

Deciphering a Pesticide Label





42 CFR Part 84 Rule Changes Changed Respirator Certifications

- In July 1995 National Institute of Occupational Safety and Health (NIOSH) upgraded the tests used to certify **non-powered air purifying particulate respirators**. TC: Test and Certify
 - Does not change chemical cartridge, SCBA, airline, gas mask, PAPR types
- Testing requirements for owning respirators or filters are eliminated:
 - Single use dust/mist respirators
 - Dust/mist respirators
 - Dust/mist/fume respirators
 - Radon daughter respirators
 - Pesticide prefilters
 - Paint spray prefilters



42 CFR Part 84 Rule Changes Changed Respirator Certifications

- Regulation creates a total of nine classes of particulate filters
- Part 84 particulate filters:
 - *Resistance to oil* - Part 84 respirators will be designated as "N" (no oil), "R" (oil-resistant for 8 hours) or "P" (oil-proof may last longer than 8 hours).
 - *Particle collection efficiency* - Part 84 respirators have a better particle collection efficiency, down to the 0.3 micron range.
 - Efficiency designations of 95, 99 or 99.97 (100 - HE)

Decisions, Decisions

Filter Class/Efficiencies	95%	99%	99.97% (100%)
N-Series (not resistant to oils)	N95	N99	N100
R-Series (resistant to oils for up to 8 hours)	R95	R99	R100
P-series (oil proof)	P95	P99	P100

NIOSH TC Designations

■ Air Supplied Respirators

- 13F: self-contained breathing apparatus (SCBA)
- 19C: supplied air respirator (SAR)

■ Air Purifying Respirators

- 14G: gas mask with canister
- 23C: air-purifying respirator (APR) with chemical cartridge
 - Half- or full-facepiece
- 84A: respirator with particulate filter or combination chemical cartridge with particulate filter
 - Filtering facepiece
 - Half- or full-facepiece

■ Powered Air Purifying Respirators

- 23C: powered air-purifying respirator (PAPR) with chemical cartridge and particulate filter
- 21C: powered air-purifying respirator (PAPR) with particulate filter

– Most protective from top to bottom



NIOSH Approval #TC-13F Self-Contained Breathing Apparatus (SCBA)
Air supplied from a pressurized tank to a full-face mask.



NIOSH Approval #TC-19C Supplied Air Respirator* (SAR)
Air supplied through an air hose from a source such as an air compressor.



NIOSH Approval #TC-14G Air Purifying full-face respirator with a canister specified for a type of chemical contaminant such as organic vapors (OV) (gas mask).



NIOSH Approval #TC-84A Air Purifying full-face respirator with combination OV cartridge and N-type particulate filter.



NIOSH Approval #TC-23C Powered Air Purifying Respirator (PAPR) with OV and combination HE filters.



NIOSH Approval #TC-21C Powered Air Purifying Respirator (PAPR) with particulate HE filter.



NIOSH Approval #TC-84A Air purifying half-face (elastomeric) respirator with combination OV cartridge and N-type particulate filters.



NIOSH Approval #TC-84A Air purifying half-face (elastomeric) respirator with P-100 (magenta) particulate filters.



NIOSH Approval #TC-84A Filtering face-piece respirator (May be an N-, R-, or P-type particulate filter.) This is also known as a 'disposable' respirator because none of its parts are replaceable.

Translation Key for Respirator on EPA labels

OUTDATED Respirator terms used on EPA pesticide labels	Current NIOSH respirator terms used on labels
NIOSH/MSHA	NIOSH
Dust/Mist	Particulate
Pre-filter approved for pesticides	N, R, or P filter, to be used in combination with a chemical cartridge
Canister approved for pesticides	Canister (contaminant specific)
N, R, P or HE filters	N, R or P (HE filters can only be used on Powered Air-Purifying Respirators (PAPRs))

Example of Respirator Options

GEMPLER'S -E406 - pg 39

Enter keyword or Item No. **Go** 39 of 594 pages

◀ Previous ◉ Shrink Page Table of Contents Index Turn on Magnifier 🔍 Next ▶

RESPIRATORS

TOP PICK

3M 6000 SERIES FULL-FACE AND HALF-MASK RESPIRATORS
Lightweight and low maintenance

Full-Face Respirator – Has a lightweight, balanced design and includes a large, hard-coated lens for a wide view. Adjustable head strap with four-point rear suspension provides extra comfort. Cool Flow™ exhalation valve reduces heat and moisture. Soft silicone face seal. Specify size: S, M fits 80% of men/ or L.

