







# Tenax Spa

## TEPOX Q FERRATO

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### 8. Exposure controls/personal protection

#### 8.1. Control parameters

Regulatory References:

USA	NIOSH-REL	NIOSH publication No. 2005-149, 3th printing, 2007.
USA	CAL/OSHA-PEL	California Division of Occupational Safety and Health (Cal-OSHA) Permissible Exposure Limits (PELs).
EU	OEL EU	Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2017

#### 2-(2-BUTOXYETHOXY)ETHANOL

##### Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV-ACGIH	-	66	10		
OEL	EU	67.5	10	101.2	15

#### 1-METHOXY-2-PROPANOL

##### Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
OEL	EU	375	100	568	150	SKIN
TLV-ACGIH	-	184	50	368	100	
CAL/OSHA	USA	360	100	540	150	SKIN
NIOSH	USA	360	100	540	150	

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

TLV of solvent mixture: 184 mg/m3

#### 8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration. Personal protective equipment must comply with current regulations.

##### HAND PROTECTION

Protect hands with category III work gloves (OSHA 29 CFR 1910.138).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

##### SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear. Wash body with soap and water after removing protective clothing.

##### EYE PROTECTION

Wear airtight protective goggles (OSHA 29 CFR 1910.133).

##### RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a NIOSH certified filter, whose class must be chosen according to the limit of use concentration (NIOSH 42 CFR 84, OSHA 29 CFR 1910.134). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus or external air-intake breathing apparatus. For a correct choice of respiratory protection device, see standard NIOSH 42 CFR 84, OSHA 29 CFR 1910.134.

##### ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

### 9. Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Appearance	liquid	
Colour	Not available	
Odour	characteristic	
Odour threshold	Not available	
pH	Not available	
Melting point / freezing point	Not available	
Initial boiling point	Not available	
Boiling range	Not available	
Flash point	70 °C	(158 °F)
Evaporation Rate	Not available	
Flammability of solids and gases	Not available	
Lower inflammability limit	Not available	
Upper inflammability limit	Not available	
Lower explosive limit	Not available	
Upper explosive limit	Not available	
Vapour pressure	Not available	
Vapour density	Not available	
Relative density	1.01	
Solubility	Not available	
Partition coefficient: n-octanol/water	Not available	
Auto-ignition temperature	Not available	
Decomposition temperature	Not available	
Viscosity	Not available	
Explosive properties	Not available	
Oxidising properties	Not available	

#### 9.2. Other information

Information not available

### 10. Stability and reactivity

#### 10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

##### 1-METHOXY-2-PROPANOL

Dissolves various plastic materials. Stable in normal conditions of use and storage.

#### 10.2. Chemical stability

The product is stable in normal conditions of use and storage.

#### 10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

##### 2-(2-BUTOXYETHOXY)ETHANOL

May react with: oxidising substances. May form peroxides with: oxygen. Develops hydrogen on contact with: aluminium. May form explosive mixtures with: air.

##### 1-METHOXY-2-PROPANOL

May react dangerously with: strong oxidising agents, strong acids.

#### 10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

##### 2-(2-BUTOXYETHOXY)ETHANOL

Avoid exposure to: air.

##### 1-METHOXY-2-PROPANOL

Avoid exposure to: air.

### 10. Stability and reactivity ... / >>

#### 10.5. Incompatible materials

##### 2-(2-BUTOXYETHOXY)ETHANOL

Incompatible with: oxidising substances, strong acids, alkaline metals.

##### 1-METHOXY-2-PROPANOL

Incompatible with: oxidising substances, strong acids, alkaline metals.

#### 10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

##### 2-(2-BUTOXYETHOXY)ETHANOL

May develop: hydrogen.

### 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

#### 11.1. Information on toxicological effects

##### Metabolism, toxicokinetics, mechanism of action and other information

Information not available

##### Information on likely routes of exposure

##### 2-(2-BUTOXYETHOXY)ETHANOL

WORKERS: inhalation; contact with the skin.

