

# SAFETY DATA SHEET

## 1. Product and Company Identification

|                                      |   |
|--------------------------------------|---|
| <b>Product identifier</b>            | <b>Pan-Spray (Black) (4296-51)</b>  |
| <b>Other means of identification</b> | Not available   |
| <b>Recommended use</b>               | Coating   |
| <b>Recommended restrictions</b>      | None known.   |
| <b>Manufacturer</b>                  | Nu-Calgon<br>2008 Altom Court<br>St. Louis, MO 63146 US<br>Phone: 314-469-7000 / 800-554-5499<br>Emergency Phone: 1-800-424-9300 (CHEMTREC) |

## 2. Hazards Identification

|                              |   |                             |
|------------------------------|---|-----------------------------|
| <b>Physical hazards</b>      | Flammable aerosols                              | Category 1                  |
|                              | Gases under pressure                            | Liquefied gas               |
| <b>Health hazards</b>        | Skin corrosion/irritation                       | Category 2                  |
|                              | Serious eye damage/eye irritation               | Category 2                  |
|                              | Germ cell mutagenicity                          | Category 2                  |
|                              | Carcinogenicity                                 | Category 2                  |
|                              | Reproductive toxicity (the unborn child)        | Category 2                  |
|                              | Specific target organ toxicity, single exposure | Category 3 narcotic effects |
| <b>Environmental hazards</b> | Not classified.                                 |                             |
| <b>OSHA defined hazards</b>  | Not classified.                                 |                             |
| <b>Label elements</b>        |   |                             |



**Signal word** Danger

**Hazard statement**  
 Suspected of causing cancer.  
 Suspected of damaging the unborn child.  
 Suspected of causing genetic defects.  
 Causes skin irritation.  
 Causes serious eye irritation.  
 Extremely flammable aerosol.  
 Contains gas under pressure; may explode if heated.  
 May cause drowsiness or dizziness.

**Precautionary statement**

**Prevention**  
 Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.  
 Wash thoroughly after handling.  
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use.  
 Do not breathe the gas. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area.  
 Wear protective gloves/protective clothing/eye protection/face protection.

**Response**  
 If exposed or concerned: Get medical advice/attention.  
 If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention.  
 Specific treatment (see this label). Take off contaminated clothing and wash it before reuse.  
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.  
 If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.

**Storage**  
 Store locked up.  
 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.  
 Store in a well-ventilated place.  
 Keep container tightly closed.

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

|  |                 |
|--|-----------------|
| <b>Hazard(s) not otherwise classified (HNOC)</b> | None known.     |
| <b>Supplemental information</b>                  | Not applicable. |

### 3. Composition/Information on Ingredients

#### Mixture

| Chemical name  | Common name and synonyms | CAS number | %       |
|--|--------------------------|------------|---------|
| Acetone  |                          | 67-64-1    | 10 - 30 |
| Heptane  |                          | 142-82-5   | 10 - 30 |
| Methane, oxybis-   |                          | 115-10-6   | 10 - 30 |
| Toluene  |                          | 108-88-3   | 10 - 30 |
| Distillates, petroleum, steam-cracked, polymers with light steam-cracked petroleum naphtha   |                          | 68410-16-2 | 5 - 10  |
| Isobutane  |                          | 75-28-5    | 5 - 10  |
| Propane  |                          | 74-98-6    | 5 - 10  |
| 2-Propanol, 1-methoxy-, acetate  |                          | 108-65-6   | 1 - 5   |
| Quaternary ammonium compounds, bis(hydrogenated tallow alkyl) dimethyl, salts with bentonite |                          | 68953-58-2 | 1 - 5   |
| 2-Pentanone, 4-methyl-   |                          | 108-10-1   | 0.1 - 1 |
| Carbon black   |                          | 1333-86-4  | 0.1 - 1 |

**Composition comments** US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

### 4. First Aid Measures

|   |  |
|---|--|
| <b>Inhalation</b>   | If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.  |
| <b>Skin contact</b>   | If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Specific treatment (see product label). Take off contaminated clothing and wash it before reuse.   |
| <b>Eye contact</b>  | If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.   |
| <b>Ingestion</b>  | In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth. Do not induce vomiting. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.  |
| <b>Most important symptoms/effects, acute and delayed</b>                     | Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause drowsiness or dizziness. May cause redness and pain. Prolonged exposure may cause chronic effects.   |
| <b>Indication of immediate medical attention and special treatment needed</b> | Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.   |
| <b>General information</b>  | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance. Do not puncture or incinerate container. Do not store at temperatures above 49°C. Keep away from sources of ignition. No smoking. |

### 5. Fire Fighting Measures

|  |   |
|--|---|
| <b>Suitable extinguishing media</b>                                  | Foam. Carbon dioxide. Dry chemical.   |
| <b>Unsuitable extinguishing media</b>                                | Water. Do not use water jet as an extinguisher, as this will spread the fire.   |
| <b>Specific hazards arising from the chemical</b>                    | Contents under pressure. Pressurized container may explode when exposed to heat or flame. Cool containers with flooding quantities of water until well after fire is out. Firefighters should wear a self-contained breathing apparatus.  |
| <b>Special protective equipment and precautions for firefighters</b> | Firefighters should wear full protective clothing including self contained breathing apparatus.   |
| <b>Fire-fighting equipment/instructions</b>                          | In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out. |
| <b>Specific methods</b>  | Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.  |

|   |   |
|---|---|
| <b>General fire hazards</b>             | Extremely flammable aerosol.                          |
| <b>Hazardous combustion products</b>    | May include and are not limited to: Oxides of carbon. |
| <b>Explosion data</b>                   |   |
| <b>Sensitivity to mechanical impact</b> | Not available.  |
| <b>Sensitivity to static discharge</b>  | Not available.  |

