges. For belt mounted: 7-202 facepiece, breathing tube, and plenum assembly, and 459315 (TC-23C-40) cartridges. For dusts and mists add 459032 (TC-21C-133) filters and 459027 filter covers to above.
41	MSA	459434 461006	449703 or 7-201, facepiece. 459316 (TC-23C-41), cartridges. For belt mounted: 7-202 facepiece, breathing tube, and plenum assembly, and 459316 (TC-23C-41), cartridges. For dusts and mists, add 459032 (TC-21C-133) filters and 459027 filter covers to above.
43	MSA	459436 461008	449703 or 7-201, facepiece. 459318 (TC-23C-43), cartridges. For belt mounted: 7-202 facepiece, breathing tube and plenum assembly, and 459318 (TC-23C-43) cartridges. For dusts and mists, add 459032 (TC-21C-133) filters and 459027 filter covers to the above.
47	MSA	459435 461007	449703 or 7-201, facepiece. 459317 (TC-23C-47), cartridges. For belt mounted: 7-202 facepiece, breathing tube, and plenum assembly, and 459317 (TC-23C-47) cartridges. For dusts and mists, add 459032 (TC-21C-133) filters and 459027 filter covers to the above.
49	Norton	7501 7501M	7500-30 or 7500-30M, facepiece. 7500-1 (TC-23C-49), cartridges.
50	Willson	1221	AR700, basic respirator assembly. R21 (TC-23C-50), cartridges.
51	Willson	122110	AR700, basic respirator assembly. R21 (TC-23C-50), cartridges. R10 (TC-21C-140), filters. R682, filter retainers.
52	Willson	122113	AR700, basic respirator assembly. R21 (TC-23C-50), cartridges. R13 (TC-23C-52), filters.

Table III-5. Chemical-cartridge respirators component parts, by approval number.

Approval number TC-23C-	Approval issued to	Model number(s)	Component parts, number(s) and description
54	Willson	122115	AR700, basic respirator assembly. R21 (TC-23C-50), cartridges. R15 (TC-23C-54), filters. R683, filter retainers.
55	Scott	70-CL	70-CL (TC-23C-55), respirator assembly.
56	AO	R5051	50206, basic respirator sub- assembly. R51 (TC-23C-56/57), cartridges.
57	AO	R6051	51071, basic respirator sub- assembly. R51 (TC-23C-56/57), cartridges.
59	DeVilbiss	MSE-502	50728, basic respirator sub- assembly. MSE-506 (TC-23C-59), cartridges.
60	AO	R5052	50206 basic respirator assembly. R52 (TC-23C-60), cartridges.
61	AO	R6052	51071, basic respirator sub- assembly. R52 (TC-23C-60), cartridges.
63	Norton	7504 7504M	7500-30 or 7500-30M, facepiece assembly. 7500-4 (TC-23C-63), cartridges.
64	Norton	7514 7514M	7500-30 or 7500-30M, facepiece assembly. 7500-4 (TC-23C-63), cartridges. 7500-6 (TC-21C-151) filters. 7500-14, filter covers.
65	Norton	7503 7503M	7500-30, 75BP30, or 7500-30M, facepiece assembly. 7500-3 (TC-23C-65), cartridges.
66	Norton	7513 7513M	7500-30 or 7500-30M, facepiece assembly. 7500-3 (TC-23C-65), cartridges. 7500-6 (TC-21C-151) filters. 7500-14, filter covers.
70	Willson	1224	AR700, basic respirator assembly. R24 (TC-23C-70), cartridges.
71	Willson	122410	AR700, basic respirator assembly. R24 (TC-23C-70), cartridges. R10 (TC-21C-140), filters. R682, filter retainers.

Table III-5. Chemical-cartridge respirators component parts, by approval number.

