Kit Components

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Components:

- BTEX-2-1H: BTEX STD
- CLPV-AH: VO IND. BLENDS MIX A
- CLPV-A: VO IND. BLENDS MIX A
- GRO-1000: GASOLINE RANGE ORGANICS
- NEAT-2458: Custom Organic
- NEAT-3505: Custom Organic
- NEAT-3873: Custom Organic Standard-Unleaded Gasoline
- P-GAS: PURGEABLE AROMATICS FOR GASOLINE
- TCLP-V: TCLP VOLATILES SPIKE B (NO VIN)
- THM-X-400: TRIHALOMETHANES
- XINF-IS-4: CUSTOM INT STD
- XQ-1314: Custom 5 compound organic standard
- XQ-3603: Custom
- XS-2380-30ML: METHANOL

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1. Identification of substance

- Product details
- Trade name: VO IND. BLENDS MIX A
- Article number: CLPV-AH
- Application of the substance / the preparation
- Manufacturer/Supplier:
  SPEX CertiPrep, Inc - 203 Norcross Ave, Metuchen, NJ 08840
- Information department: product safety department
- Emergency information:
  - Emergency Phone Number (24 hours): CHEMTREC (800-424-9300)
  - Outside US: 703-527-3887

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2. Composition/Data on components

- Chemical characterization
- Description:
  Mixture of the substances listed below with nonhazardous additions.
- Dangerous components:
  - 67-56-1 methanol: Danger: 2.6/2; 3.1.O/3, 3.1.D/3, 3.1.I/3; 3.8/197.0%
  - 79-34-5 1,1,2,2-tetrachloroethane: Danger: 3.1.D/1, 3.1.I/2
  - 4.1.C/2 0.2%
  - 107-06-2 1,2-dichloroethane: Danger: 2.6/2; 3.6/1B
  - Warning: 3.1.O/4, 3.2/2, 3.3/2A, 3.8/3
  - 0.2%
  - 75-25-2 bromoform: Danger: 3.1.I/3, 3.2/2, 3.3/2A
  - 4.1.C/2
  - 0.2%
  - 108-90-7 chlorobenzene: Danger: 2.6/3; 3.1.I/4
  - 4.1.C/2
  - 0.2%
  - 127-18-4 tetrachloroethylene: Danger: 3.6/2
  - 4.1.C/2
  - 0.2%
  - 79-01-6 trichloroethylene: Danger: 3.6/1B, 3.5/2
  - Warning: 3.2/2, 3.3/2A, 3.8/3
  - 4.1.C/3
  - 0.2%
  - 79-00-5 1,1,2-trichloroethane: Danger: 3.6/2; 3.1.O/4, 3.1.D/4, 3.1.I/4
  - 0.2%
  - 78-87-5 1,2-dichloropropane: Danger: 2.6/2
  - Warning: 3.1.O/4, 3.1.I/4
  - 0.2%
  - 67-66-3 trichloromethane: Danger: 3.6/2, 3.9/2; 3.1.O/4, 3.2/2
  - 0.2%
  - 124-48-1 dibromochloromethane: Danger: 3.1.O/4
  - 0.2%
  - 156-60-5 trans-dichloroethylene: Danger: 2.6/2
  - Warning: 3.1.I/4
  - 4.1.C/3
  - 0.2%
  - 75-09-2 dichloromethane: Danger: 3.6/2
  - 0.2%
  - 75-34-3 1,1-dichloroethane: Danger: 2.6/2
  - Warning: 3.1.O/4, 3.3/2A, 3.8/3
  - 4.1.C/3
  - 0.2%
  - 75-35-4 1,1-dichloroethylene: Danger: 2.6/1
  - Warning: 3.6/2;
  - 3.1.I/4
  - 0.2%
  - 79-00-5 1,1,2-trichloroethane: Danger: 3.6/2;
  - 3.1.O/4, 3.1.D/4, 3.1.I/4
  - 0.2%
  - 78-87-5 1,2-dichloropropane: Danger: 2.6/2
  - Warning: 3.1.O/4, 3.1.D/4, 3.1.I/4
  - 0.2%
  - 87-86-1 trichloroethylene: Danger: 2.6/2;
  - 3.1.O/4, 3.3/2
  - 0.2%
  - 126-90-3 1,2-dichloroethane: Danger: 2.6/2
  - Warning: 3.1.O/4, 3.3/2A
  - 4.1.C/3
  - 0.2%
- Chemical identification of the substance/preparation
  - 75-34-3 1,1-dichloroethane: Warning: 3.2/2
  - 75-35-4 1,1-dichloroethylene: Warning: 3.2/2
  - 79-00-5 1,1,2-trichloroethane: Warning: 3.2/2
  - 78-87-5 1,2-dichloropropane: Warning: 3.2/2
  - 87-86-1 trichloroethylene: Warning: 3.2/2
  - 126-90-3 1,2-dichloroethane: Warning: 3.2/2

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3. Hazards identification

- Hazard description:
  - Toxic
  - Highly flammable
  - Harmful for the environment
- Information pertaining to particular dangers for man and environment:
  - The product has to be labelled due to the calculation procedure of international guidelines.
  - May cause cancer.
Material Safety Data Sheet
acc. to ISO/DIS 11014

Trade name: VO IND. BLENDS MIX A

Printing date 08/06/2010
Reviewed on 07/12/2010

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First aid measures

General information:
Immediately remove any clothing soiled by the product. Symptoms of poisoning may occur after several hours; therefore medical observation for at least 48 hours after the accident.

Response:
• IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Do not induce vomiting; immediately call for medical help.
• IF INHALED: Remove to fresh air. Keep patient at rest. If not breathing, provide artificial respiration. Keep in a cool location.
• IF SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Protection equipment:
• Mouth respiratory protective device.

Accidental release measures

- Personal protective equipment: Wear protective equipment. Keep unprotected areas covered.
- Safety measures: Keep away from heat, sparks, and all sources of ignition.
- In case of fire: Use dry chemical or alcohol-based foam to extinguish.
- Spills: Absorb with suitable material (e.g., sand, diatomite, acid binders, universal binders, sawdust). Dispose of contaminated material as waste according to item 13.

Handling and storage

- Handling:
  - Information for safe handling: Ensure good ventilation at the workplace. Open and handle receptacle with care.
  - Information about protection against explosions and fires: Keep a fire extinguisher available.
  - Information about storage in one common storage facility: Store in a cool, dry location.
  - Specific treatment is urgent (see on this label).
- Storage:
  - Requirements to be met by storerooms and receptacles: Store in a cool location.
  - Information about storage conditions:
  - Information for safe handling:
  - Classification system:
    - Health: 3
    - Fire: 3
    - Reactivity: 0
  - GHS label elements:
    - Danger: Highly flammable. Also toxic by inhalation, in contact with skin and if swallowed. Also toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. Also harmful: danger of serious damage to health by prolonged exposure through inhalation. Dangerous for the ozone layer.
  - Classification system:
    - The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
  - NFPA ratings (scale 0 - 4):
    - Health: 0
    - Flammability: 3
    - Reactivity: 0
  - HMIS ratings (scale 0 - 4):
    - Health: 0
    - Flammability: 3
    - Reactivity: 0
  - PEL REL TLV:
    - 1,2-dichloroethane
    - 79-34-5
    - 1,1,2,2-tetrachloroethane
    - 67-56-1
  - Short-term value: C 100; 200* ppm
    - Long-term value: 50 ppm
    - 5-min peak in any 3 hrs
    - Short-term value: 8 mg/m³, 2 ppm
    - Long-term value: 4 mg/m³, 1 ppm
    - 40 mg/m³, 10 ppm
  - Disposal:
    - Contents/container in accordance with local/regional/national/international regulations.
  - Requirements to be met by storerooms and receptacles:
    - Information about storage conditions:
      - Material Safety Data Sheet
  - Information about protection against explosions and fires:
    - Open and handle receptacle with care.
    - Prevent formation of aerosols.
  - Information about storage in one common storage facility:
    - Store in a cool location.
  - Specific treatment is urgent (see on this label).
- Exposure controls and personal protection
  - Additional information about design of technical systems: No further data; see item 7.
  - Components with limit values that require monitoring at the workplace:
    - Benzene (95-114-1), toluene (108-88-3), 1,2-dichloroethane (79-34-5), 1,1,2,2-tetrachloroethane (67-56-1)
    - Short-term value: C 100; 200* ppm
      - Long-term value: 50 ppm
      - 5-min peak in any 3 hrs
    - Short-term value: 8 mg/m³, 2 ppm
      - Long-term value: 4 mg/m³, 1 ppm
      - 40 mg/m³, 10 ppm
5. Physical and chemical properties

5.1 General information

Form: Fluid
Color: According to product specification
Other: Characteristic

6. Ecological information

6.1 General notes:
- Water hazard class 3 (Self-assessment): extremely hazardous for water
- Do not allow product to reach ground water, water course or sewage system, even in small quantities.

6.2 Additional toxicological information:
- Toxicological properties:
  - Acute toxicity:
    - Lethal doses that are relevant for classification:
      - R50/R57: irritant
    - LD50:
      - Oral: 2402 mg/kg (mouse)
      - Dermal: 8450 mg/kg (mouse)

- Residual effects:
  - Product is not mutagenic.

- Ecotoxicological information:
  - The product shows the following dangers according to internally approved calculation methods for preparations:
    - Water hazard class 3 (Self-assessment): extremely hazardous for water
13 Disposal considerations

Product:
Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

14 Transport information

DOT regulations:

Hazard class: 3
Identification number: UN1992
Proper shipping name (technical name): FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)
Label: 3+6.1

Land transport ADR/RID (cross-border):

ADR/RID class: III
Proper shipping name: FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

Maritime transport IMDG:

IMDG Class: 3
UN Number: 1992
Proper shipping name: FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: 3
UN/ID Number: 1992
Proper shipping name: FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

15 Regulations

SARA

Section 313 (Specific toxic chemical listings):
67-56-1 methanol
75-25-2 bromoform
75-27-2 bis(2-chloroethyl) ether
75-34-3 1,1-dichloroethane
75-35-4 1,1-dichloroethylene
79-00-5 1,1,2-trichloroethane
79-34-5 1,1,2,2-tetrachloroethane
78-87-5 1,2-dichloropropane
107-06-2 1,2-dichloroethane
127-19-4 1,2-dichloroethane

Section 355 (extremely hazardous substances):
75-09-2 dichloromethane
75-34-3 1,1-dichloroethane
67-66-3 trichloromethane

TSCA (Toxic Substances Control Act):
All ingredients are listed.

Proposition 65

Chemicals known to cause cancer:
75-09-2 dichloromethane
75-34-3 1,1-dichloroethane
79-00-5 1,1,2-trichloroethane
79-34-5 1,1,2,2-tetrachloroethane
78-87-5 1,2-dichloropropane
107-06-2 1,2-dichloroethane
75-25-2 bromoform
56-23-5 carbon tetrachloride
67-66-3 trichloromethane
127-19-4 1,2-dichloroethane

Proposition 65

Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.

Chemicals known to cause developmental toxicity:
None of the ingredients is listed.

Carcinogenic categories:
EPA (Environmental Protection Agency)
75-27-2 bis(2-chloroethyl) ether
75-29-2 dibromochloromethane
75-34-3 1,1-dichloroethane
75-35-4 1,1-dichloroethylene
79-00-5 1,1,2-trichloroethane
79-34-5 1,1,2,2-tetrachloroethane
78-87-5 1,2-dichloropropane
107-06-2 1,2-dichloroethane
75-25-2 bromoform
56-23-5 carbon tetrachloride
67-66-3 trichloromethane
127-19-4 1,2-dichloroethane

UN "Model Regulation": UN1992, FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)
IARC (International Agency for Research on Cancer)
- 75-09-2 dichloromethane
- 75-35-4 1,1-dichloroethylene
- 79-00-5 1,1,2-trichloroethane
- 79-34-5 1,1,2,2-tetrachloroethane
- 107-06-2 1,2-dichloroethylene
- 75-25-2 bromoform
- 56-23-5 carbon tetrachloride
- 67-66-3 trichloromethane
- 124-88-1 dibromo dichloromethane
- 79-01-6 trichloroethylene

NTP (National Toxicology Program)
- 75-09-2 dichloromethane
- 107-06-2 1,2-dichloroethane
- 56-23-5 carbon tetrachloride
- 67-66-3 trichloromethane
- 127-18-4 tetrachloroethylene

TLV (Threshold Limit Value established by ACGIH)
- 75-09-2 dichloromethane
- 75-34-3 1,1-dichloroethane
- 75-35-4 1,1-dichloroethylene
- 79-00-5 1,1,2-trichloroethane
- 79-34-5 1,1,2,2-tetrachloroethane
- 78-87-5 1,2-dichloropropane
- 107-06-2 1,2-dichloroethylene
- 75-25-2 bromoform
- 56-23-5 carbon tetrachloride
- 108-90-7 chlorobenzene
- 67-66-3 trichloromethane
- 127-18-4 tetrachloroethylene
- 79-01-6 trichloroethylene

NIOSH-Ca (National Institute for Occupational Safety and Health)
- 75-09-2 dichloromethane
- 75-35-4 1,1-dichloroethylene
- 79-00-5 1,1,2-trichloroethane
- 79-34-5 1,1,2,2-tetrachloroethane
- 78-87-5 1,2-dichloropropane
- 107-06-2 1,2-dichloroethylene
- 75-25-2 bromoform
- 56-23-5 carbon tetrachloride
- 108-90-7 chlorobenzene
- 81-08-5 trichloroethylene
- 127-18-4 tetrachloroethylene
- 79-01-6 trichloroethylene

OSHA-Ca (Occupational Safety & Health Administration)
- 75-09-2 dichloromethane

Product related hazard information:
The product has been classified and marked in accordance with directives on hazardous materials.