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## 5. Accidental Release Measures

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|  |   |
|--|---|
| <b>Personal precautions, protective equipment and emergency procedures</b> | Keep unnecessary personnel away. Keep out of low areas. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid breathing gas. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.   |
| <b>Methods and materials for containment and cleaning up</b>               | Refer to attached safety data sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS. |
| <b>Environmental precautions</b>   | Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.  |

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## 6. Handling and Storage

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|   |  |
|---|--|
| <b>Precautions for safe handling</b>                                | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Do not breathe gas. Avoid contact during pregnancy/while nursing. Avoid contact with eyes, skin and clothing. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Use good industrial hygiene practices in handling this material. |
| <b>Conditions for safe storage, including any incompatibilities</b> | Level 1 Aerosol.<br><br>Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children.   |

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## 7. Exposure Controls/Personal Protection

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### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

| Components                               | Type | Value      |
|--|------|------------|
| 2-Pentanone, 4-methyl-<br>(CAS 108-10-1) | PEL  | 410 mg/m3  |
|  |      | 100 ppm    |
| Acetone (CAS 67-64-1)                    | PEL  | 2400 mg/m3 |
|  |      | 1000 ppm   |
| Carbon black (CAS 1333-86-4)             | PEL  | 3.5 mg/m3  |
|  |      |            |
| Heptane (CAS 142-82-5)                   | PEL  | 2000 mg/m3 |
|  |      | 500 ppm    |
| Propane (CAS 74-98-6)                    | PEL  | 1800 mg/m3 |
|  |      | 1000 ppm   |

#### US. OSHA Table Z-2 (29 CFR 1910.1000)

| Components             | Type    | Value   |
|------------------------|---------|---------|
| Toluene (CAS 108-88-3) | Ceiling | 300 ppm |
|                        | TWA     | 200 ppm |

**US. ACGIH Threshold Limit Values**

| Components                               | Type | Value    | Form                |
|--|------|----------|---------------------|
| 2-Pentanone, 4-methyl-<br>(CAS 108-10-1) | STEL | 75 ppm   |                     |
|  | TWA  | 20 ppm   |                     |
| Acetone (CAS 67-64-1)                    | STEL | 750 ppm  |                     |
|  | TWA  | 500 ppm  |                     |
| Carbon black (CAS 1333-86-4)             | TWA  | 3 mg/m3  | Inhalable fraction. |
| Heptane (CAS 142-82-5)                   | STEL | 500 ppm  |                     |
|  | TWA  | 400 ppm  |                     |
| Isobutane (CAS 75-28-5)                  | STEL | 1000 ppm |                     |
| Toluene (CAS 108-88-3)                   | TWA  | 20 ppm   |                     |

**US. NIOSH: Pocket Guide to Chemical Hazards**

| Components                               | Type    | Value                         |
|--|---------|-------------------------------|
| 2-Pentanone, 4-methyl-<br>(CAS 108-10-1) | STEL    | 300 mg/m3                     |
|  | TWA     | 75 ppm<br>205 mg/m3<br>50 ppm |
| Acetone (CAS 67-64-1)                    | TWA     | 590 mg/m3<br>250 ppm          |
| Carbon black (CAS 1333-86-4)             | TWA     | 0.1 mg/m3                     |
| Heptane (CAS 142-82-5)                   | Ceiling | 1800 mg/m3<br>440 ppm         |
|  | TWA     | 350 mg/m3<br>85 ppm           |
| Isobutane (CAS 75-28-5)                  | TWA     | 1900 mg/m3<br>800 ppm         |
| Propane (CAS 74-98-6)                    | TWA     | 1800 mg/m3<br>1000 ppm        |
| Toluene (CAS 108-88-3)                   | STEL    | 560 mg/m3<br>150 ppm          |
|  | TWA     | 375 mg/m3<br>100 ppm          |

**US. AIHA Workplace Environmental Exposure Level (WEEL) Guides**

| Components                                     | Type | Value      |
|--|------|------------|
| 2-Propanol, 1-methoxy-, acetate (CAS 108-65-6) | TWA  | 50 ppm     |
| Methane, oxybis- (CAS 115-10-6)                | TWA  | 1880 mg/m3 |
|  |      | 1000 ppm   |

**Biological limit values**

**ACGIH Biological Exposure Indices**

| Components                               | Value     | Determinant               | Specimen            | Sampling Time |
|--|-----------|---------------------------|---------------------|---------------|
| 2-Pentanone, 4-methyl-<br>(CAS 108-10-1) | 1 mg/l    | Methyl isobutyl ketone    | Urine               | *             |
| Acetone (CAS 67-64-1)                    | 50 mg/l   | Acetone                   | Urine               | *             |
| Toluene (CAS 108-88-3)                   | 0.3 mg/g  | o-Cresol, with hydrolysis | Creatinine in urine | *             |
|  | 0.03 mg/l | Toluene                   | Urine               | *             |
|  | 0.02 mg/l | Toluene                   | Blood               | *             |

\* - For sampling details, please see the source document.

