

1. PRODUCT AND COMPANY IDENTIFICATION

- 1.1 Product identifier** Trade name: Methanol
Product code(s): 3325, 3325D, 3325D-32, 3326, 3327
- 1.2 Relevant identified use** Laboratory Reagent
- 1.3 Supplier** Company: Astral Diagnostics Inc.
1224 Forest Parkway
Suite 200
West Deptford, NJ 08086
Telephone: 856.224.0900
- 1.4 Emergency Telephone** CHEMTREC 800.424.9300

2. HAZARDS IDENTIFICATION

2.2 GHS Label elements, including precautionary statements



Signal Word: Danger!

2.1 Classification of the substance or mixture

Hazard statement(s):

- H225:** Highly flammable liquid and vapor (Cat 2).
- H315:** Causes skin irritation (Cat 2)
- H319:** Causes serious eye irritation (Cat 2/2A).
- H332:** Harmful if inhaled (Cat 4).

Precautionary statement(s):

- P210:** Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P260:** Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
- P280:** Wear protective gloves/ eye protection/ face protection.
- P305+351+338:** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3 WHMIS Classification

B-2 Flammable Liquid

2.4 NFPA Rating

Health hazard: 1
Fire: 3
Reactivity Hazard: 0

Target Organs

Eyes, Kidney, Liver, Heart, Central nervous system, Blood, Optic nerve

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Components	Name	CAS number	% by weight
	Methanol	67-56-1	70 - 100
	Water	7732-18-5	0 - 30

4. FIRST AID MEASURES

4.1 General Information

- Eye contact:** Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact:** In case of contact, flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation:** Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion:** Call medical doctor or poison control center immediately. Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Use dry chemical, CO₂, water spray (fog) or foam. Not suitable, do not use water jet.

5.2 Special hazards: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

5.3 Hazardous Products: Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst with the risk of a subsequent explosion. Run-off to sewer may create fire or explosion hazard.

5.4 Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

5.5 Special remarks on explosion hazards: Vapor may cause flash fire. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

6.2 Environmental precaution: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Clean up: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container.

7. HANDLING AND STORAGE

7.1 Safe Handling: Do not get in eyes, on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use empty containers to retain product, residue can be hazardous. Do not reuse container.

7.2 Storage: Store in accordance with local regulations. Store in a segregated and approved area.. Store in original container, protected from direct sunlight. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Methanol:

Exposure limits
ACGIH (United States, 1994). Absorbed through skin.
TWA: 262 mg/m³
STEL: 328 mg/m³
OSHA (United States, 1989). Absorbed through skin.
TWA: 260 mg/m³
STEL: 325 mg/m³
ACGIH TLV (United States, 1/2008). Absorbed through skin.
TWA: 200 ppm 8 hour(s).
TWA: 262 mg/m³ 8 hour(s).
STEL: 250 ppm 15 minute(s).

STEL: 328 mg/m³ 15 minute(s).

OSHA PEL 1989 (United States, 3/1989). Absorbed through skin.

TWA: 200 ppm 8 hour(s).

TWA: 260 mg/m³ 8 hour(s).

STEL: 250 ppm 15 minute(s).

STEL: 325 mg/m³ 15 minute(s).

NIOSH REL (United States, 6/2008). Absorbed through skin.

TWA: 200 ppm 10 hour(s).

TWA: 260 mg/m³ 10 hour(s).

STEL: 250 ppm 15 minute(s).

STEL: 325 mg/m³ 15 minute(s).

OSHA PEL (United States, 11/2006).

TWA: 200 ppm 8 hour(s).

TWA: 260 mg/m³ 8 hour(s).

8.2 Engineering measures: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

8.3 Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

8.4 Personal protection

Respiratory: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Recommended: neoprene

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: splash goggles

Skin: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: lab coat

8.5 Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state:	Liquid.	Color:	Dark blue
Flash Point:	Open Cup: 15.85C (60.5F)	Auto-ignition temperature:	464C (867.2F)
Flammable limits:	Lower: 6%, Upper: 36.5%	Odor:	Characteristic, alcohol-like.
Molecular Weight:	32.05 g/mole	Molecular formula:	C-H4-O
pH:	Not available.	Boiling/condensation point:	64.5C (148.1F)
Melting/freezing point:		Relative density:	0.792
Vapor pressure:	12.9 lPa (97 mm Hg)	Vapor density:	1.11 [Air=1]

Volatility:	100% (v/v)	Odor threshold:	100ppm
Evaporation rate:	2.1 (butyl acetate=1)	VOC:	100% (w/w)
Solubility:	Not available	Decomposition temperature:	Not Available

