SAFETY DATA SHEET

Nitrosamine Checkout Mix 10 µg/L in MeOH, Part Number 5190-0489

Section 1. Identification

1.1 Product identifier
Product name : Nitrosamine Checkout Mix 10 µg/L in MeOH, Part Number 5190-0489
Part No. : 5190-0489
Validation date : 6/8/2016

1.2 Relevant identified uses of the substance or mixture and uses advised against
Material uses : Analytical chemistry.
5190-0489-1 Nitrosamine Checkout Mix 10 µg/L in MeOH 3 x 1.5 mL

1.3 Details of the supplier of the safety data sheet
Supplier/Manufacturer : Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

1.4 Emergency telephone number
In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture
OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture
H225 FLAMMABLE LIQUIDS - Category 2
H301 ACUTE TOXICITY (oral) - Category 3
H311 ACUTE TOXICITY (dermal) - Category 3
H331 ACUTE TOXICITY (inhalation) - Category 3
H315 SKIN IRRITATION - Category 2
H319 EYE IRRITATION - Category 2A
H360 TOXIC TO REPRODUCTION (Fertility) - Category 1B
H360 TOXIC TO REPRODUCTION (Unborn child) - Category 1B
H370 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (central nervous system (CNS)) - Category 1
H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

2.2 GHS label elements
Hazard pictograms : 

Signal word : Danger
Section 2. Hazards identification

**Hazard statements**
- H225 - Highly flammable liquid and vapor.
- H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled.
- H319 - Causes serious eye irritation.
- H315 - Causes skin irritation.
- H360 - May damage fertility or the unborn child.
- H370 - Causes damage to organs. (central nervous system (CNS))
- H335 - May cause respiratory irritation.

**Precautionary statements**

**Prevention**
- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.
- P242 - Use only non-sparking tools.
- P243 - Take precautionary measures against static discharge.
- P233 - Keep container tightly closed.
- P271 - Use only outdoors or in a well-ventilated area.
- P260 - Do not breathe vapor.
- P261 - Do not eat, drink or smoke when using this product.
- P264 - Wash hands thoroughly after handling.

**Response**
- P307 + P311 - IF exposed: Call a POISON CENTER or physician.
- P304 + P340 + P311 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician.
- P301 + P310 + P330 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth.
- P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- P302 + P361 + P364 + P352 + P312 + P362 + P364 - IF ON SKIN: Take off immediately all contaminated clothing and wash it before reuse. Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell. Take off contaminated clothing and wash it before reuse.
- P332 + P313 - If skin irritation occurs: Get medical attention.
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337 + P313 - If eye irritation persists: Get medical attention.

**Storage**
- P405 - Store locked up.
- P403 - Store in a well-ventilated place.
- P235 - Keep cool.

**Disposal**
- P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

2.3 Other hazards

**Hazards not otherwise classified**
- None known.

Section 3. Composition-information on ingredients

**Substance/mixture**
- Mixture

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>≥90</td>
<td>67-56-1</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Date of issue: 06/08/2016
Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

4.1 Description of necessary first aid measures

**Eye contact**
- Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.

**Inhalation**
- Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Skin contact**
- Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion**
- Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

4.2 Most important symptoms/effects, acute and delayed

**Potential acute health effects**

- **Eye contact**: Causes serious eye irritation.
- **Inhalation**: Toxic if inhaled. May cause respiratory irritation.
- **Skin contact**: Toxic in contact with skin. Causes skin irritation.
- **Ingestion**: Toxic if swallowed.

**Over-exposure signs/symptoms**

- **Eye contact**: Adverse symptoms may include the following: pain or irritation, watering, redness.
- **Inhalation**: Adverse symptoms may include the following: respiratory tract irritation, coughing, reduced fetal weight, increase in fetal deaths, skeletal malformations.
Section 4. First aid measures

**Skin contact**: Adverse symptoms may include the following:
- irritation
- redness
- reduced fetal weight
- increase in fetal deaths
- skeletal malformations

**Ingestion**: Adverse symptoms may include the following:
- reduced fetal weight
- increase in fetal deaths
- skeletal malformations

4.3 **Indication of immediate medical attention and special treatment needed, if necessary**

**Notes to physician**: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments**: No specific treatment.

**Protection of first-aiders**: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

**5.1 Extinguishing media**

**Suitable extinguishing media**: Use dry chemical, CO₂, water spray (fog) or foam.

**Unsuitable extinguishing media**: Do not use water jet.

**5.2 Special hazards arising from the substance or mixture**

**Specific hazards arising from the chemical**: Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

**Hazardous thermal decomposition products**: Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide
- Formaldehyde.

**5.3 Advice for firefighters**

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

**Special protective equipment for fire-fighters**: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
### Section 6. Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