Hazard symbols:
- Toxic
- Highly flammable
- Dangerous for the environment

Hazard-determining components of labelling:
- methanol

Risk phrases:
- May cause cancer.
- Highly flammable.
- Also toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
- Also harmful: danger of serious damage to health by prolonged exposure through inhalation.
- Dangerous for the ozone layer.

Safety phrases:
- Avoid exposure - obtain special instructions before use.
- Keep locked up and out of the reach of children.
- Do not empty into drains.
- Wear suitable protective clothing, gloves and face/eye protection.
- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- Refer to manufacturer’s/supplier’s data sheet.
- In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Other information:
This information is based on the current knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing MSDS:
Product safety department

Contact:
SPEX CertiPrep Inc.
732-549-7144

Abbreviations and acronyms:
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- ACGIH: American Conference of Governmental Industrial Hygienists
- NFPA: National Fire Protection Association
- HMIS: Hazardous Materials Identification System
- VOC: Volatile Organic Compounds
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

USA
**Material Safety Data Sheet**

**acc. to ISO/DIS 11014**

**Trade name:** VO IND. BLENDS MIX A

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**Identification of substance**

**Product details**

- **Trade name:** VO IND. BLENDS MIX A
- **Article number:** CLPA-4
- **Application of the substance / the preparation**

**Manufacturer/Supplier:**

SPEX CertiPrep, Inc. - 203 Norcross Ave, Menlovia, NJ 08840

**Emergency information:**

Emergency Phone Number (24 hours)
CHEMTREC (800-424-9300)
Outside US: 703-527-3887

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**Composition/Trade as components**

**Chemical characterization**

**Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:**

- **Nonhazardous substances**
- **Hazardous substances**

**Chemical identification of the substance/preparation**

- **Trade name:** VO IND. BLENDS MIX A
- **Article number:** CLPA-4
- **Application of the substance / the preparation**

**Information department:** product safety department

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**Application of the substance / the preparation**

- **Classification system:**
  - The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
  - **NFPA ratings (scale 0 - 4)**
    - Health = 3
    - Flammability = 3
    - Reactivity = 0

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**First aid measures**

- **General information:**
  - Immediately remove any clothing soiled by the product.
  - Remove breathing apparatus only after contaminated clothing have been completely removed.

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**Fire fighting measures**

- **Suitable extinguishing agents:** CO2, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet

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**Accidental release measures**

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
Material Safety Data Sheet
acc. to ISO/DIS 11014

Trade name: VO IND. BLENDS MIX A

Printing date 08/06/2010 Reviewed on 08/06/2010

Protection of hands:

The glove material has to be impermeable and resistant to the product/the substances/the preparation.
Due to testing no recommendation to the glove material can be given for the product/the preparation/the chemical mixture.
Selection of the glove material is based on consideration of the penetration rates, rates of diffusion and the degradation.

Material of gloves:
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- Exposure controls and personal protection

Additional information about design of technical systems: No further data; see item 7.

Components with limit values that require measuring at the workplace:

PEL of permissible

VOC content:

99.8 %

791.0 g/l / 6.60 lb/gl

Flash point:

11°C (52°F)

Vapor pressure at 20°C (68°F):

128 hPa (96 mm Hg)

Density at 20°C (68°F):

0.79 g/cm³

Vapor pressure at 20°C (68°F):

128 hPa (96 mm Hg)

Solubility in / Miscibility with:

Water: Not miscible or difficult to mix.

Color:

According to product specification

Upper:

5.5 Vol %

Lower:

44 Vol %

Solvent content:

99.8 %

VOC content:

99.8 %

791.0 g/l / 6.60 lb/gl

- Handling and storage

Information for safe handling:

Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.

Information about storage in one common storage facility: Not required.

Further information about storage conditions:

Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

- Stability and reactivity

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Dangerous reactions: No dangerous reactions known.

Dangerous products of decomposition: No dangerous decomposition products known.

- Information for safe handling:

Protective gloves:

The glove material has to be impermeable and resistant to the product/the substances/the preparation.
Due to testing no recommendation to the glove material can be given for the product/the preparation/the chemical mixture.
Selection of the glove material is based on consideration of the penetration rates, rates of diffusion and degradation.

Material of gloves:
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

10 Physical and chemical properties

General information:

Form: Fluid

Color: According to product specification

Change in condition:

Melting point/Melting range: -95°C (-143°F)
Boiling point/Boiling range: 64°C (148°F)

Flash point:

23°C (73°F)

Ignition temperature:

455°C (847°F)

Auto ignition:

Product is not selfigniting.

Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures is possible.

Explosion limits:

Lower:

5.5 Vol %

Upper:

44 Vol %

Explosion pressure at 20°C (68°F): 228 kPa (5600 lbf/in²)

Density at 20°C (68°F): 0.79 g/cm³

- Toxicalogical information

Acute toxicity:

LFECS values that are relevant for classification:

- Respiratory irritation:

  Oral: LD50: 5200 mg/kg (rat)
  Dermal: LD50: 11900 mg/kg (rabbit)

  Primary irritant:

  on the skin: No irritant effect.
  on the eye: No irritant effect.

  Sensitization: No sensitizing effects known.

  Additional toxicological information:

  The product shows the following dangers according to internally approved calculation methods for preparations:

  Toxicity:

- Additional information:

  The Lists that were valid during the creation were used as basis.

  No further data; see item 7.

  VOC content:

  99.8 %

  791.0 g/l / 6.60 lb/gl

- Environmental information:

  Information about protection against explosions and fires:

  No decomposition if used according to specifications.

  Information about storage in one common storage facility: Not required.

  Requirements to be met by 위하여 aseous and receptacles: Store in a cool location.

  Information about storage in one common storage facility: Not required.

  Further information about storage conditions:

  Keep receptacle tightly sealed.
  Store in cool, dry conditions in well sealed receptacles.

- General protective and hygienic measures:

  Personal protective equipment:

  - Respiratory protection:

    Use respiratory filter device in case of brief exposure or low pollution.
    Use respiratory protective device that is according to specifications in case of intensive or longer exposure.

  - Eye protection:

    Tightly sealed goggles

  - Hand protection:

    Use protective gloves.

  - Skin protection:

    Use protective clothing.

  - Foot protection:

    Use protective footwear.

  Additional protective clothing:

  - Protective clothing:

    Use protective clothing.

  Additional information about design of technical systems:

  No further data; see item 7.

- Further information about protection:

  Open and handle receptacle with care.

  Prevent formation of aerosols.

- Information about protection against explosions and fires:

  Keep ignition sources away - Do not smoke.
  Protect against electrostatic charges.

  Keep respiratory protective device available.

  Information about storage in one common storage facility: Not required.

  Further information about storage conditions:

  Keep receptacle tightly sealed.
  Store in cool, dry conditions in well sealed receptacles.

- Physical and chemical properties

General information:

Form: Fluid

Color: According to product specification

Change in condition:

Melting point/Melting range: -95°C (-143°F)
Boiling point/Boiling range: 64°C (148°F)

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  on the eye: No irritant effect.

  Sensitization: No sensitizing effects known.

  Additional toxicological information:

  The product shows the following dangers according to internally approved calculation methods for preparations:

  Toxicity:

- Additional information:

  The Lists that were valid during the creation were used as basis.

  No further data; see item 7.

  VOC content:

  99.8 %

  791.0 g/l / 6.60 lb/gl

- Environmental information:

  Information about protection against explosions and fires:

  No decomposition if used according to specifications.

  Information about storage in one common storage facility: Not required.

  Requirements to be met by 여러 aseous and receptacles: Store in a cool location.

  Information about storage in one common storage facility: Not required.

  Further information about storage conditions:

  Keep receptacle tightly sealed.
  Store in cool, dry conditions in well sealed receptacles.
12 Ecological information

General notes:
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

13 Disposal considerations

Product:
Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

14 Transport information

DOT regulations:

Hazard class: 3
Identification number: UN1992
Proper shipping name (technical name): FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)
Label: 3+6.1

Land transport ADR/RID (cross-border):

ADR/RID class: 3 Flammable liquids
Label: 3+6.1

Imperial transport IMDG:

UN Number: 1992
Label: 3+6.1

Packing group: II
EMIS Number: F.S.S-D
Marine pollution: No

Proper shipping name: FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

Air transport ICAO-TI and IATA-DGR:

ICAO/TI Class: 3
UN No: 1992
Label: 3+6.1

Packaging group: II
Proper shipping name: FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

15 Regulations

UN "Model Regulation": UN1992, FLAMMABLE LIQUID, TOXIC, N.O.S., 3 (6.1), II

(Contd. on page 6)

USA
Trade name: VO IND. BLENDS MIX A

- Hazard-determining components of labelling:

  - Toxic:
    - methanol

- Risk phrases:

  - Highly flammable.
  - Toxic by inhalation, in contact with skin and if swallowed.

  - Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

- Safety phrases:

  - Keep locked up and out of the reach of children.
  - Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.
  - Wear suitable protective clothing, gloves and eye/face protection.
  - In case of contact or if you feel unwell, seek medical advice immediately (show the label where possible).
  - In case of accidental inhalation: remove casualty to fresh air and keep at rest.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing MSDS: product safety department

Contact:
SPEX CertiPrep Inc.
732-549-7144

Abbreviations and acronyms:

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- IATA-DGR: Dangerous Goods Regulations by the “International Air Transport Association” (IATA)
- IC: International Civil Aviation Organization
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- ACGIH: American Conference of Governmental Industrial Hygienists
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
General information

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation: Supply fresh air, consult doctor in case of complaints.

After skin contact: Generally, the product does not irritate the skin.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: Immediately call a doctor.

Disposal:

Dispose of contents/container in accordance with local/regional/national/international regulations.

COMPONENTS

Chemical characterization:
CAS No. Description
EINECS Number: 205-184-8

Hazard identification

Hazard description:

Information pertaining to particular dangers for man and environment:

Harmful if swallowed.
Classification system:
NFPA ratings (scale 0 - 4)
Fire: 0
Health: 2
Reactivity: 0

BMS-ratings (scale 0 - 4)
Health: 2
Fire: 0
Reactivity: 0

GHS label elements

S37/39 - Harmful if swallowed.
Prevention:
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.

Response:
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
Rinse mouth.
Disposal:
Dispose of contents/container in accordance with local/regional/national/international regulations.

Exposure controls and personal protection

Additional information about design of technical systems:
No further data; see item 7.

Requirements to be met by storerooms and receptacles:
No special requirements.

Storage:
The exact breakthrough time must be ascertained by the manufacturer.

Information about storage in one common storage facility:
Not required.

Information about particular dangers for man and environment:

Harmful
Exposure controls and personal protection:

Additional information about storage conditions:
No special measures required.

Protection of hands:

Selection of the glove material on consideration of the breakthrough times, rates of diffusion and the degradation
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Eye protection:

Not required.

The exact breakthrough time has to be determined by the manufacturer of the protective gloves and has to be observed.

Penetration time of glove material
manufacturer.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to

Breathing equipment:

Not required.

Additional information about design of technical systems:
No further data; see item 7.

Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol-resistant foam.

Protection of hands:

The selection of the suitable glove material does not only depend on the material, but also on further marks of quality and varies from manufacturer to

Physical and chemical properties

Form:
Solid

Change in condition
Melting point/Freezing range: Undetermined.
Boiling point/Flash point: Not applicable.

Flash point:

Flammability (solid, gas, liquid): Product is not flammable.

Danger of explosion:
Product does not present an explosion hazard.

Density: Not determined.
10. Stability and reactivity

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Dangerous reactions: No dangerous reactions known.

Dangerous products of decomposition: No dangerous decomposition products known.

11. Toxicological information

Acute toxicity:

Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.

Sensitization: No sensitizing effects known.

12. Ecological information

General notes:
Water hazard class 3 (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13. Disposal considerations

Product:
Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

14. Transport information

Maritime transport IMDG:
Marine pollutant: No

15. Regulations

Sara
- Section 333 (extremely hazardous substances):
  - Substance is not listed.
- Section 313 (specific toxic chemicals):
  - Substance is not listed.
- TSCA (Toxic Substances Control Act):
  - Substance is listed.

