SAFETY DATA SHEET
Paraformaldehyde

Section 1. Identification

GHS product identifier : Paraformaldehyde
Code : Not available.
Other means of identification : Aldacid, Paraform, Polyoxyethylene.
Product type : Solid. [Prilled material (little tiny balls)].

Relevant identified uses of the substance or mixture and uses advised against
Identified uses : Not available.

Supplier's details : InterAtlas Chemical Inc.
63 Church Street, Suite 301
St. Catharines, ON CANADA L2R 3C4
Tel. 905.684.9991
Fax. 905.684.4504
www.interatlaschemical.com

Emergency telephone number (with hours of operation) : CHEMTREC, U.S. : 1-800-424-9300 International: +1-703-527-3887 24/7

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture : FLAMMABLE SOLIDS - Category 2
ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SKIN IRRITATION - Category 2
SERIOUS EYE DAMAGE - Category 1
RESPIRATORY SENSITIZATION - Category 1
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 1B
AQUATIC HAZARD (ACUTE) - Category 3
AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements
Hazard pictograms : 

Signal word : Danger
Section 2. Hazards identification

Hazard statements:
- H228 - Flammable solid.
- H302 + H332 - Harmful if swallowed or if inhaled.
- H314 - Causes serious eye damage.
- H315 - Causes skin irritation.
- H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H317 - May cause an allergic skin reaction.
- H350 - May cause cancer.
- H412 - Harmful to aquatic life with long lasting effects.

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.
- P284 - Wear respiratory protection.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P271 - Use only outdoors or in a well-ventilated area.
- P273 - Avoid release to the environment.
- P261 - Avoid breathing dust.
- P260 - Do not eat, drink or smoke when using this product.
- P264 - Wash hands thoroughly after handling.
- P272 (OSHA) - Contaminated work clothing must not be allowed out of the workplace.

Response:
- P308 + P313 - IF exposed or concerned: Get medical attention.
- P304 + P341 (OSHA) + P312 - IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
- P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or physician.
- P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.
- P302 + P352 + P363 - IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse.
- P333 + P313 - If skin irritation or rash occurs: Get medical attention.
- P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage:
- P405 - Store locked up.

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

Other hazards which do not result in classification/HHNOC/PHNOC:
- None known.

Section 3. Composition/information on ingredients

Substance/mixture:
- Mixture

Other means of identification:
- Aldacide, Paraform, Polyoxymethylene.

CAS number/other identifiers

CAS number:
- Not applicable.

Product code:
- Not available.
Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paraformaldehyde</td>
<td>≥90</td>
<td>30525-89-4</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>≥0.3 - &lt;1</td>
<td>50-00-0</td>
</tr>
</tbody>
</table>

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

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

**Description of necessary first aid measures**

**Eye contact**: Get medical attention immediately. Call a poison center or physician. 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 20 minutes. Chemical burns must be treated promptly by a physician.

**Inhalation**: Get medical attention immediately. Call a poison center or physician. 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. 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. In the event of any complaints or symptoms, avoid further exposure.

**Skin contact**: Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. 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. Chemical burns must be treated promptly by a physician. 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.

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

- **Eye contact**: Causes serious eye damage.
- **Inhalation**: Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- **Skin contact**: Causes skin irritation. May cause an allergic skin reaction.
- **Ingestion**: Harmful if swallowed.

**Over-exposure signs/symptoms**

- **Eye contact**: Adverse symptoms may include the following: pain, watering, redness
Section 4. First aid measures

Inhalation: Adverse symptoms may include the following:
- wheezing and breathing difficulties
- asthma

Skin contact: Adverse symptoms may include the following:
- pain or irritation
- redness
- blistering may occur

Ingestion: Adverse symptoms may include the following:
- stomach pains

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

Extinguishing media

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

Unsuitable extinguishing media: Do not use water jet or water-based fire extinguishers.

Specific hazards arising from the chemical: Flammable solid. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

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

Special protective actions for fire-fighters: 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

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. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Section 6. Accidental release measures

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".

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). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

Spill: Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. 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 only non-sparking tools. 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. See also Section 8 for additional information on hygiene measures. Remove contaminated clothing and protective equipment before entering eating areas.

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.
Section 8. Exposure controls/personal protection

