SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name: Kia A/C Evaporator Cleaner & Refresher / Part #UM090 CH035

Material number: 000000000504200008

Manufacturer or supplier's details

Company: Zep Inc.
Address: 1310 Seaboard Industrial Blvd., NW
Atlanta, GA 30318
Telephone: 404-352-1680

Emergency telephone numbers

For SDS Information: Compliance Services 1-877-428-9937
For a Medical Emergency: 877-541-2016 Toll Free - All Calls Recorded
For a Transportation Emergency: CHEMTREC: 800-424-9300 - All Calls Recorded.
In the District of Columbia 202-483-7616

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Aerosol containing a liquefied gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>colourless</td>
</tr>
<tr>
<td>Odour</td>
<td>alcohol-like, ammoniacal</td>
</tr>
</tbody>
</table>

GHS Classification

Gases under pressure: Liquefied gas
Skin corrosion: Category 1A
Serious eye damage: Category 1

GHS Label element

Hazard pictograms:

Signal word: Danger

Hazard statements:
H280 Contains gas under pressure; may explode if heated.
H314 Causes severe skin burns and eye damage.

Precautionary statements:

Prevention:
P260 Do not breathe dust or mist.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P251 Pressurized container: Do not pierce or burn, even after use.

Response:
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT
induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
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 doctor/ physician.
P363 Wash contaminated clothing before reuse.

**Storage:**
P405 Store locked up.
P410 + P403 Protect from sunlight. Store in a well-ventilated place.
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

**Disposal:**
P501 Dispose of contents/container in accordance with local regulation.

### Potential Health Effects

#### Carcinogenicity:

**IARC**
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**ACGIH**
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

**OSHA**
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**NTP**
No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Hazardous components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>butane</td>
<td>106-97-8</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td>propan-2-ol</td>
<td>67-63-0</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
<tr>
<td>propane</td>
<td>74-98-6</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
<tr>
<td>butane</td>
<td>106-97-8</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td>propan-2-ol</td>
<td>67-63-0</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
<tr>
<td>propane</td>
<td>74-98-6</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
</tbody>
</table>

### SECTION 4. FIRST AID MEASURES
General advice: Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.

If inhaled: If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

In case of skin contact: If on skin, rinse well with water. If on clothes, remove clothes. Wash off immediately with plenty of water for at least 15 minutes.

In case of eye contact: Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. Rinse immediately with plenty of water for at least 15 minutes.

If swallowed: Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Take victim immediately to hospital.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water spray
Dry chemical
Carbon dioxide (CO2)
Alcohol-resistant foam

Unsuitable extinguishing media: High volume water jet

Specific hazards during firefighting: Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products: Carbon dioxide (CO2)
Carbon monoxide
Smoke

Specific extinguishing methods: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES
SAFETY DATA SHEET

AJ0405 WIP KIA FOAM EVAP CLNR 20N18

Version 1.0  Revision Date 05/30/2015  Print Date 08/13/2015

Personal precautions, protective equipment and emergency procedures:
Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.
Evacuate personnel to safe areas.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions:
Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up:
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Sweep up or vacuum up spillage and collect in suitable container for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling:
Do not breathe vapours/dust.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.
Always replace cap after use.

Conditions for safe storage:
BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects.
Observe label precautions.
Keep in a dry, cool and well-ventilated place.
Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid:
Store and keep away from, oxidizing agents and acids.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters:

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>butane</td>
<td>106-97-8</td>
<td>TWA</td>
<td>800 ppm 1,900 mg/m3</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>800 ppm 1,900 mg/m3</td>
<td>OSHA P0</td>
</tr>
<tr>
<td>propan-2-ol</td>
<td>67-63-0</td>
<td>TWA</td>
<td>200 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>400 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>400 ppm</td>
<td>NIOSH REL</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