Proposition 65
- Chemicals known to cause cancer:
  - Substance is not listed.
- Chemicals known to cause reproductive toxicity for females:
  - Substance is not listed.
- Chemicals known to cause reproductive toxicity for males:
  - Substance is not listed.
- Chemicals known to cause developmental toxicity:
  - Substance is not listed.

- Carcinogenic categories

  - EPA (Environmental Protection Agency)
  - IARC (International Agency for Research on Cancer)
  - NTP (National Toxicology Program)
  - TLV (Threshold Limit Value established by ACGIH)
  - NIOSH (National Institute for Occupational Safety and Health)
  - OSHA (Occupational Safety & Health Administration)

- Product related hazard informations: The product has been classified and marked in accordance with directives on hazardous materials.

- Hazard symbol:

  - Risk phrases:
    - Harmful

- Abbreviations and acronyms:

  - IMDG: International Maritime Code for Dangerous Goods
  - ACGIH: American Conference of Governmental Industrial Hygienists
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - NFPA: National Fire Protection Association (USA)
  - HMIS: Hazardous Materials Identification System (USA)
  - EINECS: European Inventory of Existing Commercial Chemical Substances

- Other information

  - This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
  - Department issuing MSDS: product safety department
  - Contact:
    - SPEX CertiPrep Inc.
    - 732-549-7144
  - USA
1 Identification of substance

Product details

Trade name: Custom Organic

Article number: NEAT-3505

Application of the substance / the preparation

Manufacturer/Supplier:

SPEx CertPrep, Inc - 203 Norcross Ave, Metuchen, NJ 08840

Information department: product safety department

Emergency information:

Emergency Phone Number (24 hours) CHEMTREC (800-424-9300) Outside US: 703-527-3887

2 Composition/Information on components

Chemical characterization:

CAS No. Description
108-88-3 toluene

Identification number(s)

EINECS Number: 203-625-9
Index number: 601-021-00-3

3 Hazards identification

Hazard description:

Repr. Cat. 3 Harmful
Highly flammable

Information pertaining to particular dangers for man and environment:

Highly flammable. Irritating in skin.

Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of harm to the unborn child.

Harmful: may cause harm if swallowed. Vapours may cause drowsiness and dizziness.

Classification system:

NFPA ratings (scale 0 - 4)
2 3 0
Health = 2 Fire = 3 Reactivity = 0

BMS ratings (scale 0 - 4)

HEALTH REACTIVITY
2
Health = 2 Fire = 3 Reactivity = 0

GHS label elements

Danger

2.6.1. Highly flammable liquid and vapour.

4.10.1. May be fatal if swallowed and enters airways.

4.3.2. Suspected of damaging fertility or the unborn child.

4.5.2. May cause damage to organs through prolonged or repeated exposure.

5 First aid measures

General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation:

In case of unconsciousness place patient stably in side position for transportation.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.

After eye contact:

Rinse opened eye for several minutes under running water.

After swallowing:

If symptoms persist consult doctor.

6 Fire fighting measures

Suitable extinguishing agents:

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents:

Water with full jet

Protective equipment:

No special measures required.

7 Accidental release measures

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.

Measures for environmental protection:

Do not allow to enter sewers/surface or ground water.

Measures for cleaning/collection:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

8 Handling and storage

Handling:

Information for safe handling:

Information about protection against explosions and fires:

Keep system source away – Do not smoke.

Protect against electrostatic charges.

Storage:

Requirements to be met by warehouses and receptacles: Store in a cool location.

Information about storage in one common storage facility: Not required.

Further information about storage conditions:

Keep receptacle tightly sealed.

In case of spills, clean up with absorbent material.

9 Exposure controls and personal protection

- Additional information about design of technical systems: No further data; see item 7.

(Contd. on page 2)
Components with limit values that require monitoring at the workplace:

108-88-3 toluene

PEL

<table>
<thead>
<tr>
<th>Compound</th>
<th>PEL REL</th>
<th>TLV REL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C 300; 500* ppm</td>
<td>200 ppm*</td>
</tr>
<tr>
<td></td>
<td>150 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>100 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>375 mg/m³, 100 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>375 mg/m³, 100 ppm</td>
<td></td>
</tr>
</tbody>
</table>

Additional information: The data that were valid during the creation were used as basis.

Personal protective equipment:

- General protective and hygienic measures:
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing.
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the skin.
  - Avoid contact with the eyes and skin.

- Breathing equipment:
  - In case of brief exposure or low pollution use respiratory filter device.
  - In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- Protection of hands:
  - Protective gloves
  - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  - Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
  - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Eye protection:

- Tightly sealed goggles

Physical and chemical properties

General Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Fluid</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Aromatic</td>
</tr>
<tr>
<td>Change in condition</td>
<td></td>
</tr>
<tr>
<td>Melting point/Melting range:</td>
<td>-95°C (-139°F)</td>
</tr>
<tr>
<td>Boiling point/Boiling range:</td>
<td>110°C (230°F)</td>
</tr>
<tr>
<td>Flash point:</td>
<td>4°C (39°F)</td>
</tr>
<tr>
<td>Ignition temperature:</td>
<td>535°C (995°F)</td>
</tr>
<tr>
<td>Danger of explosion:</td>
<td>The product is not explosive. However, formation of explosive air/vapor mixtures is possible.</td>
</tr>
<tr>
<td>Explosion limits:</td>
<td></td>
</tr>
<tr>
<td>Lower:</td>
<td>1.2 Vol %</td>
</tr>
<tr>
<td>Upper:</td>
<td>7 Vol %</td>
</tr>
<tr>
<td>Vapor pressure at 20°C (68°F):</td>
<td>29 hPa (22 mm Hg)</td>
</tr>
<tr>
<td>Density at 20°C (68°F):</td>
<td>0.87 g/cm³</td>
</tr>
<tr>
<td>Solubility in / Miscibility with Water at 15°C (59°F):</td>
<td>0.5 g/l</td>
</tr>
</tbody>
</table>

Toxicological information

- Acute toxicity:
  - LD/LC50 values that are relevant for classification:
    - Oral LD50 5000 mg/kg (rat)
    - Dermal LD50 12124 mg/kg (rabbit)
    - Inhalative LC50/4 h 5320 mg/l (mouse) |

- Primary irritant effect:
  - on the skin: Irritant to skin and mucous membranes.
  - on the eye: No irritating effect.

- Sensitization: No sensitizing effects known.

Ecological information

- General notes:
  - Water hazard class 2 (Assessment by list): hazardous for water
  - Do not allow product to reach ground water, watercourse or sewage system.
  - Danger to drinking water if even small quantities leak into the ground.

Disposal considerations

- Product:
  - Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

Transport information

- DOT regulations:
  - Hazard class: 3
  - Identification number: UN1294
  - Packing group: II
  - Proper shipping name (technical name): TOLUENE
  - Label 1

- Land transport AD/RID (cross-border):
  - AD/RID class: 3 Flammable liquids
  - Danger code (Kemler): 3
  - UN-Number: 1294
Trade name: Custom Organic

Packaging group: II
Label: 3
Description of goods: 1294 TOLUENE

Maritime transport IMDG:

- IMDG Class: 3
- UN Number: 1294
- Label: 3
- Packaging group: II
- Marine pollutant: No
- Proper shipping name: TOLUENE

Air transport ICAO-TI and IATA-DGR:

- ICAO-TI Class: 3
- UNID Number: 1294
- Label: 3
- Packaging group: II
- Proper shipping name: TOLUENE

UN “Model Regulations”: UN/ID 1294, TOLUENE, 3, II

15 Regulations

- Section 355 (extremely hazardous substances):
  - Substance is not listed.
- Section 313 (Specific toxic chemical listings):
  - Substance is listed.
- TSCA (Toxic Substances Control Act):
  - Substance is listed.
- Proposition 65:
  - Substance is not listed.
- Chemicals known to cause cancer:
  - Substance is not listed.
- Chemicals known to cause reproductive toxicity for females:
  - Substance is not listed.
- Chemicals known to cause reproductive toxicity for males:
  - Substance is not listed.
- Chemicals known to cause developmental toxicity:
  - Substance is listed.

Carcinogenic category:

- EPA (Environmental Protection Agency)
  - IARC (International Agency for Research on Cancer)
  - NTP (National Toxicology Program)
  - TLV (Threshold Limit Value established by ACGIH)
  - NIOSH-Ca (National Institute for Occupational Safety and Health)

- Substance is not listed.

Other information

- This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
- Department issuing MSDS: product safety department
- Contact: SPEX CertiPrep Inc.
  - 732-549-7144
- Abbreviations and acronyms:
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - DOT: US Department of Transportation
  - IATA: International Air Transport Association
  - ICAO: International Civil Aviation Organization
  - NTP: National Toxicology Program
  - ACGIH: American Conference of Governmental Industrial Hygienists
  - GHS: Globally Harmonized System of Classification and Labelling of Chemicals
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - NFPA: National Fire Protection Association (USA)
  - HMIS: Hazardous Materials Identification System (USA)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
## Material Safety Data Sheet

**acc. to ISO/DIS 11014**

**Trade name:** Custom Organic Standard-Unleaded Gasoline

### 1 Identification of substance

#### Product details
- **Trade name:** Custom Organic Standard-Unleaded Gasoline
- **Article number:** NEAT-1273
- **Application of the substance/the preparation**
- **Supplier:** SPEX CertiPrep, Inc - 208 Norcross Ave, Metuchen, NJ 08840
- **Information department:** Product safety department
- **Emergency information:**
  - **Emergency Phone Number (24 hours):** CHEMTREC (800-424-9300)
  - **Outside US:** 703-527-3887
- **Manufacturer:** SPEX CertiPrep, Inc - 208 Norcross Ave, Metuchen, NJ 08840

### 2 Composition/Information on ingredients

#### Chemical characterization:
- **CAS No. Description:** 86290-81-5 Gasoline
- **EINECS Number:** 286-226-4
- **Index number:** 649-378-06-4
- **Chemical characterization:**
  - **Description:**
  - **Dangerous components:** Void

#### HMIS-ratings (scale 0 - 4)
- **Health = 0**
- **Fire = 0**
- **Reactivity = 0**

#### NFPA ratings (scale 0 - 4)
- **Health = 0**
- **Fire = 0**
- **Reactivity = 0**

#### GHS label elements

#### 3 Hazard identification

**Hazard description:**
- **Warning:**

**Information pertaining to particular dangers for man and the environment:**
- May cause cancer.
- May cause heritable genetic damage.
- Harmful: may cause long term effects if swallowed.

**Classification system:**
- **NFPA ratings (scale 0 - 4):**
  - Health = 0
  - Fire = 0
  - Reactivity = 0

**BMS-ratings (scale 0 - 4):**
- Health = 0
- Fire = 0
- Reactivity = 0

**GHS label elements**
- **Danger:**

### 4 First aid measures

- **Eye contact:** Rinse opened eye for several minutes under running water.
- **Skin contact:** Generally the product does not irritate the skin.
- **Inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.

### 5 Fire fighting measures

- **Suitable extinguishing agents:** CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:** Do not allow to enter sewers/surface or ground water.
- **Measures for cleaning/collection:** Dispose contaminated material as waste according to item 13.
- **Exhaust adequate ventilation.**

### 7 Handling and storage

**Handling:**
- Information for safe handling: Open and handle receptacle with care.
- Information about protection against explosions and fires: Keep respiratory protective device available.

**Storage:**
- Information about storage in one common storage facility: Not required.
- Requirements to be met by storerooms and receptacles: No special requirements.
- Information about protection against explosions and fires: Keep respiratory protective device available.
- Information for safe handling: Open and handle receptacle with care.
- Information about storage in one common storage facility: Not required.

### Exposure controls and personal protection

**Additional information about design of technical systems:** No further data; see item 7.

**Components with limit values that require monitoring at the workplace:**
- **86290-81-5 Gasoline**
  - **TLV:**
    - Short-term value: 3480 mg/m³, 500 ppm
    - Long-term value: 880 mg/m³, 300 ppm
  - **BSI: IEC 617:**
  - **Reactivity:**

**Further information about storage conditions:** None.

**Personal protective equipment:**
- General protective and hygienic measures:
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing.
  - Wash hands before breaks and at the end of work.
  - Store protective clothing separately.

**Breathing equipment:**
- In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protective gloves:**

**Additional information:** The glove material has to be impermeable and resistant to the product/the substance/the preparation.

**Due to existing tests no recommendation to the glove material can be given for the product/the preparation/the chemical mixture.**

(Contd. of page 1)

(Contd. of page 2)

(Contd. of page 3)
### Physical and chemical properties

**General Information**
- **Form:** Solid
- **Color:** Characteristic

**Change in condition**
- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** Undetermined.

**Flash point:** Not applicable.

**Flammability (solid, gaseous):** Product is not flammable.

**Danger of explosion:** Product does not present an explosion hazard.

**Density:** Not determined.

**Solubility in / Miscibility with Water:** Insoluble.

**Solvent content:**
- **Organic solvents:** 0.0%
- **Solids content:** 100.0%

### Stability and reactivity

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**Dangerous reactions:** No dangerous reactions known.