Control parameters
United States

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paraformaldehyde</td>
<td>None.</td>
</tr>
<tr>
<td></td>
<td>C: 0.3 ppm</td>
</tr>
<tr>
<td></td>
<td>C: 0.37 mg/m³</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL Z2 (United States, 2/2013).</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.75 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>STEL: 2 ppm 15 minutes.</td>
</tr>
<tr>
<td></td>
<td>NIOSH REL (United States, 10/2013).</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.016 ppm 10 hours.</td>
</tr>
<tr>
<td></td>
<td>CEIL: 0.1 ppm 15 minutes.</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (United States, 2/2013).</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.75 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>STEL: 2 ppm 15 minutes.</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>CA Alberta Provincial (Canada, 4/2009).</td>
</tr>
<tr>
<td></td>
<td>C: 1.3 mg/m³</td>
</tr>
<tr>
<td></td>
<td>8 hrs OEL: 0.75 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>8 hrs OEL: 0.9 mg/m³ 8 hours.</td>
</tr>
<tr>
<td></td>
<td>C: 1 ppm</td>
</tr>
<tr>
<td></td>
<td>CA British Columbia Provincial (Canada, 5/2015). Skin sensitizer.</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.3 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>C: 1 ppm</td>
</tr>
<tr>
<td></td>
<td>CA Ontario Provincial (Canada, 7/2015).</td>
</tr>
<tr>
<td></td>
<td>C: 1.5 ppm</td>
</tr>
<tr>
<td></td>
<td>STEL: 1 ppm 15 minutes.</td>
</tr>
<tr>
<td></td>
<td>CA Quebec Provincial (Canada, 1/2014).</td>
</tr>
<tr>
<td></td>
<td>STEV: 2 ppm 15 minutes.</td>
</tr>
<tr>
<td></td>
<td>STEV: 3 mg/m³ 15 minutes.</td>
</tr>
<tr>
<td></td>
<td>CA Saskatchewan Provincial (Canada). Skin sensitizer.</td>
</tr>
<tr>
<td></td>
<td>CEIL: 0.3 ppm</td>
</tr>
</tbody>
</table>

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.

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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Section 8. Exposure controls/personal protection

**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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

**Skin 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

**Appearance**

**Physical state**: Solid. [Prilled material (little tiny balls).]

**Color**: White.

**Odor**: Pungent irritating odor.

**Odor threshold**: Not available.

**pH**: Not available.

**Melting point**: Not available.

**Boiling point**: Not available.

**Flash point**: Not available.

**Evaporation rate**: Not available.

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

**Lower and upper explosive (flammable) limits**: Not available.

**Vapor pressure**: Not available.

**Vapor density**: Not available.

**Relative density**: 1.46

**Solubility**: Not available.

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

**Auto-ignition temperature**: Not available.

**Decomposition temperature**: 119.85 to 179.85°C (247.7 to 355.7°F)

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

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

Chemical stability: The product is stable.

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

Conditions to avoid: Avoid all possible sources of ignition (spark or flame).

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

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

Section 11. Toxicological information

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>Paraformaldehyde</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>800 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Gas.</td>
<td>Rat</td>
<td>250 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>270 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>100 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>Formaldehyde</td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours</td>
<td>750 µg</td>
</tr>
<tr>
<td></td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>750 µg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>540 µg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours</td>
<td>50 mg</td>
</tr>
<tr>
<td></td>
<td>Skin - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours</td>
<td>2 mg</td>
</tr>
</tbody>
</table>

Sensitization
There is no data available.

Mutagenicity
There is no data available.

Carcinogenicity

Classification

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>OSHA</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>EPA</th>
<th>NIOSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>+</td>
<td>1</td>
<td>Known to be a human carcinogen.</td>
<td>A2</td>
<td>-</td>
<td>+</td>
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</tbody>
</table>

Reproductive toxicity
There is no data available.

Teratogenicity
There is no data available.

Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
</tbody>
</table>
Section 11. Toxicological information

Specific target organ toxicity (repeated exposure)
There is no data available.

Aspiration hazard
There is no data available.

Information on the likely routes of exposure
Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact
Causes serious eye damage.

Inhalation
Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin contact
Causes skin irritation. May cause an allergic skin reaction.

Ingestion
Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

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

Inhalation
Adverse symptoms may include the following:
- wheezing and breathing difficulties
- asthma

Skin contact
Adverse symptoms may include the following:
- pain or irritation
- redness
- blistering may occur

Ingestion
Adverse symptoms may include the following:
- stomach pains

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

Short term exposure
Potential immediate effects
No known significant effects or critical hazards.
Potential delayed effects
No known significant effects or critical hazards.

Long term exposure
Potential immediate effects
No known significant effects or critical hazards.
Potential delayed effects
No known significant effects or critical hazards.

Potential chronic health effects
General
Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity
May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity
No known significant effects or critical hazards.

Teratogenicity
No known significant effects or critical hazards.

Developmental effects
No known significant effects or critical hazards.

Fertility effects
No known significant effects or critical hazards.
Section 11. Toxicological information

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>810.2 mg/kg</td>
</tr>
<tr>
<td>Inhalation (vapors)</td>
<td>11.14 mg/L</td>
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</tbody>
</table>

Section 12. Ecological information

Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paraformaldehyde</td>
<td>Acute LC50 39.1 ppm Fresh water</td>
<td>Fish - Lepomis macrochirus</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 1170 ul/L Marine water</td>
<td>Crustaceans - Artemia sp.</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 953.9 ppm Fresh water</td>
<td>Fish - Oncorhynchus tshawytscha - Egg</td>
<td>43 days</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Persistence and degradability

There is no data available.

Bioaccumulative potential

There is no data available.

Mobility in soil

Soil/water partition coefficient ($K_{OC}$): Not available.

