

1. Identification

| | |
|---|---|
| Product identifier | Soak-N-Solv (4162-77) |
| Other means of identification | Not available. |
| Recommended use | HVACR Component Restoring Solution |
| Recommended restrictions | None known. |
| Manufacturer/Importer/Supplier/Distributor information | |
| Manufacturer | |
| Company name | Nu-Calgon |
| Address | 2611 Schuetz Road St. Louis, MO 63043 United States |
| Telephone | 314-469-7000 / 800-554-5499 |
| E-mail | Not available. |
| Emergency phone number | 1-800-424-9300 (CHEMTREC) |
| Supplier | See above. |

2. Hazard identification

| | | |
|-----------------------------------|-------------------|------------|
| Physical hazards | Flammable liquids | Category 2 |
| Health hazards | Not classified. | |
| Environmental hazards | Not classified. | |
| WHMIS 2015 defined hazards | Not classified | |
| Label elements | | |



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|--|---|
| Signal word | Danger |
| Hazard statement | Highly flammable liquid and vapor. |
| Precautionary statement | |
| Prevention | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating and lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Wear protective gloves, protective clothing, eye protection and face protection. |
| Response | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. In case of fire: Use appropriate media to extinguish. |
| Storage | Store in a well-ventilated place. Keep cool. |
| Disposal | Dispose of container in accordance with local, regional, national and international regulations. |
| WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC) | None known |
| WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC) | None known |
| Hazard(s) not otherwise classified (HNOC) | None known. |
| Supplemental information | None. |

3. Composition/Information on ingredients

Mixture

| Chemical name | Common name and synonyms | CAS number | % |
|---------------|--------------------------|------------|---------|
| Acetone | | 67-64-1 | 3-7* |
| Methylal | | 109-87-5 | 80-100* |

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

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.

*CANADA GHS: The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

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|---|---|
| Inhalation | If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention. |
| Skin contact | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. |
| Eye contact | Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists. |
| Ingestion | Rinse mouth. Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious or is convulsing. Obtain medical attention. |
| Most important symptoms/effects, acute and delayed | Direct contact with eyes may cause temporary irritation. |
| Indication of immediate medical attention and special treatment needed | Provide general supportive measures and treat symptomatically. |
| General information | Take off all contaminated clothing immediately. If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse. Avoid contact with eyes and skin. Keep out of reach of children. |

5. Fire-fighting measures

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| Suitable extinguishing media | Alcohol resistant foam. Dry chemical powder. Carbon dioxide. |
| Unsuitable extinguishing media | Do not use water jet as an extinguisher, as this will spread the fire. |
| Specific hazards arising from the chemical | Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed. |
| Special protective equipment and precautions for firefighters | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| Fire-fighting equipment/instructions | In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. |
| Specific methods | Use standard firefighting procedures and consider the hazards of other involved materials. |
| General fire hazards | Highly flammable liquid and vapor. |
| Hazardous combustion products | May include and are not limited to: Oxides of carbon. |

6. Accidental release measures

| | |
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| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. 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. |
| Methods and materials for containment and cleaning up | Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. This product is miscible in water. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination. |
| Environmental precautions | Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground. Do not discharge into lakes, streams, ponds or public waters. |

7. Handling and storage

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| Precautions for safe handling | Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Avoid contact with eyes, skin and clothing. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid prolonged exposure. Wear appropriate personal protective equipment. Wash thoroughly after handling. Use good industrial hygiene practices in handling this material. When using do not eat or drink. |
| Conditions for safe storage, including any incompatibilities | Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children. |

8. Exposure controls/Personal protection

Occupational exposure limits

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

| Components | Type | Value |
|-------------------------|------|------------------------------------|
| Acetone (CAS 67-64-1) | STEL | 1800 mg/m ³ 750 ppm |
| | TWA | 1200 mg/m ³ 500 ppm |
| Methylal (CAS 109-87-5) | TWA | 3110 mg/m ³ 1000 ppm |