##### Delayed and immediate effects as well as chronic effects from short and long-term exposure

##### 2-(2-BUTOXYETHOXY)ETHANOL

May be absorbed by inhalation, ingestion and skin contact; is irritating for the skin and especially for the eyes. May cause damage to the spleen. At room temperature the danger of inhalation is unlikely, due to the low vapour pressure of the substance.

##### Interactive effects

Information not available

##### ACUTE TOXICITY

##### 2-(2-BUTOXYETHOXY)ETHANOL

LD50 (Oral)

3384 mg/kg Rat

LD50 (Dermal)

2700 mg/kg Rabbit

##### 1-METHOXY-2-PROPANOL

LD50 (Oral)

5300 mg/kg Rat

LD50 (Dermal)

13000 mg/kg Rabbit

LC50 (Inhalation)

54.6 mg/l/4h Rat

##### SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

##### SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

##### RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

##### GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

## 11. Toxicological information ... / >>

### CARCINOGENICITY

Does not meet the classification criteria for this hazard class

### Carcinogenicity Assessment:

107-98-2 1-METHOXY-2-PROPANOL  
ACGIH:: A4

### REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

### STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

### STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

### ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

## 12. Ecological information

No specific data are available for this product. Handle it according to good working practices. Avoid littering. Do not contaminate soil and waterways. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation. Please take all the proper measures to reduce harmful effects on aquifers.

### 12.1. Toxicity

#### METAL COMPLEX DYE

LC50 - for Fish 10 mg/l/96h

#### AZOIC DYE CHROME COMPLEX

LC50 - for Fish > 1 mg/l/96h

### 12.2. Persistence and degradability

#### 2-(2-BUTOXYETHOXY)ETHANOL

Solubility in water 1000 - 10000 mg/l  
Rapidly degradable

#### 1-METHOXY-2-PROPANOL

Solubility in water 1000 - 10000 mg/l  
Rapidly degradable

### 12.3. Bioaccumulative potential

#### 2-(2-BUTOXYETHOXY)ETHANOL

Partition coefficient: n-octanol/water 1

#### 1-METHOXY-2-PROPANOL

Partition coefficient: n-octanol/water < 1

### 12.4. Mobility in soil

### 12. Ecological information ... / >>

Information not available

#### 12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

#### 12.6. Other adverse effects

Information not available

### 13. Disposal considerations

#### 13.1. Waste treatment methods

Reuse, when possible. Neat product residues should be considered special non-hazardous waste.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

### 14. Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

#### 14.1. UN number

Not applicable

#### 14.2. UN proper shipping name

Not applicable

#### 14.3. Transport hazard class(es)

Not applicable

#### 14.4. Packing group

Not applicable

#### 14.5. Environmental hazards

Not applicable

#### 14.6. Special precautions for user

Not applicable

#### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Information not relevant

### 15. Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal Regulations

Clean Air Act Section 112(b):

34590-94-8      DIPROPYLENE GLYCOL MONOMETHYL ETHER (Glycol ethers)  
107-98-2      1-METHOXY-2-PROPANOL (Glycol ethers)

Clean Air Act Section 602 Class I Substances:

No component(s) listed.



### 15. Regulatory information ... / >>

Clean Air Act Section 602 Class II Substances:

No component(s) listed.

Clean Water Act – Priority Pollutants:

No component(s) listed.

Clean Water Act – Toxic Pollutants:

No component(s) listed.

DEA List I Chemicals (Precursor Chemicals):

No component(s) listed.

DEA List II Chemicals (Essential Chemicals):

No component(s) listed.

EPA List of Lists:

313 Category Code:

34590-94-8      DIPROPYLENE GLYCOL MONOMETHYL ETHER (Glycol ethers)  
107-98-2      1-METHOXY-2-PROPANOL (Glycol ethers)

EPCRA 302 EHS TPQ:

No component(s) listed.

EPCRA 304 EHS RQ:

No component(s) listed.

CERCLA RQ:

No component(s) listed.

EPCRA 313 TRI:

34590-94-8      DIPROPYLENE GLYCOL MONOMETHYL ETHER (Glycol ethers)  
107-98-2      1-METHOXY-2-PROPANOL (Glycol ethers)

RCRA Code:

No component(s) listed.