**Exposure guidelines**

Chemicals listed in section 3 that are not listed here do not have established limit values for ACGIH.

|  |   |
|--|---|
| <b>Appropriate engineering controls</b>                                      | Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. |
| <b>Individual protection measures, such as personal protective equipment</b> |   |
| <b>Eye/face protection</b>   | Wear safety glasses with side shields (or goggles).   |
| <b>Skin protection</b>   |   |
| <b>Hand protection</b>   | Rubber gloves. Confirm with a reputable supplier first.   |
| <b>Other</b>   | Wear appropriate chemical resistant clothing. As required by employer code.   |
| <b>Respiratory protection</b>  | Wear positive pressure self-contained breathing apparatus (SCBA). Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.  |
| <b>Thermal hazards</b>   | Not applicable.   |
| <b>General hygiene considerations</b>  | When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.   |

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## 8. Physical and Chemical Properties

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|   |                 |
|---|-----------------|
| <b>Appearance</b>                                   | Spray           |
| <b>Physical state</b>                               | Gas.            |
| <b>Form</b>   | Aerosol         |
| <b>Color</b>  | Black           |
| <b>Odor</b>   | Solvent         |
| <b>Odor threshold</b>                               | Not available.  |
| <b>pH</b>   | Not available.  |
| <b>Melting point/freezing point</b>                 | Not available.  |
| <b>Initial boiling point and boiling range</b>      | Not available.  |
| <b>Pour point</b>                                   | Not available.  |
| <b>Specific gravity</b>                             | 0.81 - 0.85     |
| <b>Partition coefficient (n-octanol/water)</b>      | Not available.  |
| <b>Flash point</b>                                  | Not available.  |
| <b>Evaporation rate</b>                             | Not available.  |
| <b>Flammability (solid, gas)</b>                    | Not applicable. |
| <b>Upper/lower flammability or explosive limits</b> |                 |
| <b>Flammability limit - lower (%)</b>               | Not available.  |
| <b>Flammability limit - upper (%)</b>               | Not available.  |
| <b>Explosive limit - lower (%)</b>                  | Not available.  |
| <b>Explosive limit - upper (%)</b>                  | Not available.  |
| <b>Vapor pressure</b>                               | 55 - 65 psig    |
| <b>Vapor density</b>                                | Not available.  |
| <b>Relative density</b>                             | Not available.  |
| <b>Solubility(ies)</b>                              | Not available.  |
| <b>Auto-ignition temperature</b>                    | Not available.  |
| <b>Decomposition temperature</b>                    | Not available.  |
| <b>Viscosity</b>                                    | 200 - 250 cP    |
| <b>Other information</b>                            |                 |
| <b>Flame extension</b>                              | > 100 cm        |
| <b>Flammability (flash back)</b>                    | No              |

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## 9. Stability and Reactivity

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|   |  |
|---|--|
| <b>Reactivity</b>                         | This product may react with strong oxidizing agents. |
| <b>Possibility of hazardous reactions</b> | Hazardous polymerization does not occur.             |
| <b>Chemical stability</b>                 | Stable under recommended storage conditions.         |

|   |  |
|---|--|
| <b>Conditions to avoid</b>              | Do not mix with other chemicals. Aerosol containers are unstable at temperatures above 49°C (120.2°F). |
| <b>Incompatible materials</b>           | Oxidizers.   |
| <b>Hazardous decomposition products</b> | May include and are not limited to: Oxides of carbon.  |

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## 10. Toxicological Information

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**Routes of exposure** Inhalation. Ingestion. Skin contact. Eye contact.

**Information on likely routes of exposure**

|                     |  |
|---------------------|--|
| <b>Ingestion</b>    | Expected to be a low ingestion hazard.   |
| <b>Inhalation</b>   | Prolonged inhalation may be harmful. May cause damage to organs by inhalation. Narcotic effects. |
| <b>Skin contact</b> | Causes skin irritation.  |
| <b>Eye contact</b>  | Causes serious eye irritation.   |

**Symptoms related to the physical, chemical and toxicological characteristics** Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

**Information on toxicological effects**

**Acute toxicity** Narcotic effects.

| <b>Components</b> | <b>Species</b> | <b>Test Results</b> |
|-------------------|----------------|---------------------|
|-------------------|----------------|---------------------|

2-Pentanone, 4-methyl- (CAS 108-10-1)

**Acute**

*Dermal*

|      |        |             |
|------|--------|-------------|
| LD50 | Rabbit | 16000 mg/kg |
|------|--------|-------------|

*Inhalation*

|      |     |                   |
|------|-----|-------------------|
| LC50 | Rat | 8.2 mg/l, 4 Hours |
|------|-----|-------------------|

*Oral*

|      |       |            |
|------|-------|------------|
| LD50 | Mouse | 1200 mg/kg |
|------|-------|------------|

|  |     |            |
|--|-----|------------|
|  | Rat | 2080 mg/kg |
|--|-----|------------|

2-Propanol, 1-methoxy-, acetate (CAS 108-65-6)

**Acute**

*Dermal*

|      |        |              |
|------|--------|--------------|
| LD50 | Rabbit | > 5000 mg/kg |
|------|--------|--------------|