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

| Components | Type | Value |
|-------------------------|------|----------|
| Acetone (CAS 67-64-1) | STEL | 500 ppm |
| | TWA | 250 ppm |
| Methylal (CAS 109-87-5) | STEL | 1250 ppm |
| | TWA | 1000 ppm |

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

| Components | Type | Value |
|-------------------------|------|----------|
| Acetone (CAS 67-64-1) | STEL | 500 ppm |
| | TWA | 250 ppm |
| Methylal (CAS 109-87-5) | TWA | 1000 ppm |

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

| Components | Type | Value |
|-------------------------|------|----------|
| Acetone (CAS 67-64-1) | STEL | 500 ppm |
| | TWA | 250 ppm |
| Methylal (CAS 109-87-5) | TWA | 1000 ppm |

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

| Components | Type | Value |
|-------------------------|------|------------------------------------|
| Acetone (CAS 67-64-1) | STEL | 2380 mg/m ³ 1000 ppm |
| | TWA | 1190 mg/m ³ 500 ppm |
| Methylal (CAS 109-87-5) | TWA | 3110 mg/m ³ 1000 ppm |

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

| Components | Type | Value |
|-------------------------|-----------|----------|
| Acetone (CAS 67-64-1) | 15 minute | 750 ppm |
| | 8 hour | 500 ppm |
| Methylal (CAS 109-87-5) | 15 minute | 1250 ppm |
| | 8 hour | 1000 ppm |

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

| Components | Type | Value |
|-------------------------|------|------------------------------------|
| Acetone (CAS 67-64-1) | PEL | 2400 mg/m ³ 1000 ppm |
| Methylal (CAS 109-87-5) | PEL | 3100 mg/m ³ 1000 ppm |

US. ACGIH Threshold Limit Values

| Components | Type | Value |
|-------------------------|------|----------|
| Acetone (CAS 67-64-1) | STEL | 500 ppm |
| | TWA | 250 ppm |
| Methylal (CAS 109-87-5) | TWA | 1000 ppm |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value |
|-------------------------|------|------------------------------------|
| Acetone (CAS 67-64-1) | TWA | 590 mg/m ³ 250 ppm |
| Methylal (CAS 109-87-5) | TWA | 3100 mg/m ³ 1000 ppm |

Biological limit values**ACGIH Biological Exposure Indices**

| Components | Value | Determinant | Specimen | Sampling Time |
|-----------------------|---------|-------------|----------|---------------|
| Acetone (CAS 67-64-1) | 25 mg/L | Acetone | Urine | * |

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

Appropriate engineering controls

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.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Impervious gloves. Confirm with reputable supplier first.

Other Wear appropriate chemical resistant clothing. As required by employer code.

Respiratory protection

Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2).

Thermal hazards

Not applicable.

General hygiene considerations

When using do not 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. When using do not eat or drink.

9. Physical and chemical properties

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|--|-------------------------------------|
| Appearance | Liquid |
| Physical state | Liquid. |
| Form | Liquid. |
| Color | Colorless |
| Odor | Characteristic |
| Odor threshold | Not available. |
| pH | Not available. |
| Melting point/freezing point | -156.64 °F (-104.8 °C) |
| Initial boiling point and boiling range | 108.14 °F (42.3 °C) |
| Pour point | Not available. |
| Specific gravity | Not available. |
| Partition coefficient (n-octanol/water) | Not available. |
| Flash point | > -22.0 °F (> -30.0 °C) (ASTM D 93) |

| | |
|---|---|
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not applicable. |
| Upper/lower flammability or explosive limits | |
| Explosive limit - lower (%) | 2.2 |
| Explosive limit - upper (%) | 71 |
| Vapor pressure | 40 kPa |
| Vapor density | 2.6 |
| Relative density | 0.861 (20°C) |
| Solubility(ies) | 330 g/l (20°C) |
| Auto-ignition temperature | 500 °F (260 °C) |
| Decomposition temperature | Not available. |
| Viscosity | 0.37 mm ² /s Kinematic 3.25 mPa·s Dynamic |
| Other information | |
| Explosive properties | Not explosive. |
| Oxidizing properties | Not oxidizing. |

