1 Identification

- Product identifier
- Product Name: CUSTOM INT STD
- Part Number: XINF-15-4
- Application of the substance / the mixture Certified Reference Material
- Details of the supplier of the safety data sheet
  - Manufacturer/Supplier: SPEX CertiPrep, LLC.
    203 Norcross Ave, Metuchen, NJ 08840 USA
- Information department: product safety department
- Emergency telephone number:
  - Emergency Telephone Number (24 hours)
    CHEMTREC (800-424-9300)
  - Outside US: 703-527-3887

2 Hazard(s) identification

- Classification of the substance or mixture
  - GHS02 Flame
  - Flamm. Liq. 2 H225 Highly flammable liquid and vapor.
  - GHS05 Skull and crossbones
  - Acute Tox. 3 H331 Toxic if inhaled.
  - GHS08 Health hazard
  - STOT SE 1 H370 Causes damage to organs.

- Label elements
  - GHS label elements: The product is classified and labeled according to the Globally Harmonized System (GHS).
  - Hazard pictograms
    - GHS02
    - GHS05
    - GHS08

- Signal word Danger
- Hazard-determining components of labeling:
  - methanol
- Hazard statements
  - Highly flammable liquid and vapor.
  - Toxic if inhaled.
  - Causes damage to organs.
- Precautionary statements
  - Keep away from heat/sparks/open flames/hot surfaces. No smoking.
  - Use explosion-proof electrical/ventilating/lighting/ equipment.
  - Do not breathe dust/fume/gas/aerosol/vapors/spray.
  - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - Store locked up.
  - Dispose of contents/container in accordance with local/regional/national/international regulations.
- Classification system:
- NFPA ratings (scale 0 - 4)

Health = 3
Fire = 3
Reactivity = 0

(Contd. on page 2)
3 Composition/information on ingredients

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

- Dangerous components:
  67-56-1 Methanol 99.875%

- Chemical identification of the substance/preparation
  344-04-7 Bromopentafluorobenzene 0.05%
  3855-82-1 1,4-Dichlorobenzene d4 0.025%
  3114-55-4 Chlorobenzene-d5 0.025%
  462-06-6 Fluorobenzene 0.025%

4 First-aid measures

- Description of first aid measures
  - General information: Immediately remove any clothing soiled by the product. Remove breathing apparatus only after contaminated clothing has been completely removed. In case of irregular breathing or respiratory arrest provide artificial respiration.
  - After inhalation: Supply fresh air or oxygen; call for doctor.
  - 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.
  - Information for Doctor:
    - Most important symptoms and effects, both acute and delayed: No further relevant information available.
    - Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5 Fire-fighting measures

- extinguishing media
  - Suitable extinguishing agents: CO2, sand, extinguishing powder. Do not use water.
  - For safety reasons unsuitable extinguishing agents: Water with full jet
  - Special hazards arising from the substance or mixture: No further relevant information available.
  - Advice for firefighters
  - Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures: Wear protective equipment. Keep unprotected persons away.
- Environmental precautions:
  - Do not allow product to reach sewage system or any water course.
  - Inform respective authorities in case of steepage into water course or sewage system.
  - Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Dispose contaminated material as waste according to item 13.
  - Ensure adequate ventilation.
  - Do not flush with water or aqueous cleansing agents
- Reference to other sections
  - See Section 7 for information on safe handling.
7 Handling and storage

- **Handling:**
  - **Precautions for safe handling**
    - Ensure good ventilation/exhaustion 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.
  - **Conditions for safe storage, including any incompatibilities**
  - **Storage:**
    - Requirements to be met by storerooms 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.
    - Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

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

Control parameters

<table>
<thead>
<tr>
<th>Components with limit values that require monitoring at the workplace:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>67-56-1 methanol</strong></td>
</tr>
<tr>
<td>PEL</td>
</tr>
<tr>
<td>REL</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Skin</td>
</tr>
<tr>
<td>TLV</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Skin: BEI</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredients with biological limit values:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>67-56-1 methanol</strong></td>
</tr>
<tr>
<td>BEI</td>
</tr>
<tr>
<td>Medium: urine</td>
</tr>
<tr>
<td>Time: end of shift</td>
</tr>
<tr>
<td>Parameter: Methanol (background, nonspecific)</td>
</tr>
</tbody>
</table>

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

- Exposure controls
  - 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.
  Selection of the glove material on consideration of the penetration times; rates of diffusion and the degradation.

(Contd. on page 4)
9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
  - Appearance:
    - Form: Liquid
    - Color: Colorless
    - Odor: Alcohol-like
    - Odour Threshold:
      - Not applicable.
    - pH-value:
      - Not applicable.
  - Change in condition
    - Melting point/Melting range: Undetermined.
    - Boiling point/Boiling range: 64 °C (147 °F)
  - Flash point: 11 °C (52 °F)
  - Flammability (solid, gaseous): Not applicable.
  - Ignition temperature: 455 °C (851 °F)
  - Decomposition temperature: Not applicable.
  - Auto ignition:
    - Product is not selfigniting.
  - Danger of explosion:
    - Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
  - Explosion limits:
    - Lower: 5.5 Vol %
    - Upper: 44.0 Vol %
  - Vapor pressure at 20 °C (68 °F): 128 kPa (96 mm Hg)
  - Density at 20 °C (68 °F): 0.79 g/cm³ (6.593 lbs/gal)
  - Relative density
    - Not applicable.
  - Vapor density
    - Not applicable.
  - Evaporation rate
    - Not applicable.
  - Solubility in / Miscibility with
    - Water: Not miscible or difficult to mix.
  - Partition coefficient (n-octanol/water): Not applicable.
  - Viscosity:
    - Dynamic: Not applicable.
    - Kinematic: Not applicable.
  - Solvent content:
    - Organic solvents: 99.9 %
    - VOC content: 99.9 %
    - Other information: No further relevant information available.

10 Stability and reactivity

- Reactivity: No further relevant information available.
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions: No dangerous reactions known.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
11 Toxicological information

- Information on toxicological effects
  - 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.

- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    - None of the ingredients is listed.
  - NTP (National Toxicology Program)
    - None of the ingredients is listed.
  - OSHA-Ca (Occupational Safety & Health Administration)
    - None of the ingredients is listed.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
  - Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
  - Additional ecological information:
    - General notes:
      - Water hazard class I (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.
    - Results of PBT and vPvB assessment
      - PBT: Not applicable.
      - vPvB: Not applicable.
    - Other adverse effects: No further relevant information available.

13 Disposal considerations

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

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

14 Transport information

- UN-Number
  - DOT, ADR, IMDG, IATA: UN1230

- UN proper shipping name
  - DOT, IATA: Methanol
  - ADR: 1230 Methanol
  - IMDG: METHANOL
Transport hazard class(es)

- DOT
  - Class: 3
  - Label: Flammable liquids
  - 3.6.1

- ADR
  - Class: 3
  - Label: Flammable liquids
  - 3.6.1

- IMDG
  - Class: 3
  - Label: Flammable liquids
  - 3.6.1

- IATA
  - Class: 3
  - Label: Flammable liquids
  - 3 (6.1)

Packing group
- DOT, ADR, IMDG, IATA
  - II

Environmental hazards:
- Not applicable.

Special precautions for user
- Warning: Flammable liquids
- Danger code (Kemler): 336
- EMS Number: F-E-S-D
- Stowage Category: B
- Stowage Code: SW2 Clear of living quarters

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
- No applicable.

Transport/Additional information:

- ADR
  - Excepted quantities (EQ)
    - Code: E2
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 500 ml

- IMDG
  - Limited quantities (LQ)
    - 1L
  - Excepted quantities (EQ)
    - Code: E2
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 500 ml

UN "Model Regulation":
- UN 1230 METHANOL, 3 (6.1), II

(Contd. of page 7)
15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - None
- Section 355 (extremely hazardous substances):
  - None of the ingredients is listed.
- Section 313 (Specific toxic chemical listings):
  - 67-56-1 methanol
- TSCA (Toxic Substances Control Act):
  - 67-56-1 methanol
  - 344-04-7 Bromo-2-fluorobenzene
  - 462-06-6 fluorobenzene
- 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:
    - 67-56-1 methanol
- Carcinogenic categories
- EPA (Environmental Protection Agency)
  - 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.
- GHS label elements
  - The product is classified and labeled according to the Globally Harmonized System (GHS).
  - Hazard pictograms
  - GHS02 GHS06 GHS08
- Signal word
  - Danger
- Hazard-determining components of labeling:
  - methanol
- Hazard statements
  - Highly flammable liquid and vapor.
  - Toxic if inhaled.
  - Causes damage to organs.
- Precautionary statements
  - Keep away from heat/sparks/open flames/hot surfaces. No smoking.
  - Use explosion-proof electrical/ventilating/lighting/equipment.
  - Do not breathe dust/fume/gas/mist/vapors/spray.
  - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - Store locked up.
  - Dispose of contents/container in accordance with local/regional/national/international regulations.
- Chemical safety assessment
  - A Chemical Safety Assessment has not been carried out.

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 SDS: product safety department
- Contact:
  - SPEX CertiPrep, LLC.
  - 1-732-549-7144
Date of preparation / last revision: 03/07/2016

Abbreviations and acronyms:
- ADR: Accident, European and Route, dangerous goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- ACGIH: American Conference of Governmental Industrial Hygienists
- ILNCS: European List of Notified Chemical Substances
- ILO: International Labour Organization
- 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)
- LCLD: Lethal concentration, 50 percent
- LC50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- NIOSH: National Institute for Occupational Safety
- OSHA: Occupational Safety & Health
- TLV: Threshold Limit Value
- REL: Recommended Exposure Limit
- BIBL: Biological Exposure Limit
- IU: Inflammable liquids, Hazard Category 2
- Acute: Trit: Acute toxicity, Hazard Category 3
- STOT: Specific target organ toxicity - Single exposure: Hazard Category 1