*Inhalation*

|      |     |                     |
|------|-----|---------------------|
| LC50 | Rat | > 5320 ppm, 4 hours |
|------|-----|---------------------|

*Oral*

|      |     |            |
|------|-----|------------|
| LD50 | Rat | 8532 mg/kg |
|------|-----|------------|

Acetone (CAS 67-64-1)

**Acute**

*Dermal*

|      |        |             |
|------|--------|-------------|
| LD50 | Rabbit | 15800 mg/kg |
|------|--------|-------------|

20 ml/kg

*Inhalation*

|      |       |                             |
|------|-------|-----------------------------|
| LC50 | Mouse | 44000 mg/m <sup>3</sup> /4H |
|------|-------|-----------------------------|

|  |     |                  |
|--|-----|------------------|
|  | Rat | 76 mg/l, 4 Hours |
|--|-----|------------------|

50.1 mg/l, 8 Hours

39 mg/l/4h

*Oral*

|      |       |            |
|------|-------|------------|
| LD50 | Human | 2857 mg/kg |
|------|-------|------------|

|  |       |            |
|--|-------|------------|
|  | Mouse | 3000 mg/kg |
|--|-------|------------|

|  |        |            |
|--|--------|------------|
|  | Rabbit | 5340 mg/kg |
|--|--------|------------|

|  |     |            |
|--|-----|------------|
|  | Rat | 5800 mg/kg |
|--|-----|------------|

| Components  | Species       | Test Results              |
|---|---------------|---------------------------|
| Carbon black (CAS 1333-86-4)  |               |                           |
| <b>Acute</b>  |               |                           |
| <i>Dermal</i>   |               |                           |
| LD50  | Rabbit        | > 3000 mg/kg              |
| <i>Inhalation</i>   |               |                           |
| LC50  | Not available |                           |
| <i>Oral</i>   |               |                           |
| LD50  | Rat           | > 8000 mg/kg              |
| Distillates, petroleum, steam-cracked, polymers with light steam-cracked petroleum naphtha (CAS 68410-16-2)   |               |                           |
| <b>LC50</b>   |               |                           |
| Not available.  |               |                           |
| <b>LD50</b>   |               |                           |
| Not available.  |               |                           |
| Heptane (CAS 142-82-5)  |               |                           |
| <b>Acute</b>  |               |                           |
| <i>Inhalation</i>   |               |                           |
| LC50  | Rat           | 103 mg/l, 4 Hours         |
| LD50  | Mouse         | 75 mg/l, 2 Hours          |
| <i>Oral</i>   |               |                           |
| LD50  | Rat           | 15000 mg/kg               |
| Isobutane (CAS 75-28-5)   |               |                           |
| <b>Acute</b>  |               |                           |
| <i>Dermal</i>   |               |                           |
| LD50  | Not available |                           |
| <i>Inhalation</i>   |               |                           |
| LC50  | Rat           | 658 mg/l/4h               |
| <i>Oral</i>   |               |                           |
| LD50  | Not available |                           |
| Methane, oxybis- (CAS 115-10-6)   |               |                           |
| <b>Acute</b>  |               |                           |
| <i>Inhalation</i>   |               |                           |
| LC50  | Mouse         | 494 ppm, 15 Minutes       |
|   |               | 386 ppm, 30 Minutes       |
|   | Rat           | 308.5 mg/l, 4 Hours       |
| <i>Oral</i>   |               |                           |
| LD50  | Not available |                           |
| Propane (CAS 74-98-6)   |               |                           |
| <b>Acute</b>  |               |                           |
| <i>Inhalation</i>   |               |                           |
| LC50  | Rat           | > 1442.8 mg/l, 15 Minutes |
| <i>Oral</i>   |               |                           |
| LD50  | Not available |                           |
| Quaternary ammonium compounds, bis(hydrogenated tallow alkyl) dimethyl, salts with bentonite (CAS 68953-58-2) |               |                           |
| <b>Acute</b>  |               |                           |
| <i>Inhalation</i>   |               |                           |
| LC50  | Rat           | 12.6 mg/l/4h              |
| <i>Oral</i>   |               |                           |
| LD50  | Rat           | 5000 mg/kg                |
| Toluene (CAS 108-88-3)  |               |                           |
| <b>Acute</b>  |               |                           |
| <i>Dermal</i>   |               |                           |
| LD50  | Rabbit        | 12196 mg/kg               |
|   |               | 12125 mg/kg               |

