

DEPARTMENT OF MINERAL RESOURCES AND ENERGY

NO. 6053

28 March 2025

MINE HEALTH AND SAFETY ACT, 1996 (ACT NO 29 OF 1996)

AMENDMENTS TO THE REGULATIONS RELATING TO OCCUPATIONAL HYGIENE

I **Samson Gwede Mantashe**, MP, Minister of Mineral and Petroleum Resources, under section 98 (1) (r) of the Mine Health and Safety Act, 1996 (Act No. 29 of 1996) and after consultation with the Mine Health and Safety Council, hereby amend Chapter 22 of the regulations to the Mine Health and Safety Act, as set out in the schedule.

The amended regulations comes into operation 90 days from the date of publication in the Government Gazette.

  
**MR. S.G. MANTASHE, MP**  
**MINISTER OF MINERAL AND PETROLEUM RESOURCES**

DATE: 28/02/2025

## SCHEDULE

### Substitution of regulation 22.9 (2) (a)

1. Regulation 22.9 (2) (a) of the regulations to the Mine Health and Safety Act is hereby amended by the substitution for the table on "Occupational Exposure Limits for Airborne Pollutants" under regulation 22.9 (2) (a) of the following table:

#### "OCCUPATIONAL EXPOSURE LIMITS FOR AIRBORNE POLLUTANTS"

Tabulation shows inhalable particulates unless indicated to be respirable

CURRENT SUBSTANCE	PROPOSED SUBSTANCE	POLLUTANT CODE	CURRENT MSHA SCHEDULE 22.9(A) OEL	SAMI NEW OEL	SAMI FINAL NOTATIONS
Acetone	Acetone	4	500 ppm/1185 mg/m <sup>3</sup> STEL 1000 ppm/2375 mg/m <sup>3</sup>	250 ppm, STEL 500 ppm	Ns
Acetonitrile	Acetonitrile	5	40 ppm/70 mg/m <sup>3</sup> STEL 60 ppm/105 mg/m <sup>3</sup>	20 ppm	Skin
Aluminium metal respirable particulate	Aluminium metal respirable particulate	17	5 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>	None
Asbestos, all forms	Asbestos, all forms	34	0,2f/ml	0,1f/ml	Carc
Benzene	Benzene	43	1 ppm/ 3 mg/m <sup>3</sup>	0,5 ppm STEL 2,5 ppm	Carc a1, skin
Calcium silicate inhalable particulate respirable particulate	Calcium silicate inhalable particulate respirable particulate	102	5 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>	
Carbon monoxide (CO)	Carbon monoxide (CO)	113	35 mg/m <sup>3</sup> / 30 ppm	25 ppm	Blood: carboxyhaemoglobin=3,5% haemoglobin @ end of shift Exhaled air 20ppm
Carbon monoxide (CO)	Carbon monoxide (CO)	113	C 115 mg/m <sup>3</sup> / 100 ppm	C 100 ppm	
	Carbon monoxide (CO) for donning SCSR	113		300 ppm	

Cement dust respirable	Cement dust respirable	121	5 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	DSEN
None	Metallic chromium as Cr(0)		None	0.5 mg/m <sup>3</sup>	
Chromium, metal and inorganic compounds (as Cr) Cr (II) compounds	Cr(II) compounds	148	0.5 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup>	Carc category 1
Chromium, metal and inorganic compounds (as Cr) Cr (III) compounds	Chromium (metal and inorganic compounds) Cr(III) water-soluble compounds	149	0.5 mg/m <sup>3</sup>	0.003 mg/m <sup>3</sup>	Carc A4; Sk: DSEN; RSEN
Chromium, metal and inorganic compounds (as Cr) Cr (VI) compounds	Chromium (metal and inorganic compounds) Cr(VI) water soluble compounds	150	0.05 mg/m <sup>3</sup>	0.0005 mg/m <sup>3</sup>	Total chromium in urine Chromium in plasma, whole blood, red cell
None	Chromium (metal and inorganic compounds) Cr(VI) water soluble compounds	150	None	STEL 0.015 mg/m <sup>3</sup>	Urine: Total chromium at the End of shift at the end of the week=25µg/L Increase during shift =10µg/L Cr (VI): carc A1; Sk: DSEN; RSEN
Coal dust (respirable particulate)	None	151	2 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	
Coal dust (respirable particulate)	Coal dust, Anthracite	151	None	0.4 mg/m <sup>3</sup>	carc A4
Coal dust (respirable particulate)	Coal dust, Bituminous	151	None	0.9 mg/m <sup>3</sup>	carc A4
Copper Dust and mists (as Cu)	Copper fume	154	0.2 mg/m <sup>3</sup>	0.2 mg/m <sup>3</sup>	None
Copper Dust and mists (as Cu)	Copper dust & mist	155	1 ppm STEL 2 PPM	1 mg/m <sup>3</sup>	None
Ethyl benzene	Ethyl benzene	276	100 ppm/435 mg/m <sup>3</sup> STEL 125 ppm/545 mg/m <sup>3</sup>	20 ppm	BEI Sum of mandelic acid and phenylglyoxylic acid: urine @End of shift 0.15g/g creatinine CARC, SKIN/Ns
*Formaldehyde	*Formaldehyde	300	1 ppm/1.2 mg/m <sup>3</sup> STEL 2 ppm/2.5 mg/m <sup>3</sup>	0.3 ppm	CarC category 1 DSEN