AJ0405 WIP KIA FOAM EVAP CLNR 20N18

Version 1.0  Revision Date 05/30/2015  Print Date 08/13/2015

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROPAN-2-OL</td>
<td>67-63-0</td>
<td>Acetone</td>
<td>Urine</td>
<td>End of shift at end of workweek</td>
<td>40 mg/l</td>
<td>ACGIH BEI</td>
</tr>
</tbody>
</table>

Biological occupational exposure limits

### Personal protective equipment

**Respiratory protection**: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

**Hand protection**

**Remarks**: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

**Eye protection**

**Remarks**: Ensure that eyewash stations and safety showers are close to the workstation location.
- Safety glasses
- Face-shield

**Skin and body protection**

**Remarks**: impervious clothing
- Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Hygiene measures**: When using do not eat or drink.
- When using do not smoke.
- Wash hands before breaks and at the end of workday.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**: Aerosol containing a liquefied gas
SAFETY DATA SHEET

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Colour : colourless
Odour : alcohol-like, ammoniacal
Odour Threshold : no data available
pH : 12.5
Melting point/freezing point : no data available
Boiling point : 82.2 - 100 °C
Flash point : no data available
Evaporation rate : no data available
Upper explosion limit : no data available
Lower explosion limit : no data available
Vapour pressure : no data available
Relative vapour density : no data available
Density : no data available
Solubility(ies)
Water solubility : partly soluble
Solubility in other solvents : not determined
Partition coefficient: n-octanol/water : no data available
Auto-ignition temperature : not determined
Thermal decomposition : no data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Stable
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : Vapours may form explosive mixture with air.
No decomposition if stored and applied as directed.
Conditions to avoid : Heat, flames and sparks.
Extremes of temperature and direct sunlight.
Incompatible materials : Acids
Oxidizing agents
Hazardous decomposition products : Carbon oxides
SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity: Acute toxicity estimate: > 5,000 mg/kg
   Method: Calculation method

Acute inhalation toxicity: Acute toxicity estimate: > 10 mg/l
   Exposure time: 4 h
   Test atmosphere: dust/mist
   Method: Calculation method

Acute dermal toxicity: Acute toxicity estimate: > 5,000 mg/kg
   Method: Calculation method

Components:

butane:
   Acute inhalation toxicity: LC50 mouse: 1,237 mg/l
   Exposure time: 2 h
   LC50 rat: 1,355 mg/l

propan-2-ol:
   Acute oral toxicity: LD50 Oral rat: 4,396 mg/kg
   Method: Calculation method

propane:
   Acute inhalation toxicity: LC50 mouse: 1,237 mg/l
   Exposure time: 2 h
   LC50 rat: 658 mg/l
   Exposure time: 4 h
   LC50 rat: 1,355 mg/l

butane:
   Acute inhalation toxicity: LC50 mouse: 1,237 mg/l
   Exposure time: 2 h
   LC50 rat: 1,355 mg/l

propan-2-ol:
   Acute oral toxicity: LD50 Oral rat: 4,396 mg/kg
   Method: Calculation method

propane:
   Acute inhalation toxicity: LC50 mouse: 1,237 mg/l
   Exposure time: 2 h
LC50 rat: 658 mg/l
Exposure time: 4 h

LC50 rat: 1,355 mg/l

Skin corrosion/irritation

**Product:**
Remarks: Extremely corrosive and destructive to tissue.

Serious eye damage/eye irritation

**Product:**
Remarks: May cause irreversible eye damage.

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

butane:
propan-2-ol:
propane:
butane:
propan-2-ol:
propane:

STOT - single exposure

no data available

STOT - repeated exposure

no data available

Aspiration toxicity

no data available

Further information

**Product:**
Remarks: no data available

SECTION 12. ECOLOGICAL INFORMATION
Ecotoxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

**Product:**

Partition coefficient: \( n\)-octanol/water

**Components:**

butane

Partition coefficient: \( n\)-octanol/water

Remarks: no data available

Pow: 2.89

butane

Partition coefficient: \( n\)-octanol/water

Pow: 2.89

Mobility in soil

no data available

Other adverse effects

no data available

**Product:**

40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information: no data available

SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

**Waste from residues**

Dispose of in accordance with local regulations.