| Components  | Species  | Test Results                         |
|---|--|--------------------------------------|
|   |  | 8390 mg/kg                           |
|   |  | 14.1 ml/kg                           |
| <i>Inhalation</i>   |  |                                      |
| LC50  | Mouse  | 7100 mg/l, 4 Hours                   |
|   |  | 5320 ppm, 8 Hours                    |
|   |  | 400 ppm, 24 Hours                    |
|   | Rat  | 26700 ppm, 1 Hours                   |
|   |  | <= 28800 mg/m <sup>3</sup> , 4 Hours |
|   |  | 12200 ppm, 2 Hours                   |
|   |  | 8000 ppm, 4 Hours                    |
|   |  | 12.5 mg/l/4h                         |
| <i>Oral</i>   |  |                                      |
| LD50  | Rat  | > 5580 mg/kg                         |
|   |  | 636 mg/kg                            |
| <b>Skin corrosion/irritation</b>  | Causes skin irritation.  |                                      |
| Exposure minutes  | Not available.   |                                      |
| Erythema value  | Not available.   |                                      |
| Oedema value  | Not available.   |                                      |
| <b>Serious eye damage/eye irritation</b>  | Causes serious eye irritation.   |                                      |
| Corneal opacity value   | Not available.   |                                      |
| Iris lesion value   | Not available.   |                                      |
| Conjunctival reddening value  | Not available.   |                                      |
| Conjunctival oedema value   | Not available.   |                                      |
| Recover days  | Not available.   |                                      |
| <b>Respiratory or skin sensitization</b>  |  |                                      |
| Respiratory sensitization   | Not available.   |                                      |
| Skin sensitization  | This product is not expected to cause skin sensitization.  |                                      |
| <b>Germ cell mutagenicity</b>   | Non-hazardous by WHMIS/OSHA criteria.  |                                      |
| <b>Mutagenicity</b>   | Non-hazardous by WHMIS/OSHA criteria.  |                                      |
| <b>Carcinogenicity</b>  | Suspected of causing cancer.   |                                      |
| <b>ACGIH Carcinogens</b>  |  |                                      |
| 2-Pentanone, 4-methyl- (CAS 108-10-1)   | A3 Confirmed animal carcinogen with unknown relevance to humans.   |                                      |
| Acetone (CAS 67-64-1)   | A4 Not classifiable as a human carcinogen.   |                                      |
| Carbon black (CAS 1333-86-4)  | A3 Confirmed animal carcinogen with unknown relevance to humans.   |                                      |
| Toluene (CAS 108-88-3)  | A4 Not classifiable as a human carcinogen.   |                                      |
| <b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>                   |  |                                      |
| 2-Pentanone, 4-methyl- (CAS 108-10-1)   | Volume 101 - 2B Possibly carcinogenic to humans.   |                                      |
| Carbon black (CAS 1333-86-4)  | Volume 65, Volume 93 - 2B Possibly carcinogenic to humans.   |                                      |
| Toluene (CAS 108-88-3)  | Volume 47, Volume 71 - 3 Not classifiable as to carcinogenicity to humans.   |                                      |
| <b>US - California Proposition 65 - CRT: Listed date/Carcinogenic substance</b> |  |                                      |
| 2-Pentanone, 4-methyl- (CAS 108-10-1)   | Carcinogenic.  |                                      |
| Benzene (CAS 71-43-2)   | Carcinogenic.  |                                      |
| Carbon black (CAS 1333-86-4)  | Carcinogenic.  |                                      |
| Crystalline silica (CAS 14808-60-7)   | Carcinogenic.  |                                      |
| <b>Reproductive toxicity</b>  | Suspected of damaging the unborn child.  |                                      |
| <b>Teratogenicity</b>   | Toluene (benzene, methyl-) has caused fetotoxicity (reduced fetal weight), behavioural effects (effects on learning and memory) and hearing loss (in males). These effects have been observed in the offspring of rats exposed by inhalation to 1200 or 1800 ppm toluene. These effects were observed in the absence of maternal toxicity. |                                      |
| <b>Specific target organ toxicity - single exposure</b>                         | Narcotic effects.  |                                      |



|   |   |
|---|---|
| <b>Specific target organ toxicity - repeated exposure</b> | Not classified.                             |
| <b>Aspiration hazard</b>                                  | Not likely, due to the form of the product. |
| <b>Chronic effects</b>                                    | Prolonged inhalation may be harmful.        |
| <b>Further information</b>                                | Not available.                              |
| <b>Name of Toxicologically Synergistic Products</b>       | Not available.                              |

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## 11. Ecological Information

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|  |   |   |                            |
|--|---|---|----------------------------|
| <b>Ecotoxicity</b>                             | See below   |   |                            |
| <b>Components</b>                              |   | <b>Species</b>                                      | <b>Test Results</b>        |
| 2-Pentanone, 4-methyl- (CAS 108-10-1)          |   |   |                            |
| Crustacea                                      | EC50  | Daphnia   | 170 mg/L, 48 Hours         |
| <b>Aquatic</b>                                 |   |   |                            |
| Fish   | LC50  | Fathead minnow (Pimephales promelas)                | 492 - 593 mg/l, 96 hours   |
| 2-Propanol, 1-methoxy-, acetate (CAS 108-65-6) |   |   |                            |
| Crustacea                                      | EC50  | Daphnia   | 500 mg/L, 48 Hours         |
| Acetone (CAS 67-64-1)                          |   |   |                            |
| Crustacea                                      | EC50  | Daphnia   | 13999 mg/L, 48 Hours       |
| <b>Aquatic</b>                                 |   |   |                            |
| Crustacea                                      | EC50  | Water flea (Daphnia magna)                          | 21.6 - 23.9 mg/l, 48 hours |
| Fish   | LC50  | Rainbow trout,donaldson trout (Oncorhynchus mykiss) | 4740 - 6330 mg/l, 96 hours |
| Heptane (CAS 142-82-5)                         |   |   |                            |
| <b>Aquatic</b>                                 |   |   |                            |
| Fish   | LC50  | Mozambique tilapia (Tilapia mossambica)             | 375 mg/l, 96 hours         |
| Toluene (CAS 108-88-3)                         |   |   |                            |
| Algae  | IC50  | Algae   | 433 mg/L, 72 Hours         |
| Crustacea                                      | EC50  | Daphnia   | 7.645 mg/L, 48 Hours       |
| <b>Aquatic</b>                                 |   |   |                            |
| Crustacea                                      | EC50  | Water flea (Daphnia magna)                          | 5.46 - 9.83 mg/l, 48 hours |
| Fish   | LC50  | Coho salmon,silver salmon (Oncorhynchus kisutch)    | 8.11 mg/l, 96 hours        |
| <b>Persistence and degradability</b>           | No data is available on the degradability of this product.  |   |                            |
| <b>Bioaccumulative potential</b>               | No data available.  |   |                            |
| <b>Mobility in soil</b>                        | No data available.  |   |                            |
| <b>Mobility in general</b>                     | Not available.  |   |                            |
| <b>Other adverse effects</b>                   | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component. |   |                            |