**Dangerous products of decomposition:** No dangerous decomposition products known.

### Toxicological information

**Acute toxicity:**
- **Primary irritant effect:**
  - on the skin: No irritant effect.
  - on the eye: No irritating effect.
- **Sensitization:** No sensitizing effects known.

### Ecological information

**General notes:**
- **Water hazard class 3 (Self-assessment):** Extremely hazardous for water.
- **Do not allow product to reach ground water, water course or sewage system, even in small quantities.
- **Danger to drinking water if even extremely small quantities leak into the ground.

**Product related hazard informations:**
- **The product has been classified and marked in accordance with directives on hazardous materials.
- **The product has been classified and marked in accordance with directives on hazardous materials.**
Identification of substance

- Product name: PURGEABLE AROMATICS FOR GASOLINE
- Article number: P-GAS
- Application of the substance / the preparation
- Manufacturer/Supplier:
  SPEX CertiPrep, Inc - 203 Norcross Ave, Metuchen, NJ 08840
- Information department: product safety department
- Emergency information:
  CHEMTREC (800-424-9300)
  Outside US: 703-527-3887

Compliance with regulations:
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- ACGIH: American Conference of Governmental Industrial Hygienists
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- EINECS: European Inventory of Existing Commercial Chemical Substances
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- SPEX CertiPrep Inc. - 203 Norcross Ave, Metuchen, NJ 08840

Dangerous components:
- Mixture of the substances listed below with nonhazardous additions.
- This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
- Application of the substance / the preparation
- Article number: P-GAS
- Manufacturer/Supplier:
  SPEX CertiPrep, Inc - 203 Norcross Ave, Metuchen, NJ 08840
- Information department: product safety department
- Emergency information:
  CHEMTREC (800-424-9300)
  Outside US: 703-527-3887

Safety phrases:
- Avoid exposure - obtain special instructions before use.
- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Other information
- The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- Classification system:
  - Toxic: Highly flammable
  - Information pertaining to particular dangers for man and environment:
    - The product has to be labelled due to the calculation procedure of international guidelines.
    - May cause cancer.
    - May cause heritable genetic damage.
    - Highly flammable.
    - Also toxic by inhalation, in contact with skin and if swallowed.
    - Heritable or aquatic organisms, may cause long-term adverse effects in the aquatic environment.
  - Classification system:
    - The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
    - NFPA ratings (scale 0 - 4)
      - Health = 3
      - Flammability = 3
      - Reactivity = 0
Material Safety Data Sheet
acc. to ISODIS 11014

Trade name: PURGEABLE AROMATICS FOR GASOLI

1 Handling and storage

- Handling
  - Information for safe handling:
    - Ensure good ventilation/illumination at the workplace.
    - Open and handle receptacle with care.
    - Prevent formation of aerosols.
    - Information about protection against explosions and fires:
      - Keep ignition sources away - Do not smoke.
      - Protect against electric static charges.
      - Keep respiratory protective device available.

- Staging:
  - Requirements to be met by storage tanks and receptacles: Store in a cool location.
  - Information about storage in common storage facility: Not required.

- Further information about storage conditions:
  - Keep receptacle tightly sealed.
  - Store in cool, dry conditions in well sealed receptacles.

2 Exposure controls and personal protection

- Additional information about design of technical systems: No further data, see item 7.
- Compounds with limit values that require monitoring at the workplace:
  - 8358-1 methanol
    - Short-term value: 15* mg/m³, 5* ppm
    - Long-term value: 3* mg/m³, 1* ppm
  - 71-45-2 benzene
    - Short-term value: 325 mg/m³, 250 ppm
    - Long-term value: 260 mg/m³, 200 ppm
  - 67-56-1 methanol
    - Short-term value: 328 mg/m³, 250 ppm
    - Long-term value: 262 mg/m³, 200 ppm

3 First aid measures

- General information:
  - Immediately remove any clothing soiled by the product.
  - Remove breathing apparatus only after contaminated clothing have been completely removed.
  - In case of regular breathing or respiratory arrest provide artificial respiration.

- After inhalation:
  - Supply fresh air or oxygen; call for doctor.

- After skin contact:
  - Rinse opened eye for several minutes under running water. Then consult a doctor.

- After eye contact:
  - Rinse opened eye for several minutes under running water. Then consult a doctor.

- After swallowing:
  - Do not induce vomiting; immediately call for medical help.

4 Fire fighting measures

- Suitable extinguishing agents: CO2, sand, extinguishing powder. Do not use water.
- For safety reasons unsuitable extinguishing agents: Water with full jet

5 Accidental release measures

- Person-related safety precautions: Wear protective equipment. Keep unprotected persons away.
- Measures for environmental protection:
  - Do not allow product to reach sewage system or any water course.
  - Inform respective authorities in case of spreading into water course or sewage system.
  - Do not allow in or near river/stream/surface or ground water.
- Measures for cleaning/solidifying:
  - Alive with liquid-binding material (sand, diatomite, acid binders, universal binders, saw dust).

6 GHS label elements

- Health: 3
- Fire: 3
- Reactivity: 0

7 Precautionary statements

- Health: *3
- Fire: 3
- Reactivity: 0

8 HMIS-ratings (scale 0 - 4)

- Health: 3
- Fire: 5
- Reactivity: 6

9 GHS label elements

- Danger
- Danger
- Danger

10 Specific treatment is urgent (see on this label):

11 Further information about storage:

- Dispose of desired material as waste according to item 13.
- Ensure adequate ventilation.
- Do not flush with water or aqueous cleansing agents.

12 Further information about storage:

- Keep receptacle tightly sealed.
- Store in cool, dry conditions in well sealed receptacles.

13 Information for safe handling:

- Prevention:
  - Keep away from heat/sparks/open flames/hot surfaces.
  - No smoking.

- Response:
  - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - Immediately call a POISON CENTER or doctor/poison control center.
  - Specific treatment is urgent (see on this label).

- Storage:
  - Store locked up.
  - Disposal:
    - Dispose of container/container in accordance with local/regional/national/international regulations.

14 Information for safe handling:

- Handling:
  - Information for safe handling:
    - Ensure good ventilation/illumination at the workplace.
    - Open and handle receptacle with care.
    - Prevent formation of aerosols.
    - Information about protection against explosions and fires:
      - Keep ignition sources away - Do not smoke.
      - Protect against electric static charges.
      - Keep respiratory protective device available.

- Staging:
  - Requirements to be met by storage tanks and receptacles: Store in a cool location.
  - Information about storage in common storage facility: Not required.

- Further information about storage conditions:
  - Keep receptacle tightly sealed.
  - Store in cool, dry conditions in well sealed receptacles.

15 Information for safe handling:

- Prevention:
  - Keep away from heat/sparks/open flames/hot surfaces.
  - No smoking.

- Response:
  - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - Immediately call a POISON CENTER or doctor/poison control center.
  - Specific treatment is urgent (see on this label).

- Storage:
  - Store locked up.
  - Disposal:
    - Dispose of container/container in accordance with local/regional/national/international regulations.

16 Information for safe handling:

- Handling:
  - Information for safe handling:
    - Ensure good ventilation/illumination at the workplace.
    - Open and handle receptacle with care.
    - Prevent formation of aerosols.
    - Information about protection against explosions and fires:
      - Keep ignition sources away - Do not smoke.
      - Protect against electric static charges.
      - Keep respiratory protective device available.

- Staging:
  - Requirements to be met by storage tanks and receptacles: Store in a cool location.
  - Information about storage in common storage facility: Not required.

- Further information about storage conditions:
  - Keep receptacle tightly sealed.
  - Store in cool, dry conditions in well sealed receptacles.

17 Information for safe handling:

- Prevention:
  - Keep away from heat/sparks/open flames/hot surfaces.
  - No smoking.

- Response:
  - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - Immediately call a POISON CENTER or doctor/poison control center.
  - Specific treatment is urgent (see on this label).

- Storage:
  - Store locked up.
  - Disposal:
    - Dispose of container/container in accordance with local/regional/national/international regulations.

18 Information for safe handling:

- Handling:
  - Information for safe handling:
    - Ensure good ventilation/illumination at the workplace.
    - Open and handle receptacle with care.
    - Prevent formation of aerosols.
    - Information about protection against explosions and fires:
      - Keep ignition sources away - Do not smoke.
      - Protect against electric static charges.
      - Keep respiratory protective device available.

- Staging:
  - Requirements to be met by storage tanks and receptacles: Store in a cool location.
  - Information about storage in common storage facility: Not required.

- Further information about storage conditions:
  - Keep receptacle tightly sealed.
  - Store in cool, dry conditions in well sealed receptacles.
Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to
manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has
therefore to be checked prior to the application.

Penetration time of glove material
The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:
Tightly sealed goggles

Physical and chemical properties

General information
Form: Fluid
Color: According to product specification
Odor: Characteristic

Change in condition
Melting point/Melting range: -98°C (-144°F)
Boiling point/Boiling range: 64°C (147°F)
Flash point: 11°C (52°F)
Ignition temperature: 455°C (851°F)

Explosion limits:
Lower: 5.5 Vol %
Upper: 44 Vol %

Vapor pressure at 20°C (68°F): 128 hPa (96 mm Hg)
Density at 20°C (68°F): 0.79 g/cm³

Solubility in / Miscibility with
Water: Not miscible or difficult to mix.

Solvent content:
Organic solvents: 99.4 %
VOC content: 99.4 %
790.1 g/l / 6.59 lb/gl

Solids content: 0.2 %

Stability and reactivity
Thermal decomposition / conditions to be avoided: No decomposition (if used according to specifications).
Dangerous reactions: No dangerous reactions known.
Dangerous products of decomposition: No dangerous decomposition products known.

Toxicological information

Acute toxicity:
LD₅₀ (oral) 5628 mg/kg (rat)
Dermal LD₅₀ 68 mg/kg (mouse)
Inhalative LC₅₀ (air) 9500 mg/m³ (mice)

Primary irritant effect:
- on the skin: No irritant effect
- on the eye: No irritating effect
- Sensitization: No sensitizing effects known.
- Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations:
- Toxic
- Carcinogenic
The product can cause inheritable damage.

Ecological information

Ecotoxical effects:
Remark: Harmful to fish
- General notes:
Water hazard class 3 (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
Harmful to aquatic organisms

Disposal considerations
Product:
Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

Transport information

DOT regulations:
Hazard class: 3
Identification number: UN1992
Packaging group: II
Proper shipping name (technical name): FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)
Label:
Land transport ADR/RID (cross-border):
ADR/RID class: 3 Flammable liquids
Danger code (Shlda): 3
UN-Number: 1992
Packaging group: II
Label: 3+6.1
Description of goods: 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

USA
**Trade name:** PURGEABLE AROMATICS FOR GASOLI

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### Maritime transport IMDG:

- **IMDG Class:** 3
- **UN Number:** 1992
- **Label:** 3 + 6.1
- **Packaging group:** II
- **Marine pollutant:** No

### Air transport ICAO-TI and IATA-DGR:

- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1992
- **Label:** 3 + 6.1
- **Packaging group:** II

---

### 15 Regulations

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>355</td>
<td>(extremely hazardous substances)</td>
</tr>
<tr>
<td>334</td>
<td>(toxic substances)</td>
</tr>
<tr>
<td>TSCA</td>
<td>(Toxic Substances Control Act)</td>
</tr>
</tbody>
</table>

### IARC (International Agency for Research on Cancer)

- **1634-04-4 tert-butyl methyl ether**: 3
- **108-38-3 m-xylene**: 3
- **95-50-1 1,2-dichlorobenzene**: 3
- **541-73-1 1,3-dichlorobenzene**: 3
- **106-46-7 1,4-dichlorobenzene**: 2B
- **71-43-2 benzene**: 1
- **95-47-6 o-xylene**: 3
- **108-90-7 chlorobenzene**: 3
- **106-42-3 p-xylene**: 3
- **108-88-3 toluene**: 3
- **100-41-4 ethylbenzene**: 2B

### TLV (Threshold Limit Value established by ACGIH)

- **1634-04-4 tert-butyl methyl ether**: A3
- **108-38-3 m-xylene**: A4
- **95-50-1 1,2-dichlorobenzene**: A4
- **106-46-7 1,4-dichlorobenzene**: A3
- **71-43-2 benzene**: A1
- **95-47-6 o-xylene**: A4
- **106-42-3 p-xylene**: A4
- **108-88-3 toluene**: A4
- **100-41-4 ethylbenzene**: A3

### NIOSH-Ca (National Institute for Occupational Safety and Health)

- **106-46-7 1,4-dichlorobenzene**
- **71-43-2 benzene**

### OSHA-Ca (Occupational Safety & Health Administration)

- **71-43-2 benzene**

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**Product related hazard informations:** The product has been classified and marked in accordance with directives on hazardous materials.