Half-Mask Respirator – A low-profile facepiece provides better visibility and increased comfort with safety gear. You may drop the mask to rest on your chest when leaving the contaminated area. Specify size: S, M fits 70% of men/ or L.

Cartridges and filters not included—order separately (see below).

Item # Description Price
G16705 Half-Mask **\$14.99** **USA★**
G700 Full-Face **\$159.99** **MADE**










CENTER ADAPTER DIRECTS AIR AND MOISTURE AWAY FROM MASK

CHEMICAL CARTRIDGE COLOR CODING
Black Organic vapors
Green Ammonia gas
Magenta Particulate filter cartridge (HEPA) (also called P100)
Olive Multiple inorganic gases and vapors
White Acid gases
Yellow Acid gases and organic vapors

Item #	Description	Cartridge Type	NIOSH Approval No.	Qty / Pkg	Price
G60921	Pesticide vapor (except fumigants, unless allowed on label), paint vapors (including paints containing isocyanates when cartridge change-out schedule is in place, according to NIOSH approval) and organic vapors, particulates	OV, P100	TC-23C/B4A	2	\$26.99
G60923	Acid gas/organic vapor (for disinfecting livestock buildings); chlorine, hydrogen chloride, sulphur dioxide, particulates	OV, AG, P100	TC-23C/B4A	2	\$26.99
G60924	Ammonia (anhydrous or from livestock confinement); methylamine; particulates	AM, MA, P100	TC-23C/B4A	2	\$32.95
G60926	Multi-gas/vapor: organic vapors (pesticides except fumigants and paint spray); chlorine gas (disinfectant); ammonia (anhydrous and animal confinement); sulphur dioxide, chlorine dioxide and methylamine; hydrogen fluoride and formaldehyde; particulates	OV, CL, HC, SD, HF, HS, CD, FM, AM, MA, P100	TC-23C/B4A	2	\$29.99
125757	Methyl bromide P100/organic vapors	OV, AG, P100	TC-23A/B4A	2	\$39.40
32154	P100 particulate filter (replaces HEPA under new NIOSH standards)	P100	TC-84A	12	\$58.99
2097	P100 flat pancake particulate filter with nuisance organic vapor layer for odors (low profile for under welding helmets)	P100, Nuisance Level	TC-84A	2	\$12.50
10865	Organic vapor; pesticide vapors (insecticides, herbicides, fungicides, but not fumigants unless allowed on label); paint spraying (including paints containing isocyanates when cartridge change-out schedule is in place according to NIOSH approval) and organic vapors; use particulate filter also if spraying material	OV	TC-23C	2	\$13.99
38020	N95 particulate filter for dusts, mists and fumes that don't contain oil	N95	TC-84A	10	\$17.99
218681	Retainer for N95 filter			2	\$5.20
224247	Filter adapter enables N95 and P95 pre-filters to be directly attached to the			2	\$6.10

Let's Look at NIOSH Approval Numbers

6000, FF-400 & 7500 Series Half-Mask & Full-Face Cartridges

Item #	Description	Cartridge Type	NIOSH Approval No.	Qty./ Pkg.	Price
 <u>G60921</u>	Pesticide vapor (except fumigants, unless allowed on label), paint vapors (including paints containing isocyanates when cartridge change-out schedule is in place, according to NIOSH approval) and organic vapors; particulates	OV, P100	TC-23C/84A	2	\$26.99
 <u>G60923</u>	Acid gas/organic vapor (for disinfecting livestock buildings); chlorine, hydrogen chloride, sulphur dioxide; particulates	OV, AG, P100	TC-23C/84A	2	\$26.99
 <u>G60924</u>	Ammonia (anhydrous or from livestock confinement); methylamine; particulates	AM, MA, P100	TC-23C/84A	2	\$32.95
 <u>G60926</u>	Multi-gas/vapor: organic vapors (pesticides except fumigants and paint spray); chlorine gas (disinfectants); ammonia (anhydrous and animal confinement); sulphur dioxide, chlorine dioxide and methylamine; hydrogen fluoride and formaldehyde; particulates	OV, CL, HC, SD, HF, HS, CD, FM, AM, MA, P100	TC-23C/84A	2	\$29.99
 <u>125757</u>	Methyl bromide P100/organic vapors	OV, AG, P100	TC-23A/84A	2	\$39.40
 <u>37154</u>	P100 particulate filter (replaces HEPA under new NIOSH standards)	P100	TC-84A	12	\$58.99
 <u>2097</u>	P100 flat pancake particulate filter with nuisance organic vapor layer for odors (low profile for under welding helmets)	P100, Nuisance Level OV	TC-84A	2	\$12.50
 <u>10865</u>	Organic vapor: pesticide vapors (insecticides, herbicides, fungicides, but not fumigants unless allowed on label); paint spraying (including paints containing isocyanates when cartridge change-out schedule is in place according to NIOSH approval) and organic vapors; use particulate filter also if spraying material	OV	TC-23C	2	\$13.99
 <u>38030</u>	N95 particulate filter for dusts, mists and fumes that don't contain oil	N95	TC-84A	10	\$17.99
<u>218681</u>	Retainer for N95 filter			2	\$5.20
<u>224242</u>	Filter adapter enables N95 and P95 pre-filters to be directly attached to the respirators. May be used multiple times.			2	\$6.45