Do not contaminate ponds, waterways or ditches with chemical or used container.

The product should not be allowed to enter drains, water courses or the soil.

**Contaminated packaging**

Empty remaining contents.

Dispose of as unused product.

Do not re-use empty containers.

Do not burn, or use a cutting torch on, the empty drum.
SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA):
This material is not classified.

Transportation Regulation: IMDG (Vessel):
This material is not classified.

Transportation Regulation: IATA (Cargo Air):
This material is not classified.

Transportation Regulation: IATA (Passenger Air):
This material is not classified.

Transportation Regulation: TDG (Canada):
This material is not classified.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ammonia, anhydrous</td>
<td>7664-41-7</td>
<td>100</td>
<td>*</td>
</tr>
</tbody>
</table>

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
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<tr>
<td>ammonia, anhydrous</td>
<td>7664-41-7</td>
<td>100</td>
<td>*</td>
</tr>
</tbody>
</table>

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards

- Sudden Release of Pressure Hazard
- Acute Health Hazard

SARA 302

- The following components are subject to reporting levels established by SARA Title III, Section 302:
  - ammonia, anhydrous 7664-41-7 0.1396%

SARA 313

- SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

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

- methanol 67-56-1

The components of this product are reported in the following inventories:
SAFETY DATA SHEET
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TSCA
On TSCA Inventory

DSL
This product contains one or several components that are not on the
Canadian DSL nor NDSL.

AICS
On the inventory, or in compliance with the inventory

NZIoC
Not in compliance with the inventory

PICCS
Not in compliance with the inventory

IECSC
On the inventory, or in compliance with the inventory

Inventory Acronym and Validity Area Legend:
AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

NFPA:
Flammability
3

HMIS III:
HEALTH
3

FLAMMABILITY
0

PHYSICAL HAZARD
2

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High
4 = Extreme, * = Chronic

OSHA GHS Label Information:

Hazard pictograms : 

Signal word : Danger:

Hazard statements : Contains gas under pressure; may explode if heated. Causes severe skin burns and eye damage.

Precautionary statements :
Prevention: Do not breathe dust or mist. Wash skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Pressurized container: Do not pierce or burn, even after use.
Response: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ show er. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. 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 doctor/physician. Wash contaminated clothing before reuse.
Storage: Store locked up. Protect from sunlight. Store in a well-ventilated place. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
Disposal: Dispose of contents/container in accordance with local regulation.

Version: 1.0
We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. Users should make their own investigations to determine the suitability and applicability of the information for their particular purposes. This SDS has been prepared by the Compliance Services organization supporting this manufacturer, supplier or distributor.

Zep Inc. markets products under well recognized and established brand names such as Zep®, Zep Commercial®, Zep Professional®, Enforcer®, National Chemical™, Selig™, Misty®, Next Dimension™, Petro®, i-Chem®, TimeMist®, TimeWick™, MicrobeMax®, Country Vet®, Kont®, Original Bike Spirits®, Blue Coral®, Black Magic®, Rain-X®, Niagara National™, FC Forward Chemicals®, Rexodan®, Mykal™, and a number of private labeled brands.
SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name: Kia A/C Intake Refresher / Part #UM090 CH035
Material number: 000000000504200008

Manufacturer or supplier's details
Company: Zep Inc.
Address: 1310 Seaboard Industrial Blvd., NW
Atlanta, GA 30318
Telephone: 404-352-1680

Emergency telephone numbers
For SDS Information: Compliance Services 1-877-428-9937
For a Medical Emergency: 877-541-2016 Toll Free - All Calls Recorded

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<td>colourless</td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic</td>
</tr>
</tbody>
</table>

GHS Classification

<table>
<thead>
<tr>
<th>Gases under pressure</th>
<th>Liquefied gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye irritation</td>
<td>Category 2A</td>
</tr>
</tbody>
</table>