Approval number TC-23C-	Approval issued to	Model number(s)	Component parts, number(s) and description
73	Norton	7511 7511M	7500-30 or 7500-30M, facepiece assembly. 7500-1 (TC-23C-49), cartridges. 7500-6 (TC-21C-151), filters. 7500-14, filter covers.
74	Norton	7549 7549M	7500-30 or 7500-30M, facepiece assembly. 7500-21 (TC-23C-74), cartridges. 7500-23 (TC-23C-74), filters. 7500-14, filter covers.
75	Norton	7531 7531M	7500-30 or 7500-30M, facepiece assembly. 7500-1 (TC-23C-49), cartridges. 7500-10 (TC-23C-75), filters. 7500-26, filter covers.
75	Acme Auto-motive Finishes	27	7500-30 or 7500-30M, facepiece assembly. 7500-1 (TC-23C-49), cartridges. 7500-10 (TC-23C-75), filters. 7500-26, filter covers.
76	Willson	1225	AR700, basic respirator assembly. R25 (TC-23C-76), cartridges.
77	Willson	122510	AR700, basic respirator assembly. R25 (TC-23C-76), cartridges. R10 (TC-21C-140), filters. R682, filter retainers.
78	3M	W-262, W-263 W-264 W-268 W-279	W-2801, powered air purifier. W-2031 (TC-21C-136A), filter. W-2114 (TC-23C-78), cartridge. W-5005, helmet, W-2810, hood, or or W-2850, economy hat. W-2804 pesticide helmet assembly. W-2851, softcap.
79	MSA	448848 461009	7-201 or 449703, facepiece assembly. 448847 (TC-23C-79), cartridges. For belt mounted, 7-202 facepiece, breathing tube and plenum assembly, and 448847 (TC-23C-79), cartridges.
80	MSA	448849 462241 460853	7-201 or 449703, facepiece assembly. 459315 (TC-23C-40), cartridges. 448842 (TC-23C-80), filters. 448844, filter covers. For belt mounted, 7-202 facepiece, breathing tube and plenum assembly, 459315 (TC-23C-40), cartridges, 448842 (TC-23C-80), filters, and 448844, filter covers.

Table III-5. Chemical-cartridge respirators component parts, by approval number.

Approval number TC-23C-	Approval issued to	Model number(s)	Component parts, number(s) and description
81	Pulmosan	C-256	10768, body assembly with either 10924, 10954, or 10792, face cushion. 17160 (TC-23C-81), cartridge.
82	AO	R5053, R6053	50206 or 51071, basic respirator subassembly. R53 (TC-23C-82), cartridge.
83	AO	R5055, R6055	50206 or 51071, basic respirator subassembly. R5 (TC-23C-83)5, cartridge.
84	AO	R8151	51294, basic respirator sub- assembly. R151 (TC-23C-84), cartridge.
85	AO	R8153	51294, basic respirator. R153 (TC-23C-85), cartridge.
86	Binks	40-129	460854, facepiece assembly. 40-127 (TC-23C-86), cartridge.
87	Binks	40-128	460854, facepiece assembly. 40-127 (TC-23C-86), cartridge. 40-131 (TC-23C-87), filter. 40-132, filter cover.
88	Glendale	GR2021	F-200, facepiece. C-21 (TC-23C-88), cartridge.
89	Glendale	GR2021-10	F-200, facepiece. C-21 (TC-23C-88), cartridge. F-10 (TC-21C-164), filter. F-21, filter cover.
90	Glendale	GR2021-20	F-200, facepiece. C-21 (TC-23C-88), cartridge F-20 (TC-23C-90), filter. F-21, filter cover.
91	Pulmosan	C-259	10768, body assembly. 10792, 10954, or 10924, face cushion. 17160 (TC-23C-81), cartridge. C-264-7 (TC-21C-157), filter. C-200-8, filter cap.
92	AO	R8191P	51294, basic respirator sub- assembly. R191 (TC-23C-92), cartridge.

Table III-5. Chemical-cartridge respirators component parts, by approval number.

Approval number TC-23C-	Approval issued to	Model number(s)	Component parts, number(s) and description
93	AO	R8151P	51294, basic respirator sub-assembly. R151 (TC-23C-84), cartridge. R149 (TC-23C-93), filter. R150, filter clip.
94	AO	R5051P	50206, basic respirator sub-assembly. R51 (TC-23C-56/57), cartridge. R49 (TC-23C-94/95), filter. R185, filter clip.
95	AO	R6051P	50206 or 51071, basic respirator assembly. R51 (TC-23C-56/57), cartridges. R49 (TC-23C-94/95), filters. R185, filter clips.
96	DeVilbiss	MSP-505	50728, basic respirator assembly. MSE-506 (TC-23C-59), cartridge. MSP-403 (TC-23C-96), filter. MSP-405, filter clip.
97	AO	R5091P	50206, basic respirator sub-assembly. R91 (TC-23C-97/98), cartridge.
98	AO	R6091P	51071, basic respirator sub-assembly. R91 (TC-23C-97/98), cartridge.
99	Cesco	94R40	94, facepiece assembly. R40, cartridge.
100	Pulmosan	C-251	10768, body assembly. 10924, 10934, or 10792, face cushion. 17160 (TC-23C-81), cartridge. C-251-7 (TC-23C-100), filter. C-200-8, filter cap.
100	Fiber Metal	C-251	10768, body assembly. 10924, 10934, or 10792, face cushion. 17160 (TC-23C-81), cartridge. C-251-7 (TC-23C-100), filter. C-200-8, filter cap.
101	Norton	7401L 7401LM	7400-30 or 7400-30M, facepiece assembly. 7400-1L (TC-23C-101), cartridge.
102	Norton	75BP01	75BP30, facepiece assembly. 7500-1 (TC-23C-49), cartridge.

