Safety Data Sheet

Triplefix

Revision Date 06-01-2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Triplefix
Product code: 3385, 3385-5G

Supplier: **Astral Diagnostics, Inc**
1224 Forest Parkway
West Deptford, NJ 08066
856-224-0900

Synonym: None
Material uses: Laboratory Reagent.
Validation date: 12/09/2013
In case of emergency: 800-424-9300 CHEMTREC (USA)
24 Hours/Day: 7 Days/Week

2. HAZARDS IDENTIFICATION

Emergency Overview

Target Organs: Eyes, Kidney, Liver, Heart, Central Nervous System

GHS Label Elements: Pictogram

Signal Word: Danger!

Hazardous Statement(s):

H225; Highly Flammable Liquids and Vapor: (Cat 2)
H302; Harmful if swallowed (Cat4)
H315; Causes skin irritation (Cat 2)
H317; May cause an allergic skin reaction (Cat1)

Potential Health Effects

Inhalation - May be harmful if inhaled. Causes respiratory tract irritation, may cause cancer
Skin - May be harmful if absorbed through skin. Causes skin irritation.
Eyes - Causes eye irritation.
Ingestion - May be harmful if swallowed.

Precautionary Statement(s)

P260; Do not breathe fumes or mist
P262; Avoid contact with eyes, skin or clothing
P280; Wear protective equipment
P302; If on skin, wash with plenty of water Wear protective gloves/ eye protection/ face protection.
P304; If inhaled, move to fresh air.
P305; If in eyes, rinse cautiously with water for several minutes, (remove contact lenses, if present) and continue rinsing.

NFPA Rating
Health hazard: 2
Fire: 3

HMIS Classification
Health hazard: 2
Flammability: 3

Reactivity Hazard: 0 Physical hazards: 0

Target Organs

Central Nervous System (CNS), Skin, Liver, Kidney, Spleen, Blood

3. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS number	%
Formaldehyde	50-00-0	~10 v/v
Methyl Alcohol	67-56-1	~ 1 v/v
IPA	67-63-0	~ 4v/v
Ethyl Alcohol	64-17-5	~62v/v
MIBK	108-10-1	~ 1 v/v
Water	7732-18-5	~ 22 v/v

4. FIRST AID MEASURES

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: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

Flammability of the product: 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. Runoff to sewer may create fire or explosion hazard.

Extinguishing media: Use dry chemical, CO2, water spray (fog) or foam.

Not suitable: Do not use water jet.

Special exposure 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.

Hazardous thermal decomposition products: Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

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.

Extinguishing media: Water spray, dry chemical, CO2 and foam

6. ACCIDENTAL RELEASE MEASURES

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).

Environmental precautions: 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).

Spill: 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

Handling: Do not get in eyes or 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.

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

Consult local authorities for acceptable exposure limits.

Engineering measures: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Formaldehyde CAS 50-00-0 OSHA PEL 0.75ppm, 2ppm STEL; ACGIH 0.3ppm
Methanol CAS 67-56-1, OSHA PEL 200ppm; ACGIH, STEL 250ppm, TWA 200ppm
MIBK CAS 108-10-1, ACGIH/TWA 50ppm, STEL 75ppm
Ethanol CAS 64-17-5, TWA 1000ppm
IPA CAS 67-63-0, TWA 200ppm, STEL 400ppm

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.