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

**For emergency responders**: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

#### 6.2 Environmental precautions

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

#### 6.3 Methods and materials for containment and cleaning up

**Methods for cleaning up**: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

### Section 7. Handling and storage

#### 7.1 Precautions for safe handling

**Protective measures**: Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene**: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

#### 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

#### 7.3 Specific end use(s)

**Recommendations**: Industrial applications, Professional applications.
Nitrosamine Checkout Mix 10 µg/L in MeOH, Part Number 5190-0489

Section 7. Handling and storage

Industrial sector specific solutions

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
</table>
| Methanol        | ACGIH TLV (United States, 3/2015).  
                 | Absorbed through skin.  
                 | TWA: 200 ppm 8 hours.  
                 | TWA: 262 mg/m³ 8 hours.  
                 | STEL: 250 ppm 15 minutes.  
                 | STEL: 328 mg/m³ 15 minutes.  
                 | Absorbed through skin.  
                 | TWA: 200 ppm 8 hours.  
                 | TWA: 260 mg/m³ 8 hours.  
                 | STEL: 250 ppm 15 minutes.  
                 | STEL: 325 mg/m³ 15 minutes.  
                 | NIOSH REL (United States, 10/2013).  
                 | Absorbed through skin.  
                 | TWA: 200 ppm 10 hours.  
                 | TWA: 260 mg/m³ 10 hours.  
                 | STEL: 250 ppm 15 minutes.  
                 | STEL: 325 mg/m³ 15 minutes.  
                 | OSHA PEL (United States, 2/2013).  
                 | TWA: 200 ppm 8 hours.  
                 | TWA: 260 mg/m³ 8 hours.  |

8.2 Exposure controls

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

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

Individual protection measures

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

Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

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Section 8. Exposure controls/personal protection

**Hand protection**: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection**: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

**Other skin protection**: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

**Appearance**

**Physical state**: Liquid.

**Color**: Colorless.

**Odor**: Not available.

**Odor threshold**: Not available.

**pH**: Not available.

**Melting point**: -98°C (-144.4°F)

**Boiling point**: 64.8°C (148.6°F)

**Flash point**: Closed cup: 11.111°C (52°F)

**Evaporation rate**: Not available.

**Flammability (solid, gas)**: Not applicable.

**Lower and upper explosive (flammable) limits**

Lower: 6.7%
Upper: 36%

**Vapor pressure**: 13.3 kPa (100 mm Hg) [room temperature]

**Vapor density**: 1.1 [Air = 1]

**Relative density**: 0.791

**Solubility**: Easily soluble in the following materials: cold water and hot water.

**Partition coefficient: n-octanol/water**: Not available.

**Auto-ignition temperature**: 385°C (725°F)

**Decomposition temperature**: Not available.

**Viscosity**: Not available.
Section 10. Stability and reactivity

10.1 Reactivity: No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability: The product is stable.

10.3 Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

10.5 Incompatible materials: Reactive or incompatible with the following materials: oxidizing materials

10.6 Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>145000 ppm</td>
<td>1 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>64000 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>15800 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>5600 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 100</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>40 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>24 hours 20</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>milligrams</td>
<td>-</td>
</tr>
</tbody>
</table>

Conclusion/Summary

Skin: Repeated exposure may cause skin dryness or cracking.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

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Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>Category 1</td>
<td>Not determined</td>
<td>central nervous system (CNS)</td>
</tr>
<tr>
<td></td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
</tbody>
</table>

Specific target organ toxicity (repeated exposure)
Not available.

Aspiration hazard
Not available.

Information on the likely routes of exposure
Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

**Eye contact**
Causes serious eye irritation.

**Inhalation**
Toxic if inhaled. May cause respiratory irritation.

**Skin contact**
Toxic in contact with skin. Causes skin irritation.

**Ingestion**
Toxic if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact**
Adverse symptoms may include the following:
- pain or irritation
- watering
- redness

**Inhalation**
Adverse symptoms may include the following:
- respiratory tract irritation
- coughing
- reduced fetal weight
- increase in fetal deaths
- skeletal malformations

**Skin contact**
Adverse symptoms may include the following:
- irritation
- redness
- reduced fetal weight
- increase in fetal deaths
- skeletal malformations

**Ingestion**
Adverse symptoms may include the following:
- reduced fetal weight
- increase in fetal deaths
- skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

**Short term exposure**

- Potential immediate effects: Not available.
- Potential delayed effects: Not available.