Table III-5. Chemical-cartridge respirators component parts, by approval number.

Approval number TC-23C-	Approval issued to	Model number(s)	Component parts, number(s) and description
103	Norton	75BP11	75BP30, facepiece assembly. 7500-1 (TC-23C-49), cartridge. 7500-6 (TC-21C-151), filter. 7500-14, filter covers.
104	Norton	75BP03	75BP30, facepiece assembly. 7500-3 (TC-23C-65), cartridge.
105	Norton	75BP13	75BP30, facepiece assembly. 7500-3 (TC-23C-65), cartridge. 7500-6 (TC-21C-151), filter. 7500-14, filter cover.
106	AO	R5058, R6058	50206 or 51071, basic respirator subassembly. R58 (TC-23C-106), cartridge.
107	Cover	1482-G100	B222, respirator assembly. G100 (TC-23C-107), cartridge.
107	Sellstrom	315-G100	B222, respirator assembly. G100 (TC-23C-107), cartridge.
107	Safe Tex	236-G100	B222, respirator assembly. G100 (TC-23C-107), cartridge.
107	Eastern Safety	E451	B222, respirator assembly. E451-6C, cartridge.
108	MSA	460400	461319, pocket respirator. 460401 (TC-23C-108), cartridge.
109	AO	R5054, R6054	50206 or 51071, basic respirator subassembly. R54 (TC-23C-109), cartridge.
110	Pulmosan	C-241	10768, body assembly. 10924, 10954, or 10792, face cushion. 17160 (TC-23C-81), cartridge. C-241-7 (TC-23C-110), filter. C-200-8, filter cap.
110	Fiber Metal	C-241	10768, body assembly. 10924, 10954, or 10792, face cushion. 17160 (TC-23C-81), cartridge. C-241-7 (TC-23C-110), filter. C-200-8, filter cap.

Table III-5. Chemical-cartridge respirators component parts, by approval number.

Approval number TC-23C-	Approval issued to	Model number(s)	Component parts, number(s) and description
111	AO	R9722	51258, basic respirator sub-assembly. R722 (TC-23C-111), cartridge.
113	Scott	604022-13, 6411-2013, 6411-3013, 6413-2013, 6413-3013	600131-03 or 600131-01, facepiece with 600109-00 or 600118-00, head straps or 600126-00, facepiece assembly. 604412-13 (TC-23C-113), cartridge.
114	Scott	604032-13, 6411-2113, 6411-3113, 6413-2113, 6413-3113	600131-03 or 600131-01, facepiece with 600109-00 or 600118-00, head straps or 600126-00, facepiece assembly. 604412-13 (TC-23C-113), cartridge. 65127-00 (TC-21C-177), filter. 64100-00, filter retainer.
115	Scott	604022-01, 6411-2001, 6411-3001, 6413-2001, 6413-3001	600131-03 or 600131-01, facepiece with 600109-00 or 600118-00, head straps or 600126-00, facepiece assembly. 604412-01 (TC-23C-115), cartridge.
116	Scott	604032-01, 6411-2101, 6411-3101, 6413-2101, 6413-3101	600131-03 or 600131-01, facepiece with 600109-00 or 600118-00, head straps, or 600126-00, facepiece assembly. 604412-01 (TC-23C-115), cartridge. 64127-00 (TC-21C-177), filter. 64100, filter retainer.
117	Scott	604032-00, 6411-2213, 6411-3213, 6413-2213, 6413-3213	600131-03 or 600131-01, facepiece with 600109-00 or 600118-00, head straps or 600126-00, facepiece assembly. 604412-13 (TC-23C-113), cartridge. 68176-00 (TC-23C-117), filter. 64030-00, filter retainer.
118	U.S. Safety	150T20	150, facepiece assembly. 158T20 (TC-23C-118), cartridge.
119	Casco	95RC25	95, facepiece assembly. RC25 (TC-23C-119), cartridge
120	U.S. Safety	158T23	150, facepiece assembly. 158T20 (TC-23C-118), cartridges. 158T10 (TC-21C-179), filters. 159T59, filter covers.

Table III-5. Chemical-cartridge respirators component parts, by approval number.