10. STABILITY AND REACTIVITY

- 10.1 Chemical stability:** The product is stable.
- 10.2 Possibility of hazardous reactions:** Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.3 Hazardous polymerization:** Under normal conditions of storage and use, hazardous polymerization will not occur.
- 10.4 Conditions to avoid:** Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition
- 10.5 Materials to avoid:** Highly reactive or incompatible with the following materials: oxidizing materials. Reactive or incompatible with the following materials: metals and acids.
- 10.6 Hazardous decomposition products:** Under normal conditions of storage and use, hazardous decomposition products should not occur
- 10.7 Conditions of reactivity:** Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts and oxidizing materials. Highly explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts and oxidizing materials. Vapor may cause flash fire. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

Oral LD50:	no data available
Inhalation LC50:	no data available
Dermal LD50:	no data available
Other information on acute toxicity:	no data available
Skin corrosion/irritation:	no data available
Serious eye damage/eye irritation:	no data available
Respiratory or skin sensitization:	no data available
Germ cell mutagenicity:	no data available
Specific target organ toxicity, single exposure (Globally Harmonized System):	no data available
Specific target organ toxicity, repeated exposure (Globally Harmonized System):	no data available
Aspiration hazard:	no data available

11.2 Potential Health Effects

- Inhalation:** Toxic if inhaled. Causes respiratory tract irritation.
- Ingestion:** Toxic if swallowed.
- Skin:** Toxic if absorbed through skin. Causes skin irritation.
- Eyes:** Causes eye irritation.

11.2 Signs and Symptoms of Exposure

Warning: Contains methanol. May be fatal or cause blindness if swallowed. Cannot be made nonpoisonous.

, Effects due to ingestion may include:, Gastrointestinal disturbance, Headache, Nausea, Vomiting, Dizziness, Weakness, Confusion, Drowsiness, Unconsciousness, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity Data (United States) Methanol

Species	Period	Result
Daphia Magna (EC50)	48 hour/hours	>10000 mg/l
Oncorhynchus myKiss (EC50)	48 hour/hours	13200 mg/l
Lepomis Macrochirus (EC50)	48 hour/hours	16000 mg/l
Daphia Magna (LC50)	96 hour/hours	>100 mg/l
Pimephales Promelas (LC 50)	96 hour/hours	>100 mg/l
Lepomis Macrochirus (LC50)	96 hour/hours	15400 mg/l

12.2 Environmental Precautions:

No known significant effects or critical hazardous. The products of degradation are less toxic than the product itself.

13. DISPOSAL CONSIDERATIONS

13.1 Methods: The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national, local laws and regulations.

14. TRANSPORT INFORMATION

Land Transport DOT (US)

UN No. UN1230
Proper Shipping Name Methanol Solution
Hazard Class 3
Packing Group II

TDG

UN No. UN1230
Proper Shipping Name Methanol Solution
Hazard Class 3
Subsidiary Hazard Class 6.1
Packing Group II

IATA

UN No. UN1230
Proper Shipping Name Methanol Solution
Hazard Class 3
Subsidiary Hazard Class 6.1
Packing Group II

IMDG/IMP

UN No. UN1230
Proper Shipping Name Methanol Solution
Hazard Class 3
Subsidiary Hazard Class 6.1
Packing Group II

15. REGULATORY INFORMATION

United States

HCS Classification: Flammable liquid, Highly toxic material, Irritating material, Target organ effects

U.S. Federal regulations: **TSCA 8(a) IUR:** Partial exemption
United States inventory (TSCA 8b):
Listed on inventory.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Methanol
SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
Methanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.
Clean Air Act (CAA) 112 accidental release prevention: No products were found.
Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

DEA List I & II Chemicals (Precursor Chemicals):

Not listed

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting Requirements:	Methanol	64-17-5	99 - 100
Supplier notification:	Methanol	64-17-5	99 - 100

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

RTK: Methanol, CAS 67-56-1, Listed, CT, MA, MN, NJ, RI

Prop 65

WHMIS (Canada): Class B-2: Flammable Liquid
Class D-1A: Material causing immediate and serious toxic effects (Very toxic).

Canadian lists:

Class D-2B: Material causing other toxic effects (Toxic).
CEPA Toxic substances: None of the components are listed.
Canadian ARET: None of the components are listed.
Canadian NPRI: None of the components are listed.
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

CEPA DSL / CEPA NDSL:

All components are listed or exempted.

CERCLA:

Methyl Alcohol: RQ 5000 lb

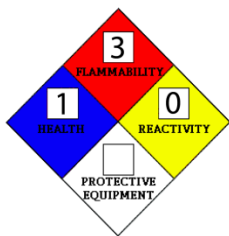
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

International lists:

Australia inventory (AICS): All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.

16. OTHER INFORMATION



National Fire Protection Association (U.S.A.)

Disclaimer

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Astral Diagnostics Inc. and its Affiliates shall not be liable for any damage resulting from handling.