10. Stability and reactivity

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|---|---|
| Reactivity | This product may react with strong oxidizing agents. |
| Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use. |
| Chemical stability | Material is stable under normal conditions. |
| Conditions to avoid | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Do not mix with other chemicals. |
| Incompatible materials | Acids. Strong oxidizing agents. |
| Hazardous decomposition products | May include and are not limited to: Oxides of carbon. |

11. Toxicological information

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|---|--|
| Routes of exposure | Eye, Skin contact, Inhalation, Ingestion. |
| Information on likely routes of exposure | |
| Ingestion | May cause stomach distress, nausea or vomiting. |
| Inhalation | Prolonged inhalation may be harmful. |
| Skin contact | No adverse effects due to skin contact are expected. |
| Eye contact | Direct contact with eyes may cause temporary irritation. |
| Symptoms related to the physical, chemical and toxicological characteristics | Direct contact with eyes may cause temporary irritation. |

Information on toxicological effects

Acute toxicity

| Components | Species | Test Results |
|-------------------------|---------|---|
| Acetone (CAS 67-64-1) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | > 15800 mg/kg, Health Canada (HSA) |
| <i>Inhalation</i> | | |
| LC50 | Rat | 76 mg/l/4h, Health Canada (HSA) |
| <i>Oral</i> | | |
| LD50 | Rat | 5800 mg/kg, Health Canada (HSA) |
| Methylal (CAS 109-87-5) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | > 5000 mg/kg, 24 Hours, ECHA |
| <i>Inhalation</i> | | |
| LC50 | Mouse | 57000 mg/m ³ , 7 Hours, ECHA |

| Components | Species | Test Results |
|---|--|------------------|
| <i>Oral</i> LD50 | Rat | 6423 mg/kg, ECHA |
| Skin corrosion/irritation | Prolonged skin contact may cause temporary irritation. | |
| Exposure minutes | Not available. | |
| Erythema value | Not available. | |
| Oedema value | Not available. | |
| Serious eye damage/eye irritation | Direct contact with eyes may cause temporary 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. | |
| Respiratory or skin sensitization | | |
| Respiratory sensitization | Not a respiratory sensitizer. | |
| Skin sensitization | This product is not expected to cause skin sensitization. | |
| Mutagenicity | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. | |
| Carcinogenicity | See below. | |
| OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052) | Not listed. | |
| Reproductive toxicity | This product is not expected to cause reproductive or developmental effects. | |
| Teratogenicity | Not available. | |
| Specific target organ toxicity - single exposure | Not classified. | |
| Specific target organ toxicity - repeated exposure | Not classified. | |
| Aspiration hazard | Not an aspiration hazard. | |
| Chronic effects | Prolonged inhalation may be harmful. | |

12. Ecological information

| | | | |
|--------------------------------------|---|--|------------------------------|
| Ecotoxicity | See below | | |
| Ecotoxicological data | | | |
| Components | Species | Test Results | |
| Acetone (CAS 67-64-1) | | | |
| Crustacea | EC50 | Daphnia | 13999 mg/L, 48 Hours |
| Aquatic | | | |
| Crustacea | EC50 | Water flea (Daphnia magna) | 10294 - 17704 mg/L, 48 hours |
| Fish | LC50 | Rainbow trout, donaldson trout (Oncorhynchus mykiss) | 4740 - 6330 mg/L, 96 hours |
| Methylal (CAS 109-87-5) | | | |
| Aquatic | | | |
| Fish | LC50 | Fathead minnow (Pimephales promelas) | 6261 - 7801 mg/L, 96 hours |
| Persistence and degradability | No data is available on the degradability of any ingredients in the mixture. | | |
| Bioaccumulative potential | | | |
| Mobility in soil | No data available. | | |
| Mobility in general | Not available. | | |
| Other adverse effects | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component. | | |