Approval number TC-23C-	Approval issued to	Model number(s)	Component parts, number(s) and description
121	Cesco	95RC45	95, facepiece assembly. RC25 (TC-23C-119), cartridges. RC15 (TC-21C-180), filters. 95R8, filter covers.
122	Norton	7542 7542M	7500-30 or 7500-30M, facepiece assembly. 7500-2 (TC-23C-122), cartridges. 7500-40 (TC-23C-122), filters. 7500-14, filter covers.
123	3M	8712 8717	8712 (TC-23C-123), respirator. For dusts and mists add: 8718 (TC-23C-123), filter; 8719, filter retainer.
124	Cover	1482-G100-F102	B222, respirator assembly. G100 (TC-23C-107), cartridges. F102 (TC-23C-124), filters. B205, filter retainers.
124	Eastern	E454	B222, respirator assembly. E451-6C (TC-23C-107), cartridges. F102 (TC-23C-124), filters. B205, filter retainers.
124	Sellstrom	315-G100-F102	B222, respirator assembly. G100 (TC-23C-107), cartridges. F102 (TC-23C-124), filters. B205, filter retainers.
125	U.S. Safety	150T24	150, facepiece assembly. 158T20 (TC-23C-118), cartridges. 150T24 (TC-23C-125), filters. PI 159T60, filter retainers.
126	Cesco	95RC35	95, facepiece assembly RC25 (TC-23C-119), cartridges. RC35 (TC-23C-126), filters. PI 159T60, filter retainers.
127	Stewart-Warner	391568	391568, facepiece assembly. 391570 (TC-23C-127), cartridge. 391571 (TC-23C-127), filters. PI 159T60, filter retainers.
128	Northcott	70-450	391568, facepiece assembly. 70-431 (TC-23C-128), cartridges. 70-432 (TC-23C-128), filters. PI 159T60, filter retainers.

Table III-5. Chemical-cartridge respirators component parts, by approval number.

Approval number TC-23C-	Approval issued to	Model number(s)	Component parts, number(s) and description
129	3M	8714 8720	8714 (TC-23C-129) respirator. For dusts and mists add 8718 (TC-23C-123) filter and 8719 filter retainer.
130	Willson	1621, 1721	ARI600 or ARI700, facepiece. R21 (TC-23C-50), cartridges.
131	Willson	162113, 172113	ARI600 or ARI700, facepiece. R21 (TC-23C-50), cartridges R13 (TC-23C-52), filters.
133	Willson	162115, 172115	ARI600 or ARI700, facepiece. R21 (TC-23C-50), cartridges. R15 (TC-23C-54), filters. R683, filter retainers.
134	Willson	162110, 172110	ARI600 or ARI700, facepiece. R21 (TC-23C-50), cartridges. R10 (TC-21C-140), filters. R682, filter retainers.
139	Willson	1624, 1724	ARI600 or ARI700, facepiece. R24 (TC-23C-70), cartridges.
140	Willson	162410, 172410	ARI600 or ARI700, facepiece. R24 (TC-23C-70), cartridges. R10 (TC-21C-140), filters. R682, filter retainers.
141	Willson	1625, 1725	ARI600 or ARI700, facepiece. R25 (TC-23C-76), cartridges.
142	Willson	162510, 172510	ARI600 or ARI700, facepiece. R25 (TC-23C-76), cartridges. R10 (TC-21C-140), filters. R682, filter retainers.
143	Scott	70-AG	70-AG (TC-23C-143), respirator.
144	MSA	461848	7-204, facepiece. 459315 (TC-23C-40), cartridges. For dusts and mists, add: 459032 (TC-21C-133), filters and 459027, filter covers to the above.

Table III-5. Chemical-cartridge respirators component parts, by approval number.

Approval number TC-23C-	Approval issued to	Model number(s)	Component parts, number(s) and description
145	MSA	461849	7-204, facepiece. 459316 (TC-23C-41), cartridges. For dusts and mists, add: 459032 (TC-21C-133), filters and 459027, filter covers to the above.
146	MSA	461850	7-204, facepiece. 459317 (TC-23C-47), cartridges. For dusts and mists, add: 459032 (TC-21C-133), filters and 459027, filter covers to the above.
147	MSA	461851	7-204, facepiece. 459318 (TC-23C-43), cartridges. For dusts and mists, add: 459032 (TC-21C-133), filters and 459027, filter covers to the above.
148	MSA	461858	7-204, facepiece. 448847 (TC-23C-79), cartridges.
149	MSA	461846	7-204, facepiece. 459315 (TC-23C-40), cartridges. 448842 (TC-23C-80), filters. 448844, filter covers.
150	MSA	461854	7-204, facepiece. 461834 (TC-23C-150), cartridges.
151	MSA	461852	7-204, facepiece. 460964 (TC-23C-151), cartridges.
152	MSA	461857	7-204, facepiece. 460845 (TC-23C-152), cartridges.
153	MSA	461855	7-204, facepiece. 460844 (TC-23C-153), cartridges.
154	MSA	461856	7-204, facepiece. 460843 (TC-23C-154), cartridges.
155	MSA	461853	7-204, facepiece. 460842 (TC-23C-155), cartridges.
156	MSA	461835, 462239	7-201, facepiece or 7-202, facepiece, breathing tube, and plenum assembly (belt-mounted) 461834 (TC-23C-150), cartridges.