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## 12. Disposal Considerations

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|  |  |
|--|--|
| <b>Disposal instructions</b>                     | Contents under pressure. Do not puncture, incinerate or crush. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. |
| <b>Local disposal regulations</b>                | Dispose in accordance with all applicable regulations.   |
| <b>Hazardous waste code</b>                      | The waste code should be assigned in discussion between the user, the producer and the waste disposal company.   |
| <b>US RCRA Hazardous Waste U List: Reference</b> |  |
| 2-Pentanone, 4-methyl- (CAS 108-10-1)            | U161   |
| Acetone (CAS 67-64-1)                            | U002   |
| Toluene (CAS 108-88-3)                           | U220   |
| <b>Waste from residues / unused products</b>     | Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).   |

**Contaminated packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

### 13. Transport Information

**U.S. Department of Transportation (DOT)****Basic shipping requirements:**

**UN number** UN1950  
**Proper shipping name** Aerosols, flammable, (each not exceeding 1 L capacity)  
**Hazard class** Limited Quantity - US

**Transportation of Dangerous Goods (TDG - Canada)****Basic shipping requirements:**

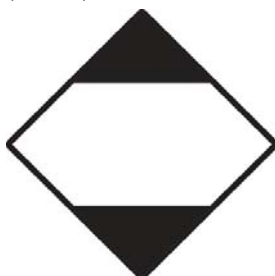
**UN number** UN1950  
**Proper shipping name** AEROSOLS, flammable  
**Hazard class** Limited Quantity - Canada

**IATA/ICAO (Air)****Basic shipping requirements:**

**UN number** UN1950  
**Proper shipping name** Aerosols, flammable  
**Hazard class** Limited Quantity - IATA

**IMDG (Marine Transport)****Basic shipping requirements:**

**UN number** UN1950  
**Proper shipping name** AEROSOLS  
**Hazard class** Limited Quantity - IMDG

**DOT; IMDG; TDG****IATA**

### 14. Regulatory Information

**Canadian federal regulations**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

**Canada DSL Challenge Substances: Listed substance**

Carbon black (CAS 1333-86-4) Listed.  
 Isobutane (CAS 75-28-5) Listed.

**Canada NPRI VOCs with Additional Reporting Requirements: Mass reporting threshold/Identification Number**

2-Pentanone, 4-methyl- (CAS 108-10-1) 1 TONNES  
 Propanol, 1-methoxy-, acetate (CAS 108-65-6) 1 TONNES  
 Heptane (CAS 142-82-5) 1 TONNES  
 Isobutane (CAS 75-28-5) 1 TONNES  
 Methane, oxybis- (CAS 115-10-6) 1 TONNES  
 Propane (CAS 74-98-6) 1 TONNES  
 Toluene (CAS 108-88-3) 1 TONNES

**Canada WHMIS Ingredient Disclosure: Threshold limits**

2-Pentanone, 4-methyl- (CAS 108-10-1) 1 %  
 Acetone (CAS 67-64-1) 1 %

|                              |     |
|------------------------------|-----|
| Carbon black (CAS 1333-86-4) | 1 % |
| Heptane (CAS 142-82-5)       | 1 % |
| Toluene (CAS 108-88-3)       | 1 % |

**WHMIS status** Controlled

**WHMIS classification** Class A - Compressed Gas, Class B - Division 5 - Flammable Aerosol, Class D - Division 2A, 2B

**WHMIS labeling**



**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration**

|                                       |       |
|---------------------------------------|-------|
| 2-Pentanone, 4-methyl- (CAS 108-10-1) | 1.0 % |
| Toluene (CAS 108-88-3)                | 1.0 % |

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance**

|                                       |         |
|---------------------------------------|---------|
| 2-Pentanone, 4-methyl- (CAS 108-10-1) | Listed. |
| Toluene (CAS 108-88-3)                | Listed. |

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**US CWA Section 311 Hazardous Substances: Listed substance**

|                        |         |
|------------------------|---------|
| Toluene (CAS 108-88-3) | Listed. |
|------------------------|---------|

**US CWA Section 307(a)(1) Toxic Pollutants: Listed substance**

|                        |         |
|------------------------|---------|
| Toluene (CAS 108-88-3) | Listed. |
|------------------------|---------|

**CERCLA Hazardous Substance List (40 CFR 302.4)**

|                                       |         |
|---------------------------------------|---------|
| 2-Pentanone, 4-methyl- (CAS 108-10-1) | Listed. |
| Acetone (CAS 67-64-1)                 | Listed. |
| Heptane (CAS 142-82-5)                | Listed. |
| Isobutane (CAS 75-28-5)               | Listed. |
| Methane, oxybis- (CAS 115-10-6)       | Listed. |
| Propane (CAS 74-98-6)                 | Listed. |
| Toluene (CAS 108-88-3)                | Listed. |