GHS Label element

<table>
<thead>
<tr>
<th>Hazard pictograms</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal word</td>
<td>Warning</td>
</tr>
<tr>
<td>Hazard statements</td>
<td>H280 Contains gas under pressure; may explode if heated. H319 Causes serious eye irritation.</td>
</tr>
<tr>
<td>Precautionary statements</td>
<td><strong>Prevention:</strong> P264 Wash skin thoroughly after handling. P280 Wear eye protection/face protection. <strong>Response:</strong> 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 advice/attention.</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

AJ2404 KIA INTAKE REFRESHER 6n4

Version 1.0  Revision Date 04/27/2015  Print Date 08/13/2015

Storage:
P410 + P403 Protect from sunlight. Store in a well-ventilated place.

Potential Health Effects

Carcinogenicity:
IARC  No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH  No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
OSHA  No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP  No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>propan-2-ol</td>
<td>67-63-0</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>1,1-difluoroethane</td>
<td>75-37-6</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td>sodium nitrite</td>
<td>7632-00-0</td>
<td>&gt;= 0.1 - &lt; 1</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

General advice: Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled: If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact: Take off contaminated clothing and shoes immediately.
If symptoms persist, call a physician.
Wash off immediately with plenty of water for at least 15 minutes.

In case of eye contact: Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
If in eyes, rinse with water for 15 minutes.

If swallowed: Keep respiratory tract clear.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media: Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical
Water spray jet

Unsuitable extinguishing media: High volume water jet

Specific hazards during firefighting: Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products: Carbon dioxide (CO2)
Carbon monoxide
Smoke
Fluorine compounds

Specific extinguishing methods: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information: Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions: Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Sweep up or vacuum up spillage and collect in suitable container for disposal.
SAFETY DATA SHEET

AJ2404 KIA INTAKE REFRESHER 6n4

Version 1.0  Revision Date 04/27/2015  Print Date 08/13/2015

SECTION 7. HANDLING AND STORAGE

Advice on safe handling: Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the
application area.
Take precautionary measures against static discharges.
Provide sufficient air exchange and/or exhaust in work rooms.
Always replace cap after use.
Dispose of rinse water in accordance with local and national
regulations.
Do not breathe vapours or spray mist.

Conditions for safe storage: BEWARE: Aerosol is pressurized. Keep away from direct sun
exposure and temperatures over 50 °C. Do not open by force
or throw into fire even after use. Do not spray on flames or
red-hot objects.
No smoking.
Containers which are opened must be carefully resealed and
kept upright to prevent leakage.
Observe label precautions.
Keep in a dry, cool and well-ventilated place.
Electrical installations / working materials must comply with
the technological safety standards.

Materials to avoid: Do not store near acids.
Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
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<td></td>
<td>STEL</td>
<td>400 ppm 980 mg/m3</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ST</td>
<td>500 ppm 1,225 mg/m3</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>400 ppm 980 mg/m3</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>400 ppm 980 mg/m3</td>
<td>OSHA P0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>500 ppm 1,225 mg/m3</td>
<td>OSHA P0</td>
</tr>
<tr>
<td>1,1-difluoroethane</td>
<td>75-37-6</td>
<td>TWA</td>
<td>1,000 ppm</td>
<td>US WEEL</td>
</tr>
</tbody>
</table>

Biological occupational exposure limits

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROPAN-2-OL</td>
<td>67-63-0</td>
<td>Acetone</td>
<td>Urine</td>
<td>End of shift at</td>
<td>40 mg/l</td>
<td>ACGIH BEI</td>
</tr>
</tbody>
</table>
Personal protective equipment

Respiratory protection: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Hand protection
Remarks: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection: Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.
Ensure that eyewash stations and safety showers are close to the workstation location.