Table III-5. Chemical-cartridge respirators component parts, by approval number.

Approval number TC-23C-	Approval issued to	Model number(s)	Component parts, number(s) and description
157	MSA	460965, 462238	7-201, facepiece or 7-202, facepiece, breathing tube, 460964 (TC-23C-151), cartridge
158	MSA	460849, 461015	7-201, facepiece or 7-202, facepiece, breathing tube, and plenum assembly (belt-mounted) 460845 (TC-23C-152), cartridges.
159	MSA	460847, 461013	7-201, facepiece or 7-202, facepiece, breathing tube, and plenum assembly (belt-mounted) 460844 (TC-23C-153), cartridges.
160	MSA	460848, 461014	7-201, facepiece or 7-202, facepiece, breathing tube, and plenum assembly (belt-mounted) 460843 (TC-23C-154), cartridges.
161	MSA	460846, 461012	7-201, facepiece or 7-202, facepiece, breathing tube, and plenum assembly (belt-mounted) 460842 (TC-23C-155), cartridges.
163	Cover	1482-G104	B222, respirator assembly. G104 (TC-23C-163), cartridges.

NAMES AND ADDRESSES OF MANUFACTURERS AND DISTRIBUTORS

Acme Automotive Finishes, 101 Prospect Ave., Cleveland, OH 44115.
Anderson Manufacturing Co., 1014 Fox Chase Road, Rockledge, PA 19111.
Bowen Tools, Inc., P.O. Box 3186, Houston, TX 77001.
Deane & Company, 190 Oneida Drive, Pt. Claire, Quebec, Canada.
Eastern Safety Equipment Co., 45-17 Pearson St., Long Island City, NY 11101.
Empire Abrasive Equipment Corp., 9990 Gantry Road, Philadelphia, PA 19115.
Fiber-Metal, P.O. Box 248, Concordville, PA 19331.
Kelco Sales & Engineering Co., P. O. Box 422, Norwalk, CA 90650.
Northcott Products Company, 1826 W. Diversey Parkway, Chicago, IL 60614.
Norton Safety Products, 2000 Plainfield Pike, Cranston, RI 02920.
Pauli & Griffin, 137 Utah Avenue, South San Francisco, CA 94080.
Quaker State Machine & Supply Co., P. O. Box 605, Rushland, PA 18956.
Robertshaw Controls Company, 333 North Euclid Way, Anaheim, CA 92803.
Safe-Tex, Toronto, Ontario, CANADA.
Sellstrom Manufacturing Co., 59 E. Van Buren Street, Chicago, IL 60605.
Stewart-Warner, Chicago, IL.

Title 30—Mineral Resources

CHAPTER I—MINING ENFORCEMENT AND SAFETY ADMINISTRATION, DEPARTMENT OF THE INTERIOR

PART 11—RESPIRATORY PROTECTIVE DEVICES; TESTS FOR PERMISSIBILITY; FEES

Gas Masks and Self-Contained Breathing Apparatus

On June 4, 1974, the Department of Health, Education, and Welfare, and the Department of the Interior, jointly published a notice of proposed rulemaking in the *FEDERAL REGISTER* (40 FR 19783) to amend Title 30, Code of Federal Regulations, Part 11, to permit an increase in the permissible carbon dioxide concentration in certain closed-circuit self-contained escape breathing apparatus and to delete recommendations to gas mask users of the maximum concentrations of gases in which the masks should be used.

Interested persons were given an opportunity to submit comments on the proposed amendments and comments were received from the Industrial Safety Equipment Association, Inc. (ISEA); and the Atomic Energy Commission (AEC). The comments have been reviewed by the National Institute for Occupational Safety and Health (NIOSH) and the Mining Enforcement and Safety Administration (MESA). The comments and principal changes are discussed below by individual sections:

Section 11.90(a)(2). The ISEA requested deletion of references to "Type N" gas masks on the grounds that it is unnecessary to describe a mask with only one difference from other gas masks. MESA and NIOSH agree, yet the capability under § 11.90(b) for approving such a gas mask was retained by including "Other gas(es) and vapor(s)" as an additional category of front-mounted or back-mounted gas masks.

Section 11.90(b). The deletion of maximum use concentrations of gas or vapor in which a device could be used was questioned by ISEA which stated that until Government research results are published indicating that the vapor values are too high, the action of deletion could be interpreted as being arbitrary and without proper foundation. In this regard, investigations by the Lawrence Livermore Laboratory, performed under the auspices of the AEC, and investigations by NIOSH have shown that the service life of activated carbon varies considerably with both the specific sorbent and the type of solvent vapor adsorbed. Therefore, canister service life is not adequate for many gases and vapors if gas masks are used at the suggested maximum use concentrations. The Joint American Industrial Hygiene Association/American Conference of Governmental Industrial Hygienists Respirator Committee has prepared a selection guide which recommends maximum use concentrations for many gases and vapors.