**US CAA Section 111 Volatile Organic Compounds: Listed substance**

|                                       |         |
|---------------------------------------|---------|
| 2-Pentanone, 4-methyl- (CAS 108-10-1) | Listed. |
| Acetone (CAS 67-64-1)                 | Listed. |
| Methane, oxybis- (CAS 115-10-6)       | Listed. |
| Toluene (CAS 108-88-3)                | Listed. |

**US CAA Section 112(r) Accidental Release Prevention - Regulated Flammable Substance: Listed substance**

|                                 |                                |
|---------------------------------|--------------------------------|
| Isobutane (CAS 75-28-5)         | Regulated flammable substance. |
| Methane, oxybis- (CAS 115-10-6) | Regulated flammable substance. |
| Propane (CAS 74-98-6)           | Regulated flammable substance. |

**US CAA Section 112(r) Accidental Release Prevention: Threshold quantity**

|                                 |           |
|---------------------------------|-----------|
| Isobutane (CAS 75-28-5)         | 10000 LBS |
| Methane, oxybis- (CAS 115-10-6) | 10000 LBS |
| Propane (CAS 74-98-6)           | 10000 LBS |

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

|                                 |         |
|---------------------------------|---------|
| Isobutane (CAS 75-28-5)         | Listed. |
| Methane, oxybis- (CAS 115-10-6) | Listed. |
| Propane (CAS 74-98-6)           | Listed. |

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

|                                       |         |
|---------------------------------------|---------|
| 2-Pentanone, 4-methyl- (CAS 108-10-1) | Listed. |
| Toluene (CAS 108-88-3)                | Listed. |

**US CAA Section 612 SNAP Program: Listed substance**

|                                 |         |
|---------------------------------|---------|
| Acetone (CAS 67-64-1)           | Listed. |
| Methane, oxybis- (CAS 115-10-6) | Listed. |
| Propane (CAS 74-98-6)           | Listed. |

**US CAA VOCs with Negligible Photochemical Activity: Listed substance**

|                       |         |
|-----------------------|---------|
| Acetone (CAS 67-64-1) | Listed. |
|-----------------------|---------|

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

|                          |                        |
|--------------------------|------------------------|
| <b>Hazard categories</b> | Immediate Hazard - Yes |
|                          | Delayed Hazard - Yes   |
|                          | Fire Hazard - Yes      |
|                          | Pressure Hazard - Yes  |
|                          | Reactivity Hazard - No |

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

**SARA 313 (TRI reporting)**

| Chemical name | CAS number | % by wt. |
|---------------|------------|----------|
| Toluene       | 108-88-3   | 10 - 30  |

**Other federal regulations**

**Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)** Hazardous substance  
Priority pollutant  
Toxic pollutant

**Safe Drinking Water Act (SDWA)** Not regulated.

**Food and Drug Administration (FDA)** Not regulated.

**US state regulations**

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

**US - California Hazardous Substances (Director's): Listed substance**

2-Pentanone, 4-methyl- (CAS 108-10-1) Listed.  
Acetone (CAS 67-64-1) Listed.  
Carbon black (CAS 1333-86-4) Listed.  
Heptane (CAS 142-82-5) Listed.  
Toluene (CAS 108-88-3) Listed.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

2-Pentanone, 4-methyl- (CAS 108-10-1) Listed.  
Benzene (CAS 71-43-2) Listed.  
Carbon black (CAS 1333-86-4) Listed.  
Crystalline silica (CAS 14808-60-7) Listed.  
Toluene (CAS 108-88-3) Listed.

**US - Illinois Chemical Safety Act: Listed substance**

2-Pentanone, 4-methyl- (CAS 108-10-1) Listed.  
Acetone (CAS 67-64-1) Listed.  
Heptane (CAS 142-82-5) Listed.  
Isobutane (CAS 75-28-5) Listed.  
Methane, oxybis- (CAS 115-10-6) Listed.  
Propane (CAS 74-98-6) Listed.  
Toluene (CAS 108-88-3) Listed.

**US - Louisiana Spill Reporting List: Reportable quantity (total mass into atmosphere)**

2-Pentanone, 4-methyl- (CAS 108-10-1) 1000 LBS

**US - Louisiana Spill Reporting: Listed substance**

2-Pentanone, 4-methyl- (CAS 108-10-1) Listed.  
Acetone (CAS 67-64-1) Listed.  
Heptane (CAS 142-82-5) Listed.  
Isobutane (CAS 75-28-5) Listed.  
Methane, oxybis- (CAS 115-10-6) Listed.  
Propane (CAS 74-98-6) Listed.  
Toluene (CAS 108-88-3) Listed.

**US - Michigan Critical Materials Register: Parameter number**

Toluene (CAS 108-88-3) 00108-88-3 Listed.

**US - Minnesota Haz Subs: Listed substance**

2-Pentanone, 4-methyl- (CAS 108-10-1) Listed.  
Acetone (CAS 67-64-1) Listed.  
Carbon black (CAS 1333-86-4) Listed.  
Heptane (CAS 142-82-5) Listed.  
Isobutane (CAS 75-28-5) Listed.  
Methane, oxybis- (CAS 115-10-6) Listed.  
Propane (CAS 74-98-6) Listed.  
Toluene (CAS 108-88-3) Listed.

