

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Permissible Exposure Limits (PEL) for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
oxalic acid (CAS 144-62-7)	PEL	1 mg/m3
SULPHURIC ACID (CAS 7664-93-9)	PEL	1 mg/m3

US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value	Form
oxalic acid (CAS 144-62-7)	STEL	2 mg/m3	
	TWA	1 mg/m3	
SULPHURIC ACID (CAS 7664-93-9)	TWA	0.2 mg/m3	Thoracic fraction.

NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

Components	Type	Value
oxalic acid (CAS 144-62-7)	IDLH	500 mg/m3
SULPHURIC ACID (CAS 7664-93-9)	IDLH	15 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards Recommended Exposure Limits (REL)

Components	Type	Value
oxalic acid (CAS 144-62-7)	STEL	2 mg/m3
	TWA	1 mg/m3
SULPHURIC ACID (CAS 7664-93-9)	TWA	1 mg/m3

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Provide eyewash station and safety shower. Use adequate ventilation to control airborne concentrations below the exposure limits/guidelines. If user operations generate a vapor, dust and/or mist, use process enclosure, appropriate local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits/guidelines.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Suitable chemical protective gloves should be worn when the potential exists for skin exposure. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Nitrile, butyl rubber or neoprene gloves are recommended.

Other

Wear appropriate chemical resistant clothing if applicable.

Respiratory protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of OSHA Respiratory Protection Standard 29 CFR 1910.134 and/or Canadian Standard CSA Z94.4.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state

Liquid.

Form

Aqueous solution.

Color

Colorless to light yellow.

Odor

Mild.