Because of these factors, in addition to such limiting factors as the heat of reaction between gas or vapor and solvent, warning properties of air contaminants,

the air contaminant concentration immediately dangerous to life and health, and lower explosive limit; it was deemed advisable to eliminate the suggested maximum use concentrations. A joint OSHA/NIOSH standards completion project is underway to write a minimum regulatory standard for each substance listed in 29 CFR 1910.93. These standards will provide respiratory protection requirements for compliance with the permissible exposure limit. Until such standards are published, information on respirator selection and use can be obtained from the sources designated in this amendment. Because of the uncertainty of respiratory protection against some toxic gases and vapors when activated carbon is employed as the sorbent, and to assure that the user is provided with a comfortable and efficiently fitting facepiece, NIOSH is undertaking a research program to develop improved approval test methods and equipment to assure that adequate protection will be provided the users of gas masks. Results of the investigations will be available from NIOSH.

The ISEA also commented that the proposed amendment would immediately place many current users of gas masks in a position of noncompliance and administratively cause the equipment to be considered obsolete. MESA and NIOSH do not agree. The users of gas masks will not be in a position of noncompliance with regulatory standards since such standards will specify the maximum use concentration for a gas mask which, in most instances, will be much less than the recommended maximum use concentration in § 11.90(b). To protect the user, such limiting factors as the facepiece fit of the gas mask, expected service life of the sorbent, warning properties of the air contaminant, the lower explosive limit, and the concentration of the air contaminant immediately dangerous to life and health are considered in establishing the maximum use concentration of a gas mask in a regulatory standard. The deletion of the maximum use concentration will not administratively cause the equipment to be considered obsolete since the maximum use concentration for a gas mask is established by a regulatory standard and not by the suggested maximum use concentration in § 11.90(b).

Changes were made in the categories under the three types of gas masks in the form of additions of gas masks for "Other gas(es) and vapor(s)" and for combinations of gases or vapors. This change was made primarily to include, for purposes of clarification, types of gas masks previously listed in the footnotes.

The AEC recommended that the specific offices to be consulted for selection, use, and maintenance of gas masks, and for information on safe use concentrations, be named along with their addresses and telephone numbers. MESA and NIOSH have adopted part of this proposal and clarified the sources where the information may be obtained.

It was suggested by the AEC that instead of the proposed procedures, there should be testing and certifying of various sorbent canisters and cartridges for

use against specific contaminants and concentrations, particularly to include provisions for specific testing of the various gas mask canisters for certification for use against specific contaminants of interest. In view of the extensive number of specific gases and vapors, MESA and NIOSH consider this suggestion impracticable at this time.

Section 11.102-5(c)(1). MESA and NIOSH agree with the suggestion of ISEA that the section be revised to require an indicator only for carbon monoxide because it is undetectable by odor or taste.

A change in the concentration of nitrogen dioxide in Tables 6 and 7 was suggested by ISEA. MESA and NIOSH agree with the suggestion and the nitrogen dioxide requirements were removed for all gas masks because the SO₂, Cl₂ tests are considered adequate for evaluating the performance of acid gas canisters. A requirement was inserted in footnote 5 of § 11.90(b) that the applicant advise users, through means of instruction on labels, of the probability of certain gases and vapors not being removed by sorbents in the canister to that degree indicated by performance requirements in Part 11.

The ISEA also recommended a performance requirement to be added to Tables 6 and 7 which would be consistent with subpart L for chemical cartridge respirator approvals. The change would allow a reduction of service life requirements for all gas masks designed to provide respiratory protection against two or more types (classes) of gases and vapors. MESA and NIOSH are of the view that such a reduction is not in the best interest of the user's safety. The inconsistency with Subpart L is believed warranted because gas masks are for use against more hazardous atmospheres.

Therefore, Part 11 is amended as set forth below, effective April 14, 1976.

Dated: March 5, 1976.

THOMAS S. KLEFFE,
Secretary of the Interior.

Dated: January 23, 1976.

MARJORIE LYNCH,
Acting Secretary of Health,
Education, and Welfare.

1. In § 11.85-12, paragraph (d) is revised to read as follows:

§ 11.85-12 Test for carbon dioxide in inspired gas; open- and closed-circuit apparatus; maximum allowable limits.

(d) In addition to the test requirements for closed-circuit apparatus set forth in paragraph (b) of this section, gas samples will be taken during the course of the man tests described in Tables 1, 2, 3, and 4. These gas samples will be taken from the closed-circuit apparatus at a point downstream of the carbon dioxide sorbent, and they shall not contain more than 0.5 percent carbon dioxide at any time, except on apparatus for escape only, using a mouthpiece only, the sample shall not contain more than 1.5 percent carbon dioxide at any time.