**US - New Jersey RTK - Substances: Listed substance**

2-Pentanone, 4-methyl- (CAS 108-10-1) Listed.  
Acetone (CAS 67-64-1) Listed.  
Carbon black (CAS 1333-86-4) Listed.  
Heptane (CAS 142-82-5) Listed.  
Isobutane (CAS 75-28-5) Listed.  
Methane, oxybis- (CAS 115-10-6) Listed.  
Propane (CAS 74-98-6) Listed.

|   |         |
|---|---------|
| Toluene (CAS 108-88-3)  | Listed. |
| <b>US - New York Release Reporting: Hazardous Substances: Listed substance</b>                                |         |
| 2-Pentanone, 4-methyl- (CAS 108-10-1)   | Listed. |
| Acetone (CAS 67-64-1)   | Listed. |
| Toluene (CAS 108-88-3)  | Listed. |
| <b>US - North Carolina Toxic Air Pollutants: Listed substance</b>   |         |
| 2-Pentanone, 4-methyl- (CAS 108-10-1)   | Listed. |
| Toluene (CAS 108-88-3)  | Listed. |
| <b>US - Texas Effects Screening Levels: Listed substance</b>  |         |
| 2-Pentanone, 4-methyl- (CAS 108-10-1)   | Listed. |
| 2-Propanol, 1-methoxy-, acetate (CAS 108-65-6)  | Listed. |
| Acetone (CAS 67-64-1)   | Listed. |
| Carbon black (CAS 1333-86-4)  | Listed. |
| Distillates, petroleum, steam-cracked, polymers with light steam-cracked petroleum naphtha (CAS 68410-16-2)   | Listed. |
| Heptane (CAS 142-82-5)  | Listed. |
| Isobutane (CAS 75-28-5)   | Listed. |
| Methane, oxybis- (CAS 115-10-6)   | Listed. |
| Propane (CAS 74-98-6)   | Listed. |
| Quaternary ammonium compounds, bis(hydrogenated tallow alkyl) dimethyl, salts with bentonite (CAS 68953-58-2) | Listed. |
| Toluene (CAS 108-88-3)  | Listed. |
| <b>US - Washington Chemical of High Concern to Children: Listed substance</b>                                 |         |
| Toluene (CAS 108-88-3)  | Listed. |
| <b>US. Massachusetts RTK - Substance List</b>   |         |
| 2-Pentanone, 4-methyl- (CAS 108-10-1)   | Listed. |
| Acetone (CAS 67-64-1)   | Listed. |
| Carbon black (CAS 1333-86-4)  | Listed. |
| Heptane (CAS 142-82-5)  | Listed. |
| Isobutane (CAS 75-28-5)   | Listed. |
| Methane, oxybis- (CAS 115-10-6)   | Listed. |
| Propane (CAS 74-98-6)   | Listed. |
| Toluene (CAS 108-88-3)  | Listed. |
| <b>US. Pennsylvania RTK - Hazardous Substances</b>  |         |
| 2-Pentanone, 4-methyl- (CAS 108-10-1)   | Listed. |
| Acetone (CAS 67-64-1)   | Listed. |
| Carbon black (CAS 1333-86-4)  | Listed. |
| Heptane (CAS 142-82-5)  | Listed. |
| Isobutane (CAS 75-28-5)   | Listed. |
| Methane, oxybis- (CAS 115-10-6)   | Listed. |
| Propane (CAS 74-98-6)   | Listed. |
| Toluene (CAS 108-88-3)  | Listed. |
| <b>US. Rhode Island RTK</b>   |         |
| 2-Pentanone, 4-methyl- (CAS 108-10-1)   | Listed. |
| Acetone (CAS 67-64-1)   | Listed. |
| Isobutane (CAS 75-28-5)   | Listed. |
| Methane, oxybis- (CAS 115-10-6)   | Listed. |
| Propane (CAS 74-98-6)   | Listed. |
| Toluene (CAS 108-88-3)  | Listed. |

**Inventory status**

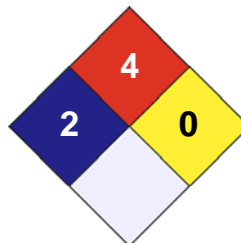
| Country(s) or region        | Inventory name                                | On inventory (yes/no)* |
|-----------------------------|---|------------------------|
| Canada                      | Domestic Substances List (DSL)                | Yes                    |
| Canada                      | Non-Domestic Substances List (NDSL)           | No                     |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes                    |

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

## 15. Other Information

| LEGEND   |   |
|----------|---|
| Severe   | 4 |
| Serious  | 3 |
| Moderate | 2 |
| Slight   | 1 |
| Minimal  | 0 |

|                     |   |   |
|---------------------|---|---|
| HEALTH              | * | 2 |
| FLAMMABILITY        |   | 4 |
| PHYSICAL HAZARD     |   | 0 |
| PERSONAL PROTECTION |   | X |



### Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

### Issue date

27-February-2015

### Effective date

28-February-2015

### Expiry date

28-February-2018

### Further information

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

### Prepared by

Nu-Calgon Technical Service Phone: (314) 469-7000

### Other information

This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).