- **Hazard symbols:**
  - Toxic
  - Highly flammable

- **Risk phrases:**
  - May cause cancer.
  - May cause heritable genetic damage.
  - Highly flammable.
  - Also toxic by inhalation, in contact with skin and if swallowed.
  - Also toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
  - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- **Safety phrases:**
  - Avoid exposure - obtain special instructions before use.
  - Keep locked up and out of the reach of children.
  - Do not clean, rinse, handle, or store this material and its container at hazardous waste collection point.
  - Wear suitable protective clothing, gloves and face/eye protection.
  - In case of accident or if you feel unwell, seek medical advice immediately (shows the label where possible).
  - In case of accident by inhalation: remove casualty to fresh air and keep at rest.
16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing MSDS: product safety department
- Contact: SPEX CertiPrep Inc. 732-549-7144
- Abbreviations and acronyms:
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  - IMDG: International Maritime Code for Dangerous Goods
  - DOT: US Department of Transportation
  - IATA: International Air Transport Association
  - IATA-DGR: Dangerous Goods Regulations by the “International Air Transport Association” (IATA)
  - ICAO: International Civil Aviation Organization
  - ICAO-TI: Technical Instructions by the “International Civil Aviation Organization” (ICAO)
  - GHS: Globally Harmonized System of Classification and Labelling of Chemicals
  - NFPA: National Fire Protection Association
  - HMIS: Hazardous Materials Identification System
  - VOC: Volatile Organic Compounds
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - USA

2 Composition/Chemical components

Mixture of the substances listed below with nonhazardous additions.

- 67-56-1 methanol
  - Danger: 2.6/2
  - Warning: 3.3/2A, 3.8/3
  - 78-93-3 butanone
    - Danger: 2.6/2
    - Warning: 3.8/3
  - 107-06-2 1,2-dichloroethane
    - Danger: 2.6/2
    - Warning: 3.1.O/4, 3.2/2, 3.3/2A
  - 106-46-7 1,4-dichlorobenzene
    - Danger: 2.6/2
    - Warning: 3.1.I/4
  - 71-43-2 benzene
    - Danger: 2.6/2
    - Warning: 3.2/2, 3.3/2A
  - 56-23-5 carbon tetrachloride
    - Danger: 3.1.O/3, 3.1.D/3, 3.1.I/3
    - Warning: 3.9/1, 3.6/2
  - 108-90-7 chlorobenzene
    - Danger: 2.6/3
    - Warning: 3.1.I/4
  - 127-18-4 tetrachloroethylene
    - Danger: 3.6/2
    - Warning: 3.2/2, 3.3/2A
  - 79-01-6 trichloroethylene
    - Danger: 3.6/1B, 3.5/2
    - Warning: 3.2/2, 3.3/2A
  - 75-35-4 1,1-dichloroethylene
    - Danger: 2.6/1
    - Warning: 3.6/2, 3.1.I/4

Chemical identification of the substance/preparation

- 78-90-5 trichloromethane
  - Danger: 2.6/2, 3.6/2, 3.1.I/3, 3.10/1
  - Warning: 3.6/2, 3.9/2, 3.1.O/4, 3.2/2

3 Hazard identification

- Hazard description:
  - Toxic
  - Highly flammable
  - Harmful for the environment
  - Other information pertaining to particular dangers for man and environment:
    - The product has to be labelled due to the calculation procedure of international guidelines.
    - May cause cancer.
    - May cause heritable genetic damage.
    - Highly flammable.
    - Also toxic by inhalation, in contact with skin and if swallowed.
    - Also toxic: danger of very serious, irreversible effects through inhalation, in contact with skin and if swallowed.
    - Also harmful: danger of serious damage to health by prolonged exposure through inhalation.
    - Dangerous for the ozone layer.
  - Classification system:
    - The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
Person-related safety precautions: Wear protective equipment. Keep unprotected persons away.

After swallowing:
- Do not induce vomiting; immediately call for medical help.

After eye contact:
- Rinse opened eye for several minutes under running water. Then consult a doctor.

After skin contact:
- Immediately wash with water and soap and rinse thoroughly.

General information:
- Immediately remove any clothing soiled by the product.

Measures for environmental protection:
- Do not allow product to reach sewage system or any water course.
- Inform respective authorities in case of seepage into waste water course or sewage system.
- Do not allow to enter surface or ground water.
- Measures for cleaning/collecting:
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sand dust).
  - Dispose contaminated material as waste according to item 13.
  - Ensure adequate ventilation.
  - Do not flush with water or aqueous cleansing agents.

Trade name: TCLP VOLATILES SPIKE B (NO VIN)

Printing date 08/06/2010
Reviewed on 03/11/2010

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Material Safety Data Sheet
acc. to ISO/DIS 11014

Handling and storage

- Handling:
  - Information for safe handling:
    - Ensure good ventilation/circulation at the workplace.
    - Open and handle receptacle with care.
    - Prevent formation of aerosols.
    - Information about protection against explosions and fires:
      - Keep ignition sources away - Do not smoke.
      - Protect against electrostatic charges.
      - Keep respiratory protective device available.
      - Storage:
        - Requirements to be met by storage rooms and receptacles:
          - Store in cool location.
          - Information about storage in one common storage facility: Not required.
          - Further information about storage conditions:
            - Keep receptacles tightly sealed.
            - Store in cool, dry conditions in well sealed receptacles.

Exposure controls and personal protection

- Additional information about design of technical systems: No further data; see item 7.

Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>HMIS-ratings (scale 0 - 4)</th>
<th>Health</th>
<th>Fire</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

NFPA ratings (scale 0 - 4)

<table>
<thead>
<tr>
<th>Health</th>
<th>Fire</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

GHS label elements

- Danger: 2.6/2 - Highly flammable liquid and vapour.
- Danger: 3.1/2 - Flammable liquid.
- Danger: 3.5/1B - May cause genetic defects.
- 3.6/1A - May cause cancer.
- 3.8/1 - Causes damage to organs through prolonged or repeated exposure.
- 3.9/2 - May cause damage to organs through prolonged or repeated exposure.

Prevention:
- Keep area free from breakable glass and flammables surfaces.
- Do not smoking.

Response:
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
- IF IN EYES: Rinses under running water for several minutes. Then consult a doctor.
- IF TO INGESTED: Do not induce vomiting; immediately call for medical help.
- IF ON CLOTHING (or hair): Remove/Take off immediately all contaminated clothing.

Food and water supply:
- Not for drinking water supply.
- Do not allow to enter surface or ground water.

Regulatory information:
- European Union:
  - Waste: 2008/98/EC.
  - Restrictions:
    - Restrictions: 2008/98/EC.
  - Use: 2008/98/EC.

Accidental release measures

Person-related safety precautions: Wear protective equipment. Keep unprotected persons away.
56-23-5 carbon tetrachloride

PEL Short-term value: 10 ppm 
Long-term value: 5 ppm
BEL Short-term value: 9 ppm 
Long-term value: 2 ppm
TEV Short-term value: 62 mg/m³, 10 ppm 
Long-term value: 33 mg/m³, 5 ppm

79-01-6 trichloroethylene

PEL Short-term value: 100 ppm 
5 min peak in air: 2.5 ppm 
BEL Short-term value: 3 ppm 
Long-term value: 2 ppm
TEV Short-term value: 135 mg/m³, 25 ppm 
Long-term value: 54 mg/m³, 10 ppm

Additional information:
- The lists that were valid during the creation were used as basis.
- Personal protective equipment:
  - General protective and hygienic measures:
    - Keep away from foodstuffs, beverages and feed.
    - Immediately remove all soiled and contaminated clothing.
    - Wash hands before breaks and at the end of work.
    - Store protective clothing separately.
    - Avoid contact with the eyes and skin.
  - Breathing equipment:
    - In case of brief exposure or low pollution use respiratory filter device.
    - In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
  - Protection of hands:
    - Protective gloves
    - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
    - Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
    - The selection of suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
    - As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
    - The penetration time of gloves material is based on product specification and has to be observed.
  - Eye protection:
    - Tightly sealed goggles

General Information
- Form: Fluid
- Color: According to product specification
- Odor: Characteristic
- Change in condition
  - Melting point/Melting range: -98°C (-144°F)
  - Boiling point/Boiling range: 64°C (147°F)
- Flash point:
  - Benzene: 11°C (52°F)
- Ignition temperature:
  - Benzene: 45°C (113°F)

Physical and chemical properties
- Acute toxicity:
  - LD/LC50 values that are relevant for classification:
    - 67-56-1 methanol
      - Oral LD50 5628 mg/kg (rat) 
      - Dermal LD50 15000 mg/kg (rabbit)
    - 107-06-2 1,2-dichloroethane
      - Oral LD50 670 mg/kg (rat)
      - Dermal LD50 2800 mg/kg (rat)
    - 106-46-7 1,4-dichlorobenzene
      - Oral LD50 500 mg/kg (rat)
      - Dermal LD50 5070 mg/kg (rat)
    - 79-01-6 trichloroethylene
      - Oral LD50 2402 mg/kg (mouse)
      - Dermal LD50 8450 mg/kg (mouse)
- Primary irritant effect:
  - on the skin: No irritant effect
  - on the eye: No irritating effect
  - Sensitization: No sensitizing effects known.

15 Toxicological information
- Acute toxicity:
  - LD/LC50 values that are relevant for classification:
    - 67-56-1 methanol
      - Oral LD50 5628 mg/kg (rat) 
      - Dermal LD50 15000 mg/kg (rabbit)
    - 107-06-2 1,2-dichloroethane
      - Oral LD50 670 mg/kg (rat)
      - Dermal LD50 2800 mg/kg (rat)
    - 106-46-7 1,4-dichlorobenzene
      - Oral LD50 500 mg/kg (rat)
      - Dermal LD50 5070 mg/kg (rat)
    - 79-01-6 trichloroethylene
      - Oral LD50 2402 mg/kg (mouse)
      - Dermal LD50 8450 mg/kg (mouse)

16 Stability and reactivity
- Thermal decomposition / conditions to be avoided:
  - No decomposition if used according to specifications.
  - Dangerous reactions:
  - No dangerous reactions known.
  - Dangerous products of decomposition:
  - No dangerous decomposition products known.
12 Ecological information

General notes:
Water hazard class 3 (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.

13 Disposal considerations

Product:
Recommendation:
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:
Recommendation:
Disposal must be made according to official regulations.

14 Transport information

DOT regulations:
Hazard class:
3
Identification number:
UN1992
Packing group:
II
Proper shipping name (technical name):
FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)
Label:
3+6.1

Land transport ADR/RID (cross-border):
ADR/RID class:
3
Identification number:
UN1992
Packing group:
II
Proper shipping name (technical name):
FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

Maritime transport IMDG:
IMDG Class:
3
UN Number:
1992
Packing group:
II
Proper shipping name (technical name):
FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

Air transport ICAO-TI and IATA-DGR:
ICAO/ATA Class:
3
UN Number:
1992
Packing group:
II
Proper shipping name (technical name):
FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

15 Regulations

UN "Model Regulation": UN1992, FLAMMABLE LIQUID, TOXIC, N.O.S., 3 (6.1), II

Section 95 (extremely hazardous substances):
80-80-1 1,2-dichloroethane
75-35-4 1,1-dichloroethylene
75-35-3 1,1-dichloroethylene
75-35-2 1,1-dichloroethylene
79-01-6 trichloroethylene
83-46-1 tetrachloroethylene
71-43-2 benzene
56-23-5 carbon tetrachloride
79-01-6 trichloroethylene
83-46-1 tetrachloroethylene
79-01-6 trichloroethylene

Chemicals known to cause cancer:
75-35-3 1,1-dichloroethylene
75-35-2 1,1-dichloroethylene
79-01-6 trichloroethylene
83-46-1 tetrachloroethylene
79-01-6 trichloroethylene

Chemicals known to cause reproductive toxicity for females:
75-35-3 1,1-dichloroethylene
75-35-2 1,1-dichloroethylene
79-01-6 trichloroethylene
83-46-1 tetrachloroethylene
79-01-6 trichloroethylene

Chemicals known to cause developmental toxicity:
75-35-3 1,1-dichloroethylene
75-35-2 1,1-dichloroethylene
79-01-6 trichloroethylene
83-46-1 tetrachloroethylene
79-01-6 trichloroethylene

Carcinogenic categories
EPA (Environmental Protection Agency)
75-35-3 1,1-dichloroethylene
75-35-2 1,1-dichloroethylene
79-01-6 trichloroethylene
83-46-1 tetrachloroethylene
79-01-6 trichloroethylene

IARC (International Agency for Research on Cancer)
75-35-3 1,1-dichloroethylene
75-35-2 1,1-dichloroethylene
79-01-6 trichloroethylene
83-46-1 tetrachloroethylene
79-01-6 trichloroethylene

NTP (National Toxicology Program)
75-35-3 1,1-dichloroethylene
75-35-2 1,1-dichloroethylene
79-01-6 trichloroethylene
83-46-1 tetrachloroethylene
79-01-6 trichloroethylene

TLV (Threshold Limit Value established by ACGIH)
75-35-3 1,1-dichloroethylene
75-35-2 1,1-dichloroethylene
79-01-6 trichloroethylene
83-46-1 tetrachloroethylene
79-01-6 trichloroethylene

USA
Trade name: TCLP VOLATILES SPIKE B (NO VIN)

106-46-7 1,4-dichlorobenzene A3
510-78-4 benzene A1
81-08-7 carbon tetrachloride A2
108-90-7 chlorobenzene A3
67-66-3 trichloromethane A3
127-18-4 tetrachloroethylene A3
75-35-4 1,1-dichloroethylene
107-06-2 1,2-dichloroethane
106-46-7 1,4-dichlorobenzene
71-43-2 benzene
56-23-5 carbon tetrachloride
67-66-3 trichloromethane
127-18-4 tetrachloroethylene

OSHA-Ca (Occupational Safety & Health Administration)

Product related hazard informations: The product has been classified and marked in accordance with directives on hazardous materials.