§ 11.90 [Amended]

2. In § 11.90, paragraph (a) is revised to read as follows:

(a) Gas masks including all completely assembled air purifying masks designed for use as respiratory protection during entry into atmospheres not immediately dangerous to life or health or escape only from hazardous atmospheres containing adequate oxygen to support life are described as follows:

3. In § 11.90, paragraph (a) (2) is deleted and paragraphs (a) (3) and (a) (4) are redesignated as paragraphs (a) (2) and (a) (3) respectively and the word "half-mask" is deleted from paragraph (a) (3).

4. In § 11.90, paragraph (b) is revised to read as follows:

(b) Gas masks shall be further described according to the types of gases or vapors against which they are designed to provide respiratory protection, as follows:

Type of front-mounted or back-mounted gas mask

Acid gas^{1,2}
Ammonia³
Carbon monoxide⁴
Organic Vapor^{1,5}
Other gas(es) and vapor(s)^{1,6}
Combination of two or more of the above gases and vapors.^{1,6}
Combination of acid gas, ammonia, carbon monoxide, and organic vapors.^{1,2}

¹ Approval may be for acid gases or organic vapors as a class or for specific acid gases or organic vapors.

² Not for use against gases or vapors with poor warning properties or which generate high heats of reaction with sorbent materials in the canister.

³ Use of the gas mask may be limited by factors such as lower explosive limit, toxicological effects, and facepiece fit. Limitations on gas mask service life and sorbent capacity limitations, shall be specified by the applicant in instructions for selection, use and maintenance of the gas mask.

⁴ Eye protection may be required in certain concentrations of gases and vapors.

TABLE 5.—Canister bench tests and requirements for front-mounted and back-mounted gas mask canisters

[30 CFR pt. 11, subpt. I, sec. 11.102-5]

Canister type	Test condition	Test atmosphere			Number of tests	Maximum allowable penetration (parts per million)	Minimum service life (minutes) ¹
		Gas or vapor	Concentration (parts per million)	Flow rate (liters per minute)			
Acid gas.....	As received...	SO ₂	20,000	64	3	5	12
		Cl ₂	20,000	64	3	5	12
	Equilibrated...	SO ₂	20,000	32	4	5	12
Organic vapor.....		Cl ₂	20,000	32	4	5	12
	As received...	CCl ₄	20,000	64	3	5	12
	Equilibrated...	CCl ₄	20,000	32	4	5	12
Ammonia.....	As received...	NH ₃	30,000	64	3	50	12
	Equilibrated...	NH ₃	30,000	32	4	50	12
Carbon monoxide.....	As received...	CO	20,000	64	2	(2)	60
		CO	5,000	22	3	(2)	60
		CO	3,000	22	3	(2)	60
Combination of 2 or 3 of above types. ⁴							
Combination of all of above types. ⁴							

¹ Minimum life will be determined at the indicated penetration.

² Relative humidity of test atmosphere will be 95±3 pct; temperature of test atmosphere will be 25±2.5° C.

³ Maximum allowable CO penetration will be 385 cm³ during the minimum life. The penetration shall not exceed 500 p/m during this time.

⁴ Relative humidity of test atmosphere will be 95±3 pct; temperature of test atmosphere entering the test fixture will be 0±2.5° C.—(0°).

⁵ Test conditions and requirements will be applicable as shown above.

⁶ Test conditions and requirements will be applicable as shown above, except the minimum service lives for acid gas, organic vapor, and ammonia will be 6 min instead of 12 min.

Type of chin-style gas mask

Acid gas^{1,2}
Ammonia³
Carbon monoxide⁴
Organic vapor^{1,5}
Other gas(es) and vapor(s)^{1,6}
Combination of two or more of the above gases and vapors.^{1,6}

Type of escape gas mask

Acid gas^{1,2}
Ammonia³
Carbon monoxide⁴
Organic vapor^{1,5}
Other gas(es) and vapor(es)^{1,6}
Combination of two or more of the above gases and vapors.^{1,6}

NOTE: For information on safe use concentrations and for information governing the selection, use, and maintenance of gas masks, the gas mask user should refer to regulations issued by the Mining Enforcement and Safety Administration or by the Occupational Safety and Health Administration, and to other applicable regulations concerning gas masks. Recommendations based on such regulations may also be obtained from the National Institute for Occupational Safety and Health, 944 Chestnut Ridge Road, Morgantown, W. Va. 26505, Attention: Director, TCL; or from the NIOSH Regional Consultants for Occupational Safety and Health in the DHEW Regional Offices throughout the country.

§ 11.102-5 [Amended]

5. In § 11.102-5, paragraph (c) (1) is revised to read as follows:

(c) (1) Front-mounted, and back-mounted, and chin-style canisters designated as providing respiratory protection against gases, ammonia, organic vapors, carbon monoxide and particulate contaminants shall have a window or other indicator to warn the gas mask wearer when the canister will no longer satisfactorily remove carbon monoxide from the inhaled air.

6. In § 11.102-5, Tables 5, 6, and 7 have been revised consistent with the amendments to § 11.90 to read as follows:

TABLE G.—Canister bench tests and requirements for chin-style gas mask canisters

[80 CFR pt. 11, subpt. I, sec. 11.102-5]

Canister type	Test condition	Test atmosphere			Number of tests	Maximum allowable penetration (parts per million)	Minimum service life (minutes) ¹
		Gas or vapor	Concentration (parts per million)	Flow rate (liters per minute)			
Acid gas.....	As received..	SO ₂	5,000	64	3	5	12
		Cl ₂	5,000	64	3	5	12
	Equilibrated..	SO ₂	5,000	22	4	5	12
Organic vapor.....		Cl ₂	5,000	32	4	5	12
	As received..	CCl ₄	5,000	64	3	5	12
	Equilibrated..	CCl ₄	5,000	32	4	5	12
Ammonia.....	As received..	NH ₃	5,000	64	3	50	12
	Equilibrated..	NH ₃	5,000	32	4	50	12
Carbon monoxide.....	As received..	CO	20,000	64	2	(3)	60
		CO	5,000	32	3	(3)	60
		CO	3,000	32	3	(3)	60
Combination of 2 or 3 of above types. ²							
Combination of all of above types. ³							

¹ Minimum life will be determined at the indicated penetration.² Relative humidity of test atmosphere will be 95±3 pct; temperature of test atmosphere will be 25±2.5° C.³ Maximum allowable CO penetration will be 385 cm³ during the minimum life. The penetration shall not exceed 500 p/m during this time.⁴ Relative humidity of test atmosphere will be 95±3 pct; temperature of test atmosphere entering the test fixture will be 0+2.5° C -0° C.⁵ Test conditions and requirements will be applicable as shown above.⁶ Test conditions and requirements will be applicable as shown above, except the minimum service lives for acid gas, organic vapor, and ammonia will be 6 min instead of 12 min.

TABLE 7.—Canister bench tests and requirements for escape gas mask canisters

[80 CFR pt. 11, subpt. I, sec. 11.102-5]

Canister type	Test condition	Test atmosphere			Number of tests	Maximum allowable penetration (parts per million)	Minimum service life (minutes) ¹
		Gas or vapor	Concentration (parts per million)	Flow rate (liters per minute)			
Acid gas	As received..	SO ₂	5,000	64	3	5	12
		Cl ₂	5,000	64	3	5	12
	Equilibrated..	SO ₂	5,000	32	4	5	12
Organic vapor.....		Cl ₂	5,000	32	4	5	12
	As received..	CCl ₄	5,000	64	3	5	12
	Equilibrated..	CCl ₄	5,000	32	4	5	12
Ammonia.....	As received..	NH ₃	5,000	64	3	50	12
	Equilibrated..	NH ₃	5,000	32	4	50	12
Carbon monoxide.....	As received..	CO	10,000	32	2	(3)	60
		CO	5,000	32	3	(3)	60
		CO	3,000	32	3	(3)	60

¹ Minimum life will be determined at the indicated penetration.² Relative humidity of test atmosphere will be 95±3 pct; temperature of test atmosphere will be 25±2.5° C.³ Maximum allowable CO penetration will be 385 cm³ during the minimum life. The penetration shall not exceed 500 p/m during this time.⁴ If effluent temperature exceeds 100° C during this test, the escape gas mask shall be equipped with an effective heat exchanger.⁵ Relative humidity of test atmosphere will be 95±3 pct; temperature of test atmosphere entering the test fixture will be 0+2.5° C -0° C.

7. Section 11.93 is revised to read as follows:

§ 11.93 Canisters and cartridges; color and markings; requirements.

The color and markings of all canisters and cartridges or labels shall conform with the requirements of the American National Standard for Identification of Air Purifying Respirator Canisters and Cartridges, K 13.1-1973, obtainable from the American National Standards Institute, Inc.; 1430 Broadway; New York, N.Y. 10018.

(Secs. 202(h), 204, and 508, 83 Stat. 763, 803 (30 U.S.C. 842(h), 844, 957); Secs. 2, 3, 5, 36 Stat. 370, as amended 37 Stat. 631 (30 U.S.C. 3, 5, 7); Sec. 8(g), 84 Stat. 1600 (29 U.S.C. 657(g)))

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