**Long term exposure**

- Potential immediate effects: Not available.
- Potential delayed effects: Not available.
Section 11. Toxicological information

Potential chronic health effects

General: No known significant effects or critical hazards.
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: May damage the unborn child.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: May damage fertility.

Numerical measures of toxicity

Acute toxicity estimates

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>100 mg/kg</td>
</tr>
<tr>
<td>Dermal</td>
<td>300 mg/kg</td>
</tr>
<tr>
<td>Inhalation (vapors)</td>
<td>3 mg/l</td>
</tr>
</tbody>
</table>

Other information: Adverse symptoms may include the following: blurred or double vision, headache. Eye contact can result in corneal damage or blindness. Repeated or prolonged exposure to the substance can produce liver damage.

Section 12. Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>Acute EC50 24500000 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Larvae</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 2500000 µg/l Marine water</td>
<td>Crustaceans - Crangon crangon - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 290 mg/l Fresh water</td>
<td>Fish - Danio rerio - Egg</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 9.96 mg/l Marine water</td>
<td>Algae - Ulva pertusa</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>-0.77</td>
<td>&lt;10</td>
<td>low</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>): Not available.

12.5 Other adverse effects: No known significant effects or critical hazards.

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Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Toxic hazardous waste "U" List

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS #</th>
<th>Status</th>
<th>Reference number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol (l); Methyl alcohol (l)</td>
<td>67-56-1</td>
<td>Listed</td>
<td>U154</td>
</tr>
</tbody>
</table>

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

Additional information: Special provisions

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Remarks

Excepted Quantity

<table>
<thead>
<tr>
<th>Regulatory information</th>
<th>UN number</th>
<th>Proper shipping name</th>
<th>Classes</th>
<th>PG*</th>
<th>Label</th>
<th>Additional information</th>
</tr>
</thead>
</table>

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## Section 14. Transport information

<table>
<thead>
<tr>
<th>DOT</th>
<th>UN1230</th>
<th>Methanol solution RQ (Methanol)</th>
<th>3</th>
<th>II</th>
<th>Reportable quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>5000 lbs / 2270 kg [758.12 gal / 2869.8 L]</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

**Limited quantity**
Yes.

**Packaging instruction**
- **Passenger aircraft**
  Quantity limitation: 1 L
- **Cargo aircraft**
  Quantity limitation: 60 L

**Special provisions**
IB2, T7, TP2

<table>
<thead>
<tr>
<th>TDG</th>
<th>UN1230</th>
<th>METHANOL solution</th>
<th>3 (6.1)</th>
<th>II</th>
<th>Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.26-2.36 (Class 6).</th>
</tr>
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<tbody>
<tr>
<td></td>
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<td>Explosive Limit and Limited Quantity Index</td>
</tr>
<tr>
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<td>1</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Passenger Carrying Road or Rail Index</td>
</tr>
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<tr>
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<td></td>
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<td></td>
<td>Special provisions</td>
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**Special provisions** 279

<table>
<thead>
<tr>
<th>Mexico</th>
<th>UN1230</th>
<th>METANOL solution</th>
<th>3 (6.1)</th>
<th>II</th>
<th>Special provisions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
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**Date of issue:** 06/08/2016
Nitrosamine Checkout Mix 10 µg/L in MeOH, Part Number 5190-0489

### Section 14. Transport information

<table>
<thead>
<tr>
<th>IMDG</th>
<th>UN1230</th>
<th>METHANOL solution</th>
<th>3 (6.1)</th>
<th>II</th>
<th>Emergency schedules (EmS)</th>
<th>Special provisions</th>
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<tbody>
<tr>
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<td></td>
<td></td>
<td></td>
<td>F-E, S-D</td>
<td>279</td>
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</table>

<table>
<thead>
<tr>
<th>IATA</th>
<th>UN1230</th>
<th>Methanol solution</th>
<th>3 (6.1)</th>
<th>II</th>
<th>Passenger and Cargo Aircraft</th>
<th>Special provisions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>Quantity limitation: 1 L</td>
<td>A104, A113</td>
</tr>
<tr>
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<td>Packaging instructions: 352</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Cargo Aircraft Only</td>
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</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Quantity limitation: 60 L</td>
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<td></td>
<td></td>
<td></td>
<td>Packaging instructions: 364</td>
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</tr>
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<td></td>
<td></td>
<td>Limited Quantities - Passenger Aircraft</td>
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</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Quantity limitation: 1 L</td>
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</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td>Packaging instructions: Y341</td>
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</tr>
</tbody>
</table>