CURRENT SUBSTANCE	PROPOSED SUBSTANCE	POLLUTANT CODE	CURRENT MHSA SCHEDULE 22.9(A) OEL	SAMI NEW FINAL OEL	SAMI FINAL NOTATIONS
None	Diesel particulate matter (DPM) – Elemental Carbon			0.1 mg/m <sup>3</sup>	Carc A1
None	Diesel particulate matter (DPM) – Total Carbon		None	None	
Hydrogen sulphide	Hydrogen sulphide	341	10 ppm/ 14 mg/m <sup>3</sup> STEL 15 ppm/ 21 mg/m <sup>3</sup>	1 ppm STEL 5 ppm	None
Iron oxide, dust and fume [as Fe]	Iron oxide, dust and fume [as Fe] (respirable particulate)	348	5 mg/m <sup>3</sup> C 10 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	Carc A4
Lead, elemental, and inorganic compounds [as Pb]	Lead, elemental, and inorganic compounds [as Pb]	366	0.1 mg/m <sup>3</sup>	0.05 mg/m <sup>3</sup>	Carc A3

Manganese, elemental, and inorganic compounds [as Mn]	Manganese, elemental, and inorganic compounds [as Mn]	378	1 mg/m <sup>3</sup>	0,2 mg/m <sup>3</sup> [I] 0,04 mg/m <sup>3</sup> [R]	
Manganese, fume [as Mn]	Manganese, fume [as Mn]	379	1 mg/m <sup>3</sup> STEL 3 mg/m <sup>3</sup>	0,1 mg/m <sup>3</sup> [I] 0,04 mg/m <sup>3</sup> [R]	
Molybdenum compounds [as Mo] soluble compounds	Molybdenum compounds [as Mo] soluble compounds	422	5 mg/m <sup>3</sup> STEL 10 mg/m <sup>3</sup>	0,5 mg/m <sup>3</sup> [R]	None
*Nickel, inorganic compounds [as Ni] insoluble compounds	*Nickel, inorganic compounds [as Ni] insoluble compounds	433	0,5 mg/m <sup>3</sup>	0,2 mg/m <sup>3</sup>	Urine nickel
Nitrogen dioxide	Nitrogen dioxide	441	3 ppm 5 mg/m <sup>3</sup> STEL 3 ppm 9 mg/m <sup>3</sup>	3 ppm 5 mg/m <sup>3</sup> STEL 3 ppm 9 mg/m <sup>3</sup>	None
Particles not otherwise classified [PNOC] (inhalable particulate)	Particles not otherwise classified [PNOC] (inhalable particulate)	458	10 mg/m <sup>3</sup>	10mg/m <sup>3</sup>	None
Particles not otherwise classified [PNOC] (respirable particulate)	Particles not otherwise classified [PNOC] (respirable particulate)	459	3 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	None
Polyvinyl chloride [PVC] respirable particulate	Polyvinyl chloride [PVC] inhalable particulate	490	5 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>	None
Portland cement respirable particulate	Portland cement respirable particulate	492	5 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>	DSEN
CURRENT SUBSTANCE	PROPOSED SUBSTANCE	POLLUTANT CODE	CURRENT MHSA SCHEDULE 22.9(A) OEL	SAMI NEW FINAL OEL	SAMI FINAL NOTATIONS
Silica, crystalline (respirable particulate) - Quartz	Silica, crystalline (respirable particulate) - Quartz	522	0,1 mg/m <sup>3</sup>	0,05 mg/m <sup>3</sup>	carc A2
Silica, crystalline (respirable particulate) - Cristobalite	Silica, crystalline (respirable particulate) - Cristobalite	521	0,1 mg/m <sup>3</sup>	0,05 mg/m <sup>3</sup>	carc A2
Silica, crystalline (respirable particulate) - Tridymite	Silica, crystalline (respirable particulate) - Tridymite	523	0,1 mg/m <sup>3</sup>	0,05 mg/m <sup>3</sup>	None
Silica, crystalline (respirable particulate) - Tripoli	Silica, crystalline (respirable particulate) - Tripoli	524	0,1 mg/m <sup>3</sup>	0,05 mg/m <sup>3</sup>	None
Silica, amorphous (inhalable)	Silica, amorphous (inhalable)	526	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	None
Silica, amorphous (respirable)	Silica, amorphous (respirable)	527	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	None
Silica, fused (respirable particulate)	Silica, fused (respirable particulate)	525	0,1 mg/m <sup>3</sup>	0,05 mg/m <sup>3</sup>	None
Titanium dioxide (Inhalable particulate)	Titanium dioxide (Inhalable particulate)	569	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	carc A4
Titanium dioxide (respirable particulate)	Titanium dioxide (respirable particulate)	570	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	None
Vanadium Pentoxide (Inhalable particulate)	Vanadium Pentoxide (Inhalable particulate)	592	0,5 mg/m <sup>3</sup>	0,5 mg/m <sup>3</sup>	carc A3

Vanadium Pentoxide (Fume and Respirable particulate)	Vanadium Pentoxide (Fume and Respirable particulate)	593	0.05 mg/m <sup>3</sup>	0.05 mg/m <sup>3</sup>	None
Welding Fume	Welding Fume	598	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	None
Wood Dust (hard wood)	Wood Dust (hard wood)	600	1 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>	Sen
Wood Dust (soft wood)	Wood Dust (soft wood)	601	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	None

<sup>1</sup> The OEL of 5 mg/m<sup>3</sup> for inhalable welding fume, is coupled with compliance with OEL values for the individual elemental hazardous contaminants in the fume

**Notations:**

**BEI** - Biological Exposure Indices indicate to occupational health and hygiene professionals that biological monitoring needs to be performed for a particular pollutant.

**Carc** - The carcinogen notation refers to a pollutant that may produce a benign or malignant neoplasm. Range from Carc A1-A5.

**Skin** - The skin notation indicates that significant quantities of the pollutant may be absorbed through the skin to produce systemic effects following exposure.

**Sen** - The sensitizer notation indicates that the pollutant may produce dermal (DSEN) and/or respiratory sensitization (RSEN).