Hazard symbols:

- Toxic
- Highly flammable
- Hazardous for the environment

Hazard-determining components of labelling: methanol
benzene
trichloroethylene
carbon tetrachloride
1,2-dichloroethane

Risk phrases:
May cause cancer.
May cause heritable genetic damage.
Highly flammable.
Also toxic by inhalation, in contact with skin and if swallowed.
Also toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
Also harmful: danger of serious damage to health by prolonged exposure through inhalation.
Dangerous for the ozone layer.

Safety phrases:
Avoid exposure - obtain special instructions before use.
Keep locked up and out of the reach of children.
Do not empty into drains.
Wear suitable protective clothing, gloves and eye/face protection.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
Refer to manufacturer/supplier for information on recovery/recycling.
In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Other information:
This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing MSDS: product safety department

Contact: SPEX CertiPrep Inc.
732-549-7144

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (EU Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association

USA
1 Identification of substance

Product details

- Trade name: TRIHALOMETHANES
- Article number: THM-X-400
- Application of the substance / the preparation
- Manufacturer/Supplier:
  SPEX CertiPrep, Inc - 203 Norcross Ave, Metuchen, NJ 08840
- Information department: product safety department
- Emergency information:
  Emergency Phone Number (24 hours) CHEMTREC (800-424-9300)
  Outside US: 703-527-3887

2 Composition/Information on components

Chemical characterization

Description: Mixture of the substances listed below with nonhazardous additions.

Health hazards classification:

- 3.8/1 - Causes damage to organs.
- 3.9/2 - May cause respiratory irritation.
- 4.1.C/2 - Hazardous when mixed with water.

3.1.O/3, 3.1.D/3, 3.1.I/3; 2.6/2; 3.1.I/3, 3.2/2, 3.3/2A

Chemical identification of the substance/preparation

- 75-72-4 dibromochloromethane Warning: 3.1.O/40.04% 0.04%
- 87-86-4 bromodichloromethane Warning: 3.1.O/40.04% 0.04%
- 124-48-1 dichloromethane Warning: 3.1.O/40.04% 0.04%

4 Hazard identification

Hazard description:

- Toxic
- Highly flammable

Information pertaining to particular dangers for man and environment:

The product has to be labelled due to the calculation procedure of international guidelines.
- Highly flammable.
- Toxic by inhalation, in contact with skin and if swallowed.
- Classification system:
  - The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
  - NFPA ratings (scale 0 - 4)
    - Health = 3
    - Fire = 3
    - Reactivity = 0
  - HMIS-ratings (scale 0 - 4)
    - Health = 3
    - Fire = 3
    - Reactivity = 0

GHS label elements

- Danger
  - 2.6/2 - Highly flammable liquid and vapour.
  - 3.1/2 - Fatal if inhaled.

5 First aid measures

- General information:
  - Immediately remove any clothing soiled by the product.
  - In case of irregular breathing or respiratory arrest provide artificial respiration.
  - After breathing:
    - Supply fresh air or oxygen; call for doctor.
  - After skin contact:
    - Immediately wash with water and soap and rinse thoroughly.
  - After eye contact:
    - Rinse open eyes for several minutes under running water. Then consult a doctor.
  - After swallowing:
    - Do not induce vomiting, immediately call for medical help.

6 Fire-fighting measures

- Suitable extinguishing agents: CO2, sand, extinguishing powder. Do not use water.
- For safety reasons avoid extinguishing agents: Water with full jet
- Protective equipment: Mask respiratory protective device.

7 Accidental release measures

- Personal-related safety precautions: Wear protective equipment. Keep unprotected persons away.
- Measures for environmental protection:
  - Do not allow product to reach sewage system or any watercourse.
  - Dispose of contaminated material waste according to item 13.
  - Do not flush with water or aqueous cleansing agents
  - Do not allow to enter sewers/surface or ground water.
  - The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
  - Inform respective authorities in case of seepage into water course or sewage system.
  - Do not allow product to reach sewage system or any water course.

8 Chemical identification of the substance/preparation

- Description:
  - Mixture of the substances listed below with nonhazardous additions.

9 Safety summary

- Measures for cleaning/collecting:
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- Measures for environmental protection:
  - Dispose of contents/container in accordance with local/regional/national/international regulations.

10 Application of the substance / the preparation

- Article number:
  - THM-X-400
- Trade name: TRIHALOMETHANES

Printing date 08/06/2010 Reviewed on 07/09/2010

Material Safety Data Sheet acc. to ISODIS 11831

Material Safety Data Sheet acc. to ISODIS 11831

Trade name: TRIHALOMETHANES

Warning:

- Keep away from heat, sparks, open flames, hot surfaces. - No smoking.
- Keep out of reach of children.
- If inhaled: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
- If on skin: Wash with plenty of soap and water; for persistent effects, seek medical advice.
- If on clothes: Remove clothing immediately (as far as is feasible) and wash before reuse.
- If swallowed: Rinse mouth. Do not induce vomiting unless told to do so by medical personel. Call a POISON CENTER or doctor/physician.

Emergency information:

- Emergency Phone Number (24 hours) CHEMTREC (800-424-9300)
  - Outside US: 703-527-3887
- Storage:
  - Store in a cool, dry location.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions:
    - Keep receptor tightly sealed.

Material Safety Data Sheet

Printing date 08/06/2010 Reviewed on 07/09/2010

Material Safety Data Sheet

Trade name: TRIHALOMETHANES

Warning:

- Keep away from heat, sparks, open flames, hot surfaces. - No smoking.
- Keep out of reach of children.
- If inhaled: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
- If on skin: Wash with plenty of soap and water; for persistent effects, seek medical advice.
- If on clothes: Remove clothing immediately (as far as is feasible) and wash before reuse.
- If swallowed: Rinse mouth. Do not induce vomiting unless told to do so by medical personel. Call a POISON CENTER or doctor/physician.

Emergency information:

- Emergency Phone Number (24 hours) CHEMTREC (800-424-9300)
  - Outside US: 703-527-3887
- Storage:
  - Store in a cool, dry location.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions:
    - Keep receptor tightly sealed.
Proper shipping name (technical name): FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

Danger of explosion:
Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

Packing group:
II
Product is not selfigniting.

Identification number:
UN1992
Hazard class:
3
Ignition temperature:
455°C (851°F)
Flash point:
11°C (52°F)
Boiling point/Boiling range:
64°C (147°F)
Melting point/Melting range:
-98°C (-144°F)

Odor:
Characteristic
Color:
According to product specification
Form:
Fluid

Explosion limits:
Lower: 3.5 Vol %
Upper: 44 Vol %

Vapor pressure at 20°C (68°F): 218 kPa (16 mm Hg)

Solubility in / Miscibility with Water:
Not miscible or difficult to mix.

Solvent content:
99.9 %
VOC content:
99.9 %

Change in condition

DOT regulations:

10 Stability and reactivity

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Dangerous reactions: No dangerous reactions known.

Dangerous products of decomposition: No dangerous decomposition products known.

11 Toxicological information

Acute toxicity:

Eyes:

- Primary irritant effect: No irritant effect.

Skin:

- Primary irritant effect: No irritant effect.

Inhalation:

No irritating effect.

12 Ecological information

- General notes:
  Water hazard class 1 (Self-assessment): Slightly hazardous for water.
  Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

- Product:
  Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
  - Uncleaned packagings:
    - Recommendation: Disposal must be made according to official regulations.

14 Transport information

DOT regulations:

3
UN1992
II

Identification number:
FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)
None of the ingredients is listed.

Abbreviations and acronyms:

- NFPA: National Fire Protection Association (USA)
- ACGIH: American Conference of Governmental Industrial Hygienists
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- ICAO: International Civil Aviation Organization
- IATA: International Air Transport Association
- DOT: US Department of Transportation
- IMDG: International Maritime Code for Dangerous Goods
- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- OSHA-Ca (Occupational Safety & Health Administration)
- NIOSH-Ca (National Institute for Occupational Safety and Health)
- TLV (Threshold Limit Value established by ACGIH)
- NTP (National Toxicology Program)
- NTP-Ca (National Toxicology Program-Canada)
- TSCA (Toxic Substances Control Act)
- OSHA-Ca (Occupational Safety & Health Administration)

Product related hazard informations: The product has been classified and marked in accordance with directives on hazardous materials.

- Hazard symbols:
  - Toxic
  - Highly flammable

- Hazard-determining components of labelling: methylated

- Risk phrases:
  - Highly flammable.

- Safety phrases:
  - Keep locked up and out of the reach of children.
  - Do not empty into drains.
  - Dispose of this material and its container at hazardous or special waste collection point.
  - In case of accident by inhalation: remove casualty to fresh air and keep at rest.
  - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
  - Wear suitable protective clothing, gloves and eye protection.
  - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

- TSCA (Toxic Substances Control Act): None of the ingredients is listed.

- Carcinogenic categories:
  - EPA (Environmental Protection Agency)
  - NTP (National Toxicology Program)
  - OSHA-Ca (Occupational Safety & Health Administration)

- Other information:
  - This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing MSDS: product safety department
- Contact: SPEX CertiPrep Inc.
  - 752-540-7144
- Abbreviations and acronyms:
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  - IMDG: International Maritime Code for Dangerous Goods
  - NTP (National Toxicology Program)
  - TSCA (Toxic Substances Control Act)
  - OSHA-Ca (Occupational Safety & Health Administration)
  - NIOSH-Ca (National Institute for Occupational Safety and Health)
  - NFPA: National Fire Protection Association (USA)
1 Identification of substance

- Product name:
  Trade name: TRIHALOMETHANES

- Article number:
  XQ-1314

- Application of the substance / the preparation

- Manufacturer/Supplier:
  SPEX CertiPrep, Inc - 203 Norcross Ave, Metuchen, NJ 08840

- Emergency information:
  Emergency Phone Number (24 hours) CHEMTREC (800-424-9300)
  Outside US: 703-527-3887

2 Composition/Data on components

- Chemical characterization
  Description: Mixture of the substances listed below with nonhazardous additions.
  Dangerous components:
  - 67-56-1 methanol Danger: 2.6/2; 3.1.O/3, 3.1.D/3, 3.1.I/3; 3.8/199.99%
  - 462-06-6 fluorobenzene Danger: 2.6/20.002%
  - 105-53-3 diethyl malonate Warning: 2.6/40.002%
  - 3855-82-1 1,4-Dichlorobenzene-d4 Warning: 3.6/2; 4.1.C/1; 3.3/2A; 2.6/40.002%
  - 3364-55-4 Chlorobenzene-d5 Warning: 2.6/3; 3.1.I/4 4.1.C/2 0.002%
  - 2037-26-5 (2H8)toluene Danger: 2.6/2; 3.10/1, 3.7/2, 3.9/2 Warning: 3.2/2, 3.8/3 0.002%
  - 3114-55-4 (2H8)toluene Danger: 2.6/2; 3.10/1, 3.7/2, 3.9/2

3 Hazards identification

- Hazard description:
  Toxic: Highly flammable
  Health: 3
  Fire: 3
  Reactivity: 0

- Information pertaining to particular dangers for man and environment:
  The product has to be labelled due to the calculation procedure of international guidelines.

- Classification system:
  The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- NFPA ratings (scale 0 - 4):
  Health = 3
  Fire = 3
  Reactivity = 0

- HMIS-ratings (scale 0 - 4):
  Health = 3
  Fire = 3
  Reactivity = 0

- GHS label elements
  Danger 2.6/2 - Highly flammable liquid and vapour.
Trade name: Custom 5 compound organic standard

---

**Danger**
3.5/1 - Fatal if inhaled.

**Danger**
3.8/1 - Causes damage to organs.

- Prevention:
  - Keep away from local/parent/flame/flash surfaces. - No smoking.
  - If ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/detergent.
  - If the inhaled substance is a liquid, immediately call a POISON CENTER or doctor/physician.

- Specific treatment is urgent (see on this label).

**Storage:**
- Store locked up.
- Disposal:
  - Dispose of contents/container in accordance with local/regional/national/international regulations.