CAA 112 (r) RMP TQ:

No component(s) listed.

State Regulations

Massachusetts:

34590-94-8      DIPROPYLENE GLYCOL MONOMETHYL ETHER (Glycol ethers)  
107-98-2      1-METHOXY-2-PROPANOL (Glycol ethers)

Minnesota:

34590-94-8      DIPROPYLENE GLYCOL MONOMETHYL ETHER (Glycol ethers)  
107-98-2      1-METHOXY-2-PROPANOL (Glycol ethers)

New Jersey:

34590-94-8      DIPROPYLENE GLYCOL MONOMETHYL ETHER (Glycol ethers)  
107-98-2      1-METHOXY-2-PROPANOL (Glycol ethers)

New York:

No component(s) listed.

Pennsylvania:

34590-94-8      DIPROPYLENE GLYCOL MONOMETHYL ETHER (Glycol ethers)  
107-98-2      1-METHOXY-2-PROPANOL (Glycol ethers)

California:

34590-94-8      DIPROPYLENE GLYCOL MONOMETHYL ETHER (Glycol ethers)  
107-98-2      1-METHOXY-2-PROPANOL (Glycol ethers)

Proposition 65:

This product does not contain any substances known to the State of California to cause cancer, reproductive harm or birth defects.

International Regulations

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

### 15. Regulatory information ... / >>

None

Substances subject to the Rotterdam Convention:  
None

Substances subject to the Stockholm Convention:  
None

Canadian WHMIS  
Information not available

### 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

<b>H226</b>	Flammable liquid and vapour.
<b>H227</b>	Combustible liquid.
<b>H319</b>	Causes serious eye irritation.
<b>H336</b>	May cause drowsiness or dizziness.
<b>H411</b>	Toxic to aquatic life with long lasting effects.
<b>H412</b>	Harmful to aquatic life with long lasting effects.

#### LEGEND:

- 313 CATEGORY CODE: Emergency Planning and Community Right-to Know Act Section 313 Category Code
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAA 112 ® RMP TQ: Risk Management Plan Threshold Quantity (Clean Air Act Section 112®)
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CERCLA RQ: Reportable Quantity (Comprehensive Environment Response, Compensation, and Liability Act)
- CLP: EC Regulation 1272/2008
- DEA: Drug Enforcement Administration
- EmS: Emergency Schedule
- EPA: US Environmental Protection Agency
- EPCRA: Emergency Planning and Community Right-to Know Act
- EPCRA 302 EHS TPQ: Extremely Hazardous Substance Threshold Planning Quantity (Section 302 Category Code)
- EPCRA 304 EHS RQ: Extremely Hazardous Substance Reportable Quantity (Section 304 Category Code)
- EPCRA 313 TRI: Toxics Release Inventory (Section 313 Category Code)
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PEL: Predicted exposure level
- RCRA Code: Resource Conservation and Recovery Act Code
- REL: Recommended exposure limit
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TSCA: Toxic Substances Control Act
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- WHMIS: Workplace Hazardous Materials Information System.

#### GENERAL BIBLIOGRAPHY:

- GHS rev. 3
- The Merck Index. 10th Edition
- Handling Chemical Safety
- Niosh - Registry of Toxic Effects of Chemical Substances
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy
  
- 6 NYCRR part 597
- Cal/OSHA website

- California Safe Drinking Water and Toxic Enforcement Act- EPA website
- Hazard Communication Standard (HCS 2012)
- IARC website
- List Of Lists EPA: Consolidated List of Chemicals Subject to EPCRA, CERCLA and Section 112® of the Clean Air Act
- Massachusetts 105 CMR Department of public health 670.000: "Right to Know"
- Minnesota Chapter 5206 Department Of Labor and Industry Hazardous Substances, Employee "Right to Know".
- New Jersey Worker and Community Right to know Act N.J.S.A.
- NTP. 2011. Report on Carcinogens, 12th Edition.
- OSHA website
- Pennsylvania, Hazardous Substance List, Chapter 323

**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.