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
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

Physical state:	Liquid.	**Color:**	Clear
Flash Point:	Open cup: 54°F	**Odor:**	Formaldehyde/alcoholic
pH:	6.9 - 7.1	**Boiling/condensation point:**	Not available.
Melting/freezing point:	Not available.	**Relative density:**	Not available.
Vapor pressure:	Not available.	**Vapor density:**	Not available.
Odor threshold:	Not available.	**Evaporation rate:**	Not available.
VOC:	62% (v/v)	**Flammable limits:**	Lower: 3.3% Upper: 19%
Solubility:	Soluble in the following materials: water		

10. STABILITY AND REACTIVITY

Chemical stability:	The product is stable.
Possibility of hazardous reactions:	Under normal conditions of storage and use, hazardous reactions will not occur.
Hazardous polymerization:	Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid:	Excessive heat.
Hazardous decomposition products:	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under fire condition; carbon oxides

11. TOXICOLOGICAL INFORMATION

Principle Routes of Exposure: Skin, Eyes and Respiratory Tract

Ingestion: May cause pain, nausea, vomiting and diarrhea. Lower doses may decreased body temperature, pain in digestive tract, shallow respiration, weak pulse unconsciousness and death.

Skin: May cause skin irritation, scaling, cracking with redness, pain and including allergic skin reaction

Inhalation: Vapor could be toxic, cause severe irritation and sensitization**.** Symptoms include a burning sensation, coughing, shortness of breath, nausea, headache or dizziness. Severe over-exposure may produce lung damage, or choking ordeath.

Eye Contact: Vapors may cause eye irritation, pain and blurred vision.

Carcinogenicity: IARC, Listed; NTP, Known or suspect carcinogen; ACGIH, Confirmed or suspect carcinogen to Humans; Select or possible select carcinogen.

Mutagenicity: No known significant effects or critical hazards. Lab animal studies suggest formaldehyde may be Mutagenic.

Teratogenicity: No known significant effects or critical hazards except possibly in laboratory animals.

Reproductive: No known significant effects or critical hazards except possibly in laboratory animals.

Acute toxicity; Oral LD50 NA, Inhalation LC50 NA, Dermal LD50 NA,

12. ECOLOGICAL INFORMATION

Environmental effects: Formaldehyde has a half-life of less than one day. Readily biodegradable
Other adverse effects: No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

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 and local laws and regulations.

14. TRANSPORT INFORMATION

DOT (US)

UN number: UN1987, Alcohol NOS (ethanol/methanol/MIBK) 3, II

IMDG
UN number: UN1987, Alcohol NOS (ethanol/methanol/MIBK) 3, II

IATA
UN number: UN1987, Alcohol NOS (ethanol/methanol/MIBK) 3, II

15. REGULATORY INFORMATION

Formaldehyde is listed on TSCA (formaldehyde is NL on TSCA), FORMA, DSL, PICCS, ENCS, AICS, China and KECL inventory. Methanol is below the threshold of 1% for SARA 313 values.

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): All components are listed or exempted.
TSCA (Toxic Substance Control Act): This product is listed on the TSCA 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: Light Green SF, Yellowish; Ethyl Alcohol; Methanol
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Eosin Y: Immediate (acute) health hazard; Methanol: Fire hazard, Immediate (acute) Health hazard, Delayed (chronic) health hazard; Ethanol: Fire hazard, Immediate (acute) Health hazard, Delayed (chronic) health hazard
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

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, Ethanol CAS 64-17-5, MIBK CAS 108-10-1, Formaldehyde 50-00-0, MA, MN, NJ, PA, RI
California Prop. 65
WARNING: This product contains a chemical known to the State of California to cause birth defects or other

reproductive harm (MIBK/formaldehyde).

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Methanol	No	Yes	No	No

CANADA

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

Canadian lists: **CEPA Toxic substances**: None of the components are listed.
Canadian ARET: None of the components are listed.
Canadian NPRI: The following components are listed: Ethanol; Methanol
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.

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: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components SARA 311/312 Hazardous Categorization: Acute Health Hazard, No; Chronic HH, Yes; Fire Hazard, No; Sudden Release of Pressure and Reactive Hazard, No

CWA: Formaldehyde is listed as hazardous substance.

CWA: Formaldehyde is listed as a HAP

16. OTHER INFORMATION

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

Notice to reader

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Astral Diagnostics Inc. shall not be liable for any damage resulting from handling of contact with this product.