Skin and body protection: impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures: When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Aerosol containing a liquefied gas

Colour: colourless
Odour: characteristic
Odour Threshold: no data available
pH: no data available
Melting point/freezing point: no data available
Boiling point: 82.2 - 100 °C
Flash point: not applicable
Evaporation rate: no data available
Flammability (solid, gas): Not classified as a flammability hazard

Upper explosion limit: no data available
Lower explosion limit: no data available
Vapour pressure: no data available
Density: 0.95 g/cm3
Solubility(ies):
Water solubility: partly soluble
Partition coefficient: n-octanol/water: no data available
Auto-ignition temperature: not determined
Thermal decomposition: no data available
Viscosity
Viscosity, kinematic: no data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity: Stable
Chemical stability: Stable under normal conditions.
Possibility of hazardous reactions: No decomposition if stored and applied as directed.
Conditions to avoid: Heat, flames and sparks. Extremes of temperature and direct sunlight.
Incompatible materials: Acids
Strong oxidizing agents
Hazardous decomposition products: Carbon oxides
Nitrogen oxides (NOx)
Hydrocarbons
Smoke

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:
Acute oral toxicity: Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Acute dermal toxicity: Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Components:
propan-2-ol:
Acute oral toxicity: LD50 Oral rat: 4,396 mg/kg
Method: Calculation method

1,1-difluoroethane:
Acute inhalation toxicity: LC50 mouse: 977,000 mg/l
Exposure time: 2 h
Skin corrosion/irritation

**Product:**
Remarks: May cause skin irritation in susceptible persons.

Serious eye damage/eye irritation

**Product:**
Remarks: Severe eye irritation

Respiratory or skin sensitisation
no data available

Germ cell mutagenicity
no data available

Carcinogenicity
no data available

Reproductive toxicity
no data available

- propan-2-ol:
- 1,1-difluoroethane:
- sodium nitrite:

STOT - single exposure
no data available

STOT - repeated exposure
no data available

Aspiration toxicity
no data available

Further information

**Product:**
Remarks: no data available

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**SECTION 12. ECOLOGICAL INFORMATION**

Ecotoxicity
no data available

**Persistence and degradability**
no data available

Bioaccumulative potential
Product:
Partition coefficient: n-octanol/water = Remarks: no data available

Mobility in soil
no data available

Other adverse effects
no data available

Product:
Regulation 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste from residues: The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Dispose of in accordance with local regulations.

Contaminated packaging: Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA):
This material is not classified.

Transportation Regulation: IMDG (Vessel):
This material is not classified.

Transportation Regulation: IATA (Cargo Air):
This material is not classified.

Transportation Regulation: IATA (Passenger Air):
This material is not classified.
SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium nitrite</td>
<td>7632-00-0</td>
<td>100</td>
<td>*</td>
</tr>
</tbody>
</table>

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards

- Sudden Release of Pressure Hazard
- Acute Health Hazard

SARA 302

- SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313

- SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

- WARNING! This product contains a chemical known to the State of California to cause cancer.
- biphenyl-2-ol 90-43-7
  - WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
- methanol 67-56-1

The components of this product are reported in the following inventories:

- TSCA On TSCA Inventory
- DSL This product contains the following components that are not on the Canadian DSL nor NDSL
- AICS Not in compliance with the inventory
- NZIoC Not in compliance with the inventory
- PICCS Not in compliance with the inventory
- IECSC Not in compliance with the inventory

Inventory Acronym and Validity Area Legend:

- AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)
SECTION 16. OTHER INFORMATION

Further information

NFPA: Flammability

<table>
<thead>
<tr>
<th>3</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Health</td>
</tr>
<tr>
<td></td>
<td>Instability</td>
</tr>
</tbody>
</table>

Special hazard.

HMIS III:

- **HEALTH**: 3
- **FLAMMABILITY**: 0
- **PHYSICAL HAZARD**: 2

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

OSHA GHS Label Information:

- **Signal word**: Warning
- **Hazard statements**: Contains gas under pressure; may explode if heated. Causes serious eye irritation.
- **Precautionary statements**: Prevention: Wash skin thoroughly after handling. Wear eye protection/face protection.
  Response: 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.
  Storage: Protect from sunlight. Store in a well-ventilated place.

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