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

Section 13. Disposal considerations

Disposal methods: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should 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 empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

<table>
<thead>
<tr>
<th>DOT</th>
<th>TDG</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>UN2213</td>
<td>UN2213</td>
<td>UN2213</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>PARAFORMALDEHYDE RQ (Paraformaldehyde, Formaldehyde)</td>
<td>PARAFORMALDEHYDE</td>
<td>PARAFORMALDEHYDE</td>
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</tbody>
</table>
**Section 14. Transport information**

<table>
<thead>
<tr>
<th>Transport hazard class(es)</th>
<th>4.1</th>
<th>4.1</th>
<th>4.1</th>
<th>4.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packing group</td>
<td>III</td>
<td>III</td>
<td>III</td>
<td>III</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
<tr>
<td>Additional information</td>
<td>Reportable quantity 1000 lbs / 454 kg Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.</td>
<td>Limited quantity Yes.</td>
<td>Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.20-2.22 (Class 4).</td>
<td>-</td>
</tr>
<tr>
<td>Passenger aircraft</td>
<td>Quantity limitation: 25 kg</td>
<td>Cargo aircraft Quantity limitation: 100 L</td>
<td>A1, IB8, IP3, T1</td>
<td>-</td>
</tr>
</tbody>
</table>

**DOT-RQ Details**
- Paraformaldehyde 1000 lbs / 454 kg Formaldehyde, solution 100 lbs / 45.4 kg [14.77 gal / 55.911 L]

**Special precautions for user**
- Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Section 15. Regulatory information**

<table>
<thead>
<tr>
<th>U.S. Federal regulations</th>
<th>TSCA 8(a) CDR Exempt/Partial exemption: Not determined</th>
<th>United States inventory (TSCA 8b): All components are listed or exempted.</th>
<th>Clean Water Act (CWA) 311: Formaldehyde; Paraformaldehyde</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)</td>
<td>Listed</td>
<td>Not listed</td>
<td></td>
</tr>
<tr>
<td>Clean Air Act Section 602 Class I Substances</td>
<td>Not listed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clean Air Act Section 602 Class II Substances</td>
<td>Not listed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEA List I Chemicals (Precursor Chemicals)</td>
<td>Not listed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Section 15. Regulatory information

**DEA List II Chemicals**
- Not listed

**SARA 302/304**

### Composition/information on ingredients

<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></td>
<td></td>
<td></td>
<td>(lbs)</td>
<td>(gallons)</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>≥0.3 - &lt;1</td>
<td>Yes</td>
<td>500</td>
<td>73.9</td>
</tr>
</tbody>
</table>

**SARA 304 RQ**
- 11111.1 lbs / 5044.4 kg

**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></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>≥90 - 99</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Paraformaldehyde</td>
<td>≥90 - 99</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>≥0.3 - &lt;1</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

**SARA 313**

### Product name

<table>
<thead>
<tr>
<th>Product name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>≥0.3 - &lt;1</td>
</tr>
</tbody>
</table>

**Supplier notification**

<table>
<thead>
<tr>
<th>Supplier notification</th>
<th>Product name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>≥0.3 - &lt;1</td>
<td></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: Paraformaldehyde
- **New York**: The following components are listed: Paraformaldehyde; Formaldehyde
- **New Jersey**: The following components are listed: Paraformaldehyde; Formaldehyde
- **Pennsylvania**: The following components are listed: Paraformaldehyde; Formaldehyde

**California Prop. 65**

- **WARNING**: This product contains a chemical known to the State of California to cause cancer.
- **WARNING**: This product contains less than 1% of a chemical known to the State of California to cause 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>Formaldehyde</td>
<td>Yes.</td>
<td>No.</td>
<td>Yes.</td>
<td>No. 23000 µg/day (ingestion)</td>
</tr>
<tr>
<td>Methanol</td>
<td>No.</td>
<td>Yes.</td>
<td></td>
<td>47000 µg/day (inhalation)</td>
</tr>
</tbody>
</table>
Section 15. Regulatory information

Canada

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : The following components are listed: Formaldehyde

Canada inventory : All components are listed or exempted.

Section 16. Other information

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLAMMABLE SOLIDS - Category 2</td>
<td>Expert judgment</td>
</tr>
<tr>
<td>ACUTE TOXICITY (oral) - Category 4</td>
<td>Calculation method</td>
</tr>
<tr>
<td>ACUTE TOXICITY (inhalation) - Category 4</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SKIN IRRITATION - Category 2</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SERIOUS EYE DAMAGE - Category 1</td>
<td>Calculation method</td>
</tr>
<tr>
<td>RESPIRATORY SENSITIZATION - Category 1</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SKIN SENSITIZATION - Category 1</td>
<td>Calculation method</td>
</tr>
<tr>
<td>CARCINOGENICITY - Category 1B</td>
<td>Calculation method</td>
</tr>
<tr>
<td>AQUATIC HAZARD (ACUTE) - Category 3</td>
<td>Calculation method</td>
</tr>
<tr>
<td>AQUATIC HAZARD (LONG-TERM) - Category 3</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

History

Date of issue mm/dd/yyyy : 02/15/2016

Version : 1

Prepared by : KMK Regulatory Services Inc.

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