13. Disposal considerations

| | |
|-----------------------------------|--|
| Disposal instructions | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Local disposal regulations | Dispose in accordance with all applicable regulations. |

| | |
|--|--|
| Hazardous waste code | The waste code should be assigned in discussion between the user, the producer and the waste disposal company. |
| Waste from residues / unused products | 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 | Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. |

14. Transport information

Transport of Dangerous Goods (TDG) Proof of Classification Classification Method: Classified as per Part 2, Sections 2.1 – 2.8 of the Transportation of Dangerous Goods Regulations. If applicable, the technical name and the classification of the product will appear below.

U.S. Department of Transportation (DOT)

Basic shipping requirements:

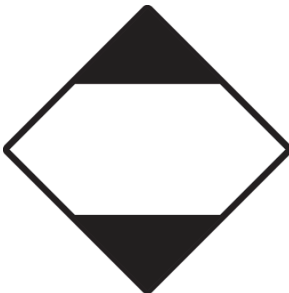
| | |
|-----------------------------|---------------------------------|
| UN number | UN1993 |
| Proper shipping name | Flammable liquids, n.o.s. |
| Technical name | Methylal |
| Technical name | Acetone |
| Hazard class | Limited Quantity - US |
| Packing group | II |
| Packaging exceptions | <0.3 Gallons - Limited Quantity |

Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

| | |
|-----------------------------|---------------------------|
| UN number | UN1993 |
| Proper shipping name | FLAMMABLE LIQUID, N.O.S. |
| Technical name | Methylal |
| Technical name | Acetone |
| Hazard class | Limited Quantity - Canada |
| Packing group | II |
| Packaging exceptions | <1L - Limited Quantity |

DOT; TDG



15. Regulatory information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

| | |
|-----------------------|---------|
| Acetone (CAS 67-64-1) | Class B |
|-----------------------|---------|

WHMIS 2015 Exemptions Not applicable

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

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

| | |
|-------------------------|---------|
| Acetone (CAS 67-64-1) | Listed. |
| Methylal (CAS 109-87-5) | Listed. |

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance No
Classified hazard categories Flammable (gases, aerosols, liquids, or solids)
SARA 313 (TRI reporting) Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
 Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
 Not regulated.

US state regulations See below

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

Acetone (CAS 67-64-1) Listed.
 Methylal (CAS 109-87-5) Listed.

US - Illinois Chemical Safety Act: Listed substance

Acetone (CAS 67-64-1)
 Methylal (CAS 109-87-5)

US - Louisiana Spill Reporting: Listed substance

Acetone (CAS 67-64-1) Listed.
 Methylal (CAS 109-87-5) Listed.

US - Minnesota Haz Subs: Listed substance

Acetone (CAS 67-64-1) Listed.
 Methylal (CAS 109-87-5) Listed.

US - Texas Effects Screening Levels: Listed substance

Acetone (CAS 67-64-1) Listed.
 Methylal (CAS 109-87-5) Listed.

US. Massachusetts RTK - Substance List

Acetone (CAS 67-64-1)
 Methylal (CAS 109-87-5)

US. New Jersey Worker and Community Right-to-Know Act

Acetone (CAS 67-64-1)
 Methylal (CAS 109-87-5)

US. Pennsylvania Worker and Community Right-to-Know Law

Acetone (CAS 67-64-1)
 Methylal (CAS 109-87-5)

US. Rhode Island RTK

Acetone (CAS 67-64-1)
 Methylal (CAS 109-87-5)

US. California Proposition 65

Not Listed.

Inventory status

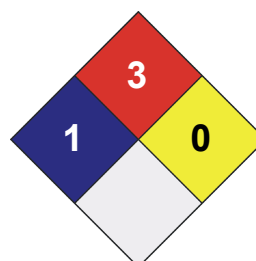
| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|---|------------------------|