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**First aid measures**

- General information:
  - General Information:
    - Prerequisite safety precautions:
      - Wear protective equipment. Keep unprotected persons away.
    - Information for safe handling:
      - See section 8.
    - Information for safe handling at the workplace:
      - Open and handle receptacle with care.
    - Prevent formation of aerosols.
    - Information about protection against explosions and fires:
      - Keep ignition sources away - Do not smoke.
      - Protect against electronic charges.
      - Keep respiratory protective device available.

- Handling:
  - Information for safe handling:
    - Keep ignition sources away - Do not smoke.
    - Protect against electronic charges.
    - Keep respiratory protective device available.

- Protection of hands:
  - Independent of circulating air.
  - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- Breathing equipment:
  - Mouth respiratory protective device.

---

**Firefighting measures**

- Suitable extinguishing agents:
  - CO2, sand, extinguishing powder.
- Do not use water.
- For safety reasons unsuitable extinguishing agents:
  - Water with full jet
- Protective equipment:
  - Mask respiratory protective device.

---

**Accidental release measures**

- Person-related safety precautions:
  - Wear protective equipment. Keep unprotected persons away.
  - Do not allow product to reach sewage system or any water course.
  - Inform respective authorities in case of rupture into waste water course or sewage system.
  - Do not allow to enter access/soil or produe waters.
- Measures for cleaning/polishing:
  - Alkali with liquid-bonding material (sodium, diethanol, acetic binders, universal binders, sawdust).
  - Dispose contaminated material as waste according to item 11.
  - Ensure adequate ventilation.
  - Do not flush with water or aqueous cleaning agents.

---

**Handling and storage**

- Information for safe handling:
  - Store in cool, dry conditions in well sealed receptacles.
- Further information about storage conditions:
  - Keep receptacle tightly sealed.
  - Store in cool, dry conditions in well sealed receptacles.

---

**Explosion control and personal protection**

- Additional information about design of technical systems:
  - No further data: see item 7.
- Components with limit values that require monitoring at the workplace:
  - 8/56/1 interim
    - REL Short-term value: 325 mg/m³, 250 ppm
    - Long-term value: 325 mg/m³, 250 ppm
    - TLV Short-term value: 262 mg/m³, 200 ppm
    - Long-term value: 262 mg/m³, 200 ppm

---

**First aid measures**

- On Skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/detergent.
- Immediately rinse any soiled clothing with water.
- Ensure adequate ventilation.
- Do not flush with water or aqueous cleansing agents.

---

**Physical and chemical properties**

- General Information
  - Form: Fluid
  - Color: According to product specification
  - Odor: Characteristic
- Change in condition
  - Melting point/Melting range: -98°C (-144°F)
  - Boiling point/Boiling range: 64°C (147°F)
  - Flash point: 11°C (52°F)

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**Trade name:** Custom 5 compound organic standard

**Printing date:** 08/06/2010
**Reviewed on:** 07/12/2010

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**Material Safety Data Sheet acc. to ISODIS 11014**

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**Trade name:** Custom 5 compound organic standard

**Printing date:** 08/06/2010
**Reviewed on:** 07/12/2010

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**Material Safety Data Sheet acc. to ISODIS 11014**

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10 Stability and reactivity

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Dangerous reactions: No dangerous reactions known.
Dangerous products of decomposition: No dangerous decomposition products known.

11 Toxicological information

Acute toxicity:

LD/LC50 values that are relevant for classification:
67-56-1 methanol
Oral LD50 5628 mg/kg (rat)
Dermal LD50 15800 mg/kg (rabbit)

Primary irritant effect:

on the skin: No irritant effect.
on the eye: No irritating effect.
Sensitization: No sensitizing effects known.
Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations: Toxic.

12 Ecological information

General notes:

Water hazard class 3 (Self-assessment): Slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

Product:
Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Unpacked packaging:
Recommendation: Disposal must be made according to official regulations.

14 Transport information

DOT regulations:

Hazard class: 3
Identification number: UN1992
Packing group: II
Proper shipping name (technical name): FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)
Label: 3+6.1

Land transport ADR/RID (cross-border):

ADR/RID class: 3 Flammable liquids
UN-Number: 1992
Label: 3+6.1

Maritime transport IMDG:

IMDG Class: 3
UN Number: 1992
Label: 3+6.1

Marine pollutant: No

Proper shipping name: FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

Air transport ICAO-TI and IATA-DGR:

ICAO/DATA Class: 3
UNID Number: 1992
Label: 3+6.1

Proper shipping name: FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

UN "Model Regulation": UN1992, FLAMMABLE LIQUID, TOXIC, N.O.S., 3 (6.1), II

15 Regulations

USA

Section 313 (Specific toxic chemical listings):

67-56-1 methanol
462-06-6 fluorobenzene
105-53-3 diethyl malonate

Section 315 (extremely hazardous substances): None of the ingredients is listed.
Proposition 65

Chemicals known to cause cancer:
None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.

Chemicals known to cause developmental toxicity:
None of the ingredients is listed.

Carcinogenic categories

EPA (Environmental Protection Agency)
None of the ingredients is listed.

IARC (International Agency for Research on Cancer)
None of the ingredients is listed.

NTP (National Toxicology Program)
None of the ingredients is listed.

TLV (Threshold Limit Value established by ACGIH)
None of the ingredients is listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

Product related hazard informations: The product has been classified and marked in accordance with directives on hazardous materials.

Risk symbols:

Toxic· Highly flammable

Risk phrases:

Highly flammable.

Toxic, in contact with skin and if swallowed.

Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

Safety phrases:

Keep locked up and out of the reach of children.

Do not empty into drains, dispose of this material and its container at hazardous or special waste collection points.

Wear suitable protective clothing, gloves and eye/face protection.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

In case of accident by inhalation: remove casualty to fresh air and keep at rest.

14 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing MSDS: product safety department

Contact:

SPEX CertiPrep Inc.
732-549-7144

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

EEC: Directives concerning the International Carriage of Dangerous Goods by Road (European Economic Community)

IIA: 12 Department of Transportation

IATA: International Air Transport Association

IMDG Code: International Maritime Code for Dangerous Goods

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association

HMIS: Hazardous Materials Identification System

VOC: Volatile Organic Compounds

USA

(Contd. on page 7)
Material Safety Data Sheet acc. to ISO/DIS 11014

Printing date 08/06/2010
Reviewed on 03/11/2010

1 Identification of substance

Product details

- Trade name: Custom
- Article number: XQ-3603
- Application of the substance / the preparation: Certified Reference Material
- Manufacturer/Supplier: SPEX CertiPrep, Inc - 203 Norcross Ave, Metuchen, NJ 08840

Information department: Product safety department

Emergency information:

Emergency phone: Place Number (24 hours)
CHEMTREC (800-424-9300)
Outside US: 761-527-3987

2 Composition/Information on components

Chemical characterization

Description: Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>flammable</td>
<td>2.2/2</td>
<td>flammable</td>
</tr>
</tbody>
</table>

3 Hazard identification

Health description

- Toxic: Highly flammable
- Information pertaining to particular dangers for man and environment:
  - The product has to be labelled due to the calculation procedure of international guidelines.
  - Highly flammable.
  - Toxic by inhalation, in contact with skin and if swallowed.
  - Danger: very serious irreversible effects through inhalation, in contact with skin and if swallowed.

Classification system:

- The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

NFPA ratings (scale 0 – 4)

- Health: 3
- Fire: 3
- Reactivity: 0

FMRS ratings (scale 0 – 4)

- Health: 3
- Fire: 3
- Reactivity: 0

GHS label elements

- Danger: 2.6/3 - Highly flammable liquid and vapour.
- Danger: 3.1/2 - Fatal if inhaled.

4 First aid measures

- General information:
  - Immediately remove any clothing soiled by the product.
  - Remove breathing apparatus only after contaminated clothing have been completely removed.
  - In case of irregular breathing or respiratory arrest provide artificial respiration.
  - After inhalation:
    - Supply fresh air or oxygen; call for doctor.
    - In case of unconsciousness place patient stable in side position for transportation.
  - After skin contact:
    - Immediately wash with water and soap and rinse thoroughly.
    - After eye contact:
      - Rinse opened eye for several minutes under running water. Then consult a doctor.
  - After swallowing:
    - Do not induce vomiting, immediately call for medical help.

5 Fire-fighting measures

- Suitable extinguishing agents: CO2, sand, extinguishing powder. do not use water.
- For safety reasons avoidable extinguishing agents: Water with full jet
- Protective equipment: Mask respirator protective device.

6 Accidental release measures

- Personal-related safety precautions: Wear protective equipment. Keep unprotected persons away.
- Measures for environmental protection:
  - Do not allow product to reach sewage system or any water course.
  - Inform respective authorities in case of seepage into water course or sewage system.
- Measures for cleaning/collection:
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Dispose contaminated material waste according to item 13.
- Protective clothing and equipment:
  - Wear adequate ventilation.
  - Do not flush with water or aqueous cleansing agents.

7 Handling and storage

- Handling:
  - Information for safe handling:
    - Ensure good ventilation/expiration at the workplace.
    - Open and handle receptacle with care.
    - Prevent formation of aerosols.
    - Information about protection against explosions and fires:
      - Keep ignition sources away - Do not smoke.
      - Protect against electrostatic charges.
      - Keep respiratory protective device available.
    - Storage:
      - Requirements to be met by storage rooms and receptacles: Store in a cool location.
      - Information about storage in one common storage facility: Not required.
      - Further information about storage conditions:
        - Keep receptacle tightly sealed.

(Contd. of page 2)

USA
Material Safety Data Sheet
acc. to ISO/DIS 11014

Trade name: Custom

Store in cool, dry conditions in well sealed receptacles.

Exposure controls and personal protection

Additional information about design of technical systems: No further data, see item 7.

Component with time values that require monitoring at the workplace:

- 67/56-1 ethanol
  - PEL: 250 mg/m³; 200 ppm
  - REL: short-term value: 325 mg/m³; 250 ppm
  - Long-term value: 280 mg/m³; 200 ppm
  - TLV: short-term value: 325 mg/m³; 250 ppm
  - Long-term value: 282 mg/m³; 200 ppm

Additional information: The data that were valid during the creation were cited at basis

Personal protective equipment:

- General protective and hygienic measures:
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing.
  - Wash hands before breaks and at the end of work.
  - Store protective clothing separately.
  - Avoid contact with the eyes and skin.

- Breathing equipment:
  - In case of short exposure or low pollution use respiratory filter device. In case of intense or longer exposure use respiratory protective device that is independent of circulating air.

Protection of hands:

- Protective gloves
  - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

- The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

- The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

- Tightly sealed goggles

Physical and chemical properties

General Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>According to product specification</td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic</td>
</tr>
<tr>
<td>Flash point</td>
<td>11°C (51°F)</td>
</tr>
<tr>
<td>Auto ignition</td>
<td>Product is not autoflammable.</td>
</tr>
<tr>
<td>Danger of explosion</td>
<td>Product is not explosive. However, formation of explosive aerosol/vapor mixtures is possible.</td>
</tr>
</tbody>
</table>

Transport information

- UN1992, Packing group H, Proper shipping name (technical name): FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

Exposure limits:

- Lower: 3.5 Vol %
- Upper: 44 Vol %

Vapor pressure at 20°C (68°F): 228 mmHg (96 mm Hg)

Density at 20°C (68°F): 0.79 g/ml

Solubility in / Miscibility with Water: Not miscible or difficult to mix.

Solvent content:

- Organic solvents: 100.0 %
- VOC content: 789.9 g/l / 6.59 lb/gl

Stability and reactivity

- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Dangerous reactions: No dangerous reactions known.
- Dangerous products of decomposition: No dangerous decomposition products known.

Toxicological information

- Acute toxicity:
  - LD50/4h oral: 67-56-1 methanol
  - LD50/4h dermal: 67-56-1 methanol
  - Primary routes of exposure:
    - on the skin: No irritant effect.
    - on the eye: No irritating effect.
    - Sensitization: No sensitizing effects known.
  - Additional toxicological information:
    - The product shows the following dangers according to internally approved calculation methods for preparations:
      - Toxic

Ecological information

- General notes:
  - Water hazard class 1 (Self-assessment): Slightly hazardous for water
  - Do not allow unsealed product or large quantities of it to reach ground water, water course or sewage system.

Disposal considerations

- Product:
  - Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
  - Unlabelled packaging:
  - Recommendation: Disposal must be made according to official regulations.

PEL/REL/TLV

<table>
<thead>
<tr>
<th>Substance</th>
<th>PEL</th>
<th>REL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Organic solvents</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Notes:

- The lists that were valid during the creation were used as basis.
- Additional information about design of technical systems: No further data, see item 7.

Hazard class:

- UN1992
- Identification number: UN1992
- Packing group: H
- Proper shipping name (technical name): FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)
### Material Safety Data Sheet

**Trade name:** Custom

<table>
<thead>
<tr>
<th>Label</th>
<th>3+6.1</th>
</tr>
</thead>
</table>

**Land transport ADR/RID (cross-border):**

- **ADR/RID class:** 3 Flammable liquids
- **Danger code (Konst):** 336
- **UN/Number:** 1992
- **Packaging group:** II
- **Label:** 3+6.1
- **Description of goods:** 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

**Maritime transport IMDG:**

- **IMDG Class:** 3
- **UN Number:** 1992
- **Label:** 3+6.1
- **Packaging group:** II
- **Proper shipping name:** FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

**UN/ID Number:** 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

### 11 Regulations

<table>
<thead>
<tr>
<th>Section 373 (Extremly Hazardous Substances):</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients is listed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section 117 (Specific New Chemicals):</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients is listed</td>
</tr>
</tbody>
</table>

**Proposition 65:**

- **Chemicals known to cause cancer:** None of the ingredients is listed
- **Chemicals known to cause reproductive toxicity for females:** None of the ingredients is listed
- **Chemicals known to cause reproductive toxicity for males:** None of the ingredients is listed
- **Chemicals known to cause developmental toxicity:** None of the ingredients is listed
- **Carcinogenic categories:** None of the ingredients is listed

**EPA (Environmental Protection Agency):**

- **84-66-2 diethyl phthalate:**
- **Carcinogenic categories:** None of the ingredients is listed
- **Chemicals known to cause reproductive toxicity for females:** None of the ingredients is listed
- **Chemicals known to cause reproductive toxicity for males:** None of the ingredients is listed
- **Chemicals known to cause developmental toxicity:** None of the ingredients is listed

### 16 Other information

- **IAECO/12 (International Agency for Research on Cancer):** None of the ingredients is listed
- **TTL (Threshold Limit Value established by ACGIH):** None of the ingredients is listed
- **NIOSH-Ca (National Institute for Occupational Safety and Health):** None of the ingredients is listed
- **OSHA-Ca (Occupational Safety & Health Administration):** None of the ingredients is listed

**Product related hazard informations:** The product has been classified and marked in accordance with directives on hazardous materials.

**- Hazard symbols:**

- **Toxic:** Highly flammable

**- Hazard-determining components of labelling:**

- **Risk phrases:**
  - Highly flammable
  - Toxic by inhalation, in contact with skin and if swallowed.

- **Safety phrases:**
  - Keep locked up and out of the reach of children.
  - Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.
  - Wear suitable protective clothing, gloves and eye/face protection.
  - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
  - In case of accidental inhalation: remove casualty to fresh air and keep at rest.

**- Hazard code (Kemler):** 336

**- Risk phrases:**

- **Toxic:** danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

**- Safety phrases:**

- **Emergency reference numbers:**
  - **EMS Number:** F-E,S-D
  - **UN/ID Number:** 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

**- Dangerous goods classification:**

- **UN Number:** 1992
- **ICAO/IATA Class:** 3
- **IMDG Class:** 3
- **ADR/RID class:** 3 Flammable liquids
- **67-56-1 methanol**
- **TLV (Threshold Limit Value established by ACGIH):** None of the ingredients is listed
- **NTP (National Toxicology Program):** None of the ingredients is listed
- **IARC (International Agency for Research on Cancer):** None of the ingredients is listed
- **OSHA-Ca (Occupational Safety & Health Administration):** None of the ingredients is listed

**- ADR/RID class:** 3 Flammable liquids

**- Acc. to ISO/DIS 11014:**

- **Material Safety Data Sheet:** SPEX CertiPrep Inc.
- **Printing date:** 08/06/2010
- **Reviewed on:** 03/11/2010

**- ADR/RID class:** 3 Flammable liquids

**- Acc. to ISO/DIS 11014:**

- **Material Safety Data Sheet:** SPEX CertiPrep Inc.
- **Printing date:** 08/06/2010
- **Reviewed on:** 03/11/2010
Material Safety Data Sheet
acc. to GHS 11014

Identification of substance

Product details
- Trade name: METHANOL
- Article number: XS-2300-30ML
- Application of the substance / the preparation
- Manufacturer/Supplier: SPEX CertiPrep, Inc - 203 Norcross Ave, Metuchen, NJ 08840

Information department: product safety department
- Emergency information:
  - Emergency Phone Number (24 hours): CHEMTREC (800-424-9300)
  - Outside US: 703-527-3887

General information:
- No special measures required.

Form:
- Fluid

Color:
- Colorless

Preparation of the substance / the preparation:
- Physical and chemical properties:
  - Health = 0
  - Fire = 3
  - Reactivity = 0
  - Health = 0
  - Fire = 3
  - Reactivity = 0

Hazard identification
- Hazard description: Not applicable.
- Information pertaining to particular dangers for man and environment: Not applicable.
- Classification system:
  - NFPA ratings (scale 0 - 4)
    - Health = 0
    - Fire = 3
    - Reactivity = 0
  - HMIS-ratings (scale 0 - 4)
    - Health = 0
    - Fire = 3
    - Reactivity = 0

GHS label elements:
- Danger: 2.3 - Highly flammable liquid and vapour.
- Danger: 1.8 - Causes damage to organs.

Prevention:
- Keep away from heat, sparks, flammable materials and sources of ignition.
- Use explosion-proof electrical equipment.
- Use appropriate respiratory protection equipment.
- Use appropriate protective gloves and eye protection.
- Store in a cool, dry place.
- Dispose of in accordance with local regulations.

Emergency information:
- Emergency Phone Number (24 hours): CHEMTREC (800-424-9300)
- Emergency Phone Number (24 hours): CHEMTREC (800-424-9300)

Exposure controls and personal protection:
- Additional information about design of technical systems:
  - No further data; see item 7.

Personal protective equipment:
- respiratory protection: None.
- protective equipment: None.
- eye protection:
  - Goggles recommended during refilling.
  - Additional information about design of technical systems:
  - No further data; see item 7.

First aid measures
- General information: No special measures required.

Health = 0
Fire = 3
Reactivity = 0

Health = 0
Fire = 3
Reactivity = 0

Trade name: METHANOL

5 Fire fighting measures
- Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol-resistant foam.
- Protective equipment: No special measures required.

6 Accidental release measures
- Person-related safety precautions: Not required.
- Measures for environmental protection: Dilute with plenty of water.
- Measures for cleaning/collection:
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Additional information: No dangerous substances are released.

7 Handling and storage
- Handling:
  - Information for safe handling:
    - No special measures required.
    - Follow good laboratory practices.
    - Information about protection against fires and explosions: No special measures required.
    - Storage:
      - Requirements to be met by storage facilities: No special requirements.
      - Information about storage in one common storage facility: Not required.
    - Additional information:
      - Further information about storage conditions: None.

8 Transportation information
- Classification system:
  - Health = 0
  - Fire = 3
  - Reactivity = 0

9 Physical and chemical properties
- General Information:
  - Form:
    - Liquid
  - Color:
    - Colorless

10 Environmental protection
- General information:
  - No special measures required.

Material Safety Data Sheet
acc. to GHS 11014

Identification of substance

Product details
- Trade name: METHANOL
- Article number: XS-2300-30ML
- Application of the substance / the preparation
- Manufacturer/Supplier: SPEX CertiPrep, Inc - 203 Norcross Ave, Metuchen, NJ 08840

Information department: product safety department
- Emergency information:
  - Emergency Phone Number (24 hours): CHEMTREC (800-424-9300)
  - Outside US: 703-527-3887

General information:
- No special measures required.

Form:
- Liquid

Color:
- Colorless

Preparation of the substance / the preparation:
- Physical and chemical properties:
  - Health = 0
  - Fire = 3
  - Reactivity = 0
  - Health = 0
  - Fire = 3
  - Reactivity = 0

Hazard identification
- Hazard description: Not applicable.
- Information pertaining to particular dangers for man and environment: Not applicable.
- Classification system:
  - NFPA ratings (scale 0 - 4)
    - Health = 0
    - Fire = 3
    - Reactivity = 0
  - HMIS-ratings (scale 0 - 4)
    - Health = 0
    - Fire = 3
    - Reactivity = 0

GHS label elements:
- Danger: 2.3 - Highly flammable liquid and vapour.
- Danger: 1.8 - Causes damage to organs.

Prevention:
- Keep away from heat, sparks, flammable materials and sources of ignition.
- Use explosion-proof electrical equipment.
- Use appropriate respiratory protection equipment.
- Use appropriate protective gloves and eye protection.
- Store in a cool, dry place.
- Dispose of in accordance with local regulations.

Emergency information:
- Emergency Phone Number (24 hours): CHEMTREC (800-424-9300)
- Emergency Phone Number (24 hours): CHEMTREC (800-424-9300)

Exposure controls and personal protection:
- Additional information about design of technical systems:
  - No further data; see item 7.

Personal protective equipment:
- respiratory protection: None.
- protective equipment: None.
- eye protection:
  - Goggles recommended during refilling.
  - Additional information about design of technical systems:
  - No further data; see item 7.

First aid measures
- General information: No special measures required.

Health = 0
Fire = 3
Reactivity = 0

Health = 0
Fire = 3
Reactivity = 0

Trade name: METHANOL

5 Fire fighting measures
- Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol-resistant foam.
- Protective equipment: No special measures required.

6 Accidental release measures
- Person-related safety precautions: Not required.
- Measures for environmental protection: Dilute with plenty of water.
- Measures for cleaning/collection:
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Additional information: No dangerous substances are released.

7 Handling and storage
- Handling:
  - Information for safe handling:
    - No special measures required.
    - Follow good laboratory practices.
    - Information about protection against fires and explosions: No special measures required.
    - Storage:
      - Requirements to be met by storage facilities: No special requirements.
      - Information about storage in one common storage facility: Not required.
    - Additional information:
      - Further information about storage conditions: None.

8 Transportation information
- Classification system:
  - Health = 0
  - Fire = 3
  - Reactivity = 0

9 Physical and chemical properties
- General Information:
  - Form:
    - Liquid
  - Color:
    - Colorless

10 Environmental protection
- General information:
  - No special measures required.
Odor: Alcohol-like

Change in condition:
Melting point/Melting range: -98°C (-144°F)
Boiling point/Boiling range: 100°C (212°F)

Flash point: 11°C (52°F)

Ignition temperature: 45°C (113°F)

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:
Lower: 5.5 Vol %
Upper: 44 Vol %

Vapor pressure at 20°C (68°F): 128 hPa (96 mm Hg)

Density at 20°C (68°F): 0.79 g/cm³

Solubility in / Miscibility with Water: Fully miscible.
Organic solvents: 99.9 %
VOC content: 99.9 %

10 %

13 Stability and reactivity

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Dangerous reactions: No dangerous reactions known.

Dangerous products of decomposition: No dangerous decomposition products known.

11 Toxicological information

Acute toxicity:

LD/LC50 values that are relevant for classification:

Oral LD50 5628 mg/kg (rat)
Dermal LD50 15800 mg/kg (rabbit)

Primary irritation effect:

- on the skin: No irritant effect.
- on the eyes: No irritating effect.

Sensitization: No sensitizing effects known.

Other toxicological information:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

The substance is not subject to classification.

12 Ecological information

General notes:

Generally not hazardous for water

14 Transport information

DOT regulations:

Hazard class: 3
Identification number: UN1230
Packing group: II
Proper shipping name (technical name): METHANOL
Label: 3+6.1

Land transport ADR/RID (cross-border):

ADR/RID class: 3 Flammable liquids
UN Number: 1230
Label: 3+6.1
Description of goods: 1230 METHANOL

Maritime transport IMDG:

IMDG Class: 3
UN Number: 1230
Label: 3+6.1

Marine pollutant: No

Proper shipping name: METHANOL

Air transport ICAO-TI and IATA-DGR:

ICAO/TI Class: 3
UN Number: 1230
Label: 3+6.1

UN “Model Regulation” : UN1230, METHANOL, 3 (6.1), II

15 Regulations

Sara:

Section 311 (extremely hazardous substances):

Substance is not listed.

Section 313 (specific hazardous chemicals):

Substance is hazardous.

SMCA (Haz. Substances Control Act):

Substance is hazardous.

Proposition 65:

Chemically known to cause cancer:

Substance is not listed.
### Trade name: METHANOL

#### Carcinogenic categories

<table>
<thead>
<tr>
<th>Agency</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA (Environmental Protection Agency)</td>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>IARC (International Agency for Research on Cancer)</td>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>NTP (National Toxicology Program)</td>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>TLV (Threshold Limit Value established by ACGIH)</td>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>NIOSH w (National Institute for Occupational Safety and Health)</td>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>OSHA-Ca (Occupational Safety &amp; Health Administration)</td>
<td>Substance is not listed.</td>
</tr>
</tbody>
</table>

#### Other information

- **Observe the general safety regulations when handling chemicals.**
- The substance is not subject to classification according to the sources of literature known to us.

#### Other information

**This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.**

**Department issuing MSDS:** Product safety department

**Contact:**

SPEX CertiPrep Inc.

732-549-7144

**Abbreviations and acronyms:**

- ADR: Accord européen sur le transport des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
- ADR: Emergency Card for Dangerous Goods
- ICAO: International Civil Aviation Organization
- ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- ACGIH: American Conference of Governmental Industrial Hygienists
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LE(L)D: Lethal dose, 50 percent