



1. Identification

Product identifier	TSL-401-10/TS-401-10
Other means of identification	
Description	Zearalenone in Methanol
Synonyms	Laboratory standard
Recommended use	Reference standard for analytical use.
Recommended restrictions	Use in accordance with manufacturer's recommendations.

Manufacturer/Supplier information

Company Name	Trilogy Analytical Laboratory, Inc
Address	870 Vossbrink Dr Washington, MO 63090
Phone	(636) 239-1521
Toll Free	(855) 256-8244
Fax	(636) 239-1531
Website	www.trilogylab.com

2. Hazard(s) identification

GHS classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225
Acute toxicity, oral (Category 3), H301
Acute toxicity, Inhalation (Category 3), H331
Acute toxicity, Dermal (Category 3), H311
Specific target organ toxicity – single exposure (Category 1), H370



GHS label elements

Signal Word	Danger
Hazard statement(s)	H225 Highly flammable liquid and vapor. H301 + H311 + H331 Toxic if swallowed, in contact with skin or inhaled. H370 Causes damage to organs.
Precautionary statement(s)	P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ventilating/lighting/equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/protective clothing/eye protection/face protection.



P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/doctor
Rinse mouth.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all
contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P311 IF INHALED: Remove victim to fresh air and keep at rest in a
position comfortable for breathing. Call a POISON CENTER/doctor.
P307 + P311 IF exposed: Call a POISON CENTER or doctor/physician.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for
extinction.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) None

3. Composition/Information on ingredients

Mixtures

Chemical name	CAS number	%
Zearalenone	17924-92-4	< 0.1
Methanol	67-56-1	99.9

4. First aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

Most important known symptoms and effects are described in section 2.

Indication of immediate medical attention and special treatment needed

No data available.



5. Firefighting measures

Suitable extinguishing media Dry powder, dry sand

Unsuitable extinguishing media

Do NOT use water jet.

Special hazards arising from the substance or mixture

No data available.

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

Use water spray to cool unopened containers.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection see section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. Handling and storage

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.
Use explosion-proof equipment. Keep away from sources of ignition - No smoking.
Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: 2 - 8 °C. Product is sensitive to light and moisture. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. Exposure controls/personal protection

Occupational exposure limits

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

Components	Type	Value
Methanol (CAS 67-56-1)	TWA	260 mg/m ³ (200 ppm)
	STEL	325 mg/m ³ (250 ppm)



US. ACGIH Threshold Limit Values

Components	Type	Value
Methanol (CAS 67-56-1)	TWA	200 ppm
	STEL	250 ppm

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

Components	Type	Value
Methanol (CAS 67-56-1)	TWA	325mg/m ³ (250 ppm)
	REL	260mg/m ³ (200 ppm)
	PEL	260mg/m ³ (200 ppm)

Appropriate engineering controls

Avoid contact with skin, eyes, and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

- Eye/face protection** Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- Skin protection** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
- Body Protection** Use impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- Respiratory protection** Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. Physical and chemical properties

Appearance

Physical state	Liquid
Color	Clear
Odor	Mild solvent odor
Odor threshold	No data available
pH	No data available
Melting point/freezing point	No data available

Initial boiling point/range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available
Vapor pressure	No data available
Relative density	No data available
Water solubility	Completely miscible
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	Not explosive
Oxidizing properties	The mixture is not classified as oxidizing

10. Stability and reactivity

Reactivity No data available

Chemical stability Stable under recommended storage conditions

Possibility of hazardous reactions

Vapors may form explosive mixture with air

Conditions to avoid Heat, flames and sparks.

Incompatible materials Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids

Hazardous decomposition products

Other decomposition products - No data available

Hazardous decomposition products formed under fire conditions – Carbon oxides
In the event of fire: see section 5

11. Toxicological information

Acute toxicity

LD50 Oral - Rat – 1,187 – 2.769 mg/kg

LC50 Inhalation - Rat - 4 h – 128.2 mg/l

LC50 Inhalation - Rat - 6 h – 87.6 mg/l



LD50 Dermal - Rabbit – 17,100 mg/kg

Skin corrosion/irritation

Skin – Rabbit

Result: No skin irritation

Serious eye damage/eye irritation

Eyes – Rabbit

Result: No eye irritation

Respiratory or skin sensitization

Maximization Test – Guinea pig

Does not cause skin sensitization.

(OECD Test Guideline 406)

Germ cell mutagenicity

Ames test

S. typhimurium

Result: negative

In vitro assay

Fibroblast

Result: negative

Mutation in mammalian somatic cells

Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)

Mouse – male and female

Result: negative

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

No ingredient of this product preset at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

OSHA

No ingredient of this product preset at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

NTP Report on Carcinogens

No ingredient of this product preset at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

Reproductive toxicity

Damage to fetus not classifiable.

Fertility classification not possible from current data.

Specific target organ toxicity - single exposure

Causes damage to organs.

Specific target organ toxicity - repeated exposure



The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

No aspiration toxicity classification

12. Ecological information

Toxicity

Toxicity to fish Mortality LC50 – *Lepomis macrochirus* (Bluegill) – 15,400.0 mg/l – 96 h
NOEC – *Oryzias latipes* – 7,900 mg/l – 200 h

Toxicity to daphnia and other aquatic invertebrates

EC50 - *Daphnia magna* (Water flea) – > 10,000 mg/l - 48 h

Toxicity to algae Growth inhibition EC50 – *Scenedesmus capricornutum* (fresh water algae) – 22,000.00 mg/l – 96 h

Persistence and degradability

Biodegradability Readily biodegradable

Bio accumulative potential No bioaccumulation is to be expected ($\log P_{ow} \leq 4$)

Mobility in soil Not expected to adsorb on soil

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects

None

13. Disposal considerations

Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber and exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. Transport information

DOT (US)

UN Number: 1230 Class: 3 Packing Group: II

Proper Shipping Name: Methanol

DOT regulated small quantity provisions apply (see 49CFR173.4)

IMDG

UN Number: 1230 Class: 3 Packing Group: II EMS-No: F-E, S-D



Proper Shipping Name: Methanol

IATA

UN Number: 1230 Class: 3 Packing Group: II

Proper Shipping Name: Methanol

15. Regulatory information

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Methanol CAS-No. 67-56-1 Revision Date: 2007-07-01

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know

Methanol CAS-No. 67-56-1 Revision Date: 2007-07-01

Pennsylvania Right To Know Components

Methanol CAS-No. 67-56-1 Revision Date: 2007-07-01

New Jersey Right To Know Components

Methanol CAS-No. 67-56-1 Revision Date: 2007-07-01

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer.

Methanol CAS-No. 67-56-1 Revision Date: 2007-07-01

16. Other information

HMIS Rating

Health hazard: 2
Chronic Health Hazard: *
Flammability: 3
Physical Hazard 0

NFPA Rating

Health hazard: 2
Fire Hazard: 3
Reactivity Hazard: 0