Label Example

- Mixer Loaders, applicators and all other handlers must wear ...
- And NIOSH approved **dust/mist filtering respirator** (MSHA/NIOSH approval number prefix **TC-21C** or a **NIOSH approved respirator with any N, R, P or HE filter**

Remember Dust Mist = Particulate?

- **NIOSH Particulate Respirators**



TC-84A



TC-84A



TC-84A



TC-21C

Label Language

- For exposures in enclosed areas wear a respirator with an organic vapor removing cartridge with a pre-filter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C)

TC-23C

Correct??



**Look for the
COMPONENTS:
not the number!**

Correct??

TC-84A



NIOSH TC-84A vs TC-23C

TC-84A



Organic Vapor with combination N95 filter

TC-23C



Organic Vapor Cartridge only

Counter (Terbufos)

- A respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSH/NIOSH-approval number prefix TC-14G), or a NIOSH-approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P or HE prefilter
- A NIOSH approved respirator with an organic vapor (OV) removing cartridge with any combination N, R, or P filter (NIOSH approval number prefix TC-84A); or an OV canister (NIOSH approval prefix TC-14G; or a powered air purifying respirator (PAPR) with HE filters (NIOSH approval prefix TC-23)



Gramoxone Inteon

Personal Protective Equipment (PPE)

Applicators and other handlers (other than Mixers and Loaders) must wear:

- Long-sleeve shirt and long pants
 - Shoes plus socks
 - Protective eyewear
 - Chemical Resistant Gloves - Category A (e.g. barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride (PVC) or Viton®)
 - A dust mist NIOSH-approved respirator with any N, R, P, or HE filter
-
- A NIOSH approved particulate respirator with any N, R or P filter (NIOSH approval TC-84A); or a powered air purifying respirator (PAPR) with HE filters (NIOSH approval TC-21C)





Hyvar[®]
X

WETTABLE POWDER

See inside leaflet for complete First Aid Instructions, Precautionary Statements, Directions for Use and Storage and Disposal Instructions.



PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical resistant to this product are listed below. If you want more options follow the instructions for Category A on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

Long-sleeved shirt and long pants.

Shoes plus socks.

Chemical resistant gloves made of any waterproof material such as polyethylene or polyvinylchloride.

Mixers and Loaders must also wear:

A non-powered air purifying respirator equipped with a N, R, or P series filter (NIOSH approved number prefix 84A) for mixing and loading.

Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Nonrefillable Container

<https://www.backedbybayer.com/~media/BackedByBayer/Product%20Labels%20-%20pdf/Hyvar%20X.ashx>



When Will a Label require the use of an atmosphere supplying respirator?

- When insufficient oxygen is in the ambient air

There is no substitute for reading the pesticide product label when selecting a respirator. The SCBA respirators (TC-13F) and Supplied air type respirators (TV-19C) are not interchangeable

and Health (IDLH) at a very low concentration



Product Formulation + Toxicity + Type of Application = Type of Respirator

EPA Criteria	Label Statement for Respiratory Protection
Solid pesticides with Toxicity Class II, III, or IV	Use NIOSHA-approved respirator with any N, R, P or 100 series prefilter
Liquid pesticides, Toxicity Class I	Use NIOSH-approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P or 100 series prefilter
Gas applied in enclosed area	Use any air-supplying respirator with NIOSH TC-19C or use a self-contained breathing apparatus with NIOSH TC-13F

Bottom Line...

- The respirator you use must be right for the job that you do!