PG*: Packing group

### Section 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

**U.S. Federal regulations**

- **Clean Water Act (CWA) 307**: Dimethylnitrosoamine; Nitrosodiphenylamine; Nitrosodipropylamine; 1-Nitrosopyrrolidine; 1-nitrosopiperidine; N-Nitrosodibutylamine; Ethylamine, N-methyl-N-nitroso-; Diethylnitrosoamine; Morpholine, N-nitroso-
- **United States inventory (TSCA 8b)**: Not determined.
- **Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)**: Listed
- **Clean Air Act Section 602 Class I Substances**: Not listed
- **Clean Air Act Section 602 Class II Substances**: Not listed
- **DEA List I Chemicals (Precursor Chemicals)**: Not listed
- **DEA List II Chemicals (Essential Chemicals)**: Not listed
- **SARA 302/304 Composition/information on ingredients**

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Section 15. Regulatory information

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>EHS</th>
<th>SARA 302 TPQ</th>
<th>SARA 304 RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethylnitrosoamine</td>
<td>&lt;0.001</td>
<td>Yes.</td>
<td>1000</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>118.7</td>
<td>1.2</td>
</tr>
</tbody>
</table>

**SARA 304 RQ**: 793650793.7 lbs / 360317460.3 kg [120336034 gal / 455521441.6 L]

**SARA 311/312**
- **Classification**: Fire hazard
  - Immediate (acute) health hazard
  - Delayed (chronic) health hazard

**Composition/information on ingredients**

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Fire hazard</th>
<th>Sudden release of pressure</th>
<th>Reactive</th>
<th>Immediate (acute) health hazard</th>
<th>Delayed (chronic) health hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>≥90</td>
<td>Yes.</td>
<td>No.</td>
<td>No.</td>
<td>Yes.</td>
<td>Yes.</td>
</tr>
</tbody>
</table>

**SARA 313**

<table>
<thead>
<tr>
<th>Product name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Form R - Reporting requirements</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>≥90</td>
</tr>
<tr>
<td><strong>Supplier notification</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>≥90</td>
</tr>
</tbody>
</table>

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

**State regulations**

- **Massachusetts**: The following components are listed: METHANOL; METHYL ALCOHOL
- **New York**: The following components are listed: Methanol
- **New Jersey**: The following components are listed: METHYL ALCOHOL; METHANOL
- **Pennsylvania**: The following components are listed: METHANOL

**California Prop. 65**

**WARNING**: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Cancer</th>
<th>Reproductive</th>
<th>No significant risk level</th>
<th>Maximum acceptable dosage level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
<td>23000 µg/day (ingestion)</td>
</tr>
<tr>
<td>Dimethylnitrosoamine</td>
<td>Yes.</td>
<td>No.</td>
<td>Yes.</td>
<td>47000 µg/day (inhalation)</td>
</tr>
<tr>
<td>Nitrosodiphenylamine</td>
<td>Yes.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
<tr>
<td>Nitrosodipropylamine</td>
<td>Yes.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
<tr>
<td>1-Nitrosopyrrolidine</td>
<td>Yes.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
<tr>
<td>1-nitrosopiperidine</td>
<td>Yes.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
</tbody>
</table>

**Date of issue**: 06/08/2016
Section 15. Regulatory information

<table>
<thead>
<tr>
<th>Substance</th>
<th>Yes</th>
<th>No</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Nitrosodibutylamine</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Ethylamine, N-methyl-N-nitroso-</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Diethylnitrosoamine</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Morpholine, N-nitroso-</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Canada inventory: Not determined.

International regulations:

International lists:
- Australia inventory (AICS): Not determined.
- China inventory (IECSC): Not determined.
- Japan inventory (ENCS): Not determined.
- Japan inventory (ISHL): Not determined.
- Korea inventory: Not determined.
- Malaysia Inventory (EHS Register): Not determined.
- New Zealand Inventory of Chemicals (NZIoC): Not determined.
- Philippines inventory (PICCS): Not determined.
- Taiwan Chemical Substances Inventory (TCSI): All components are listed or exempted.
- Turkey inventory: Not determined.

Chemical Weapons Convention List Schedule I Chemicals: Not listed

Chemical Weapons Convention List Schedule II Chemicals: Not listed

Chemical Weapons Convention List Schedule III Chemicals: Not listed

Section 16. Other information

History
- Date of issue: 06/08/2016
- Date of previous issue: 06/16/2014
- Version: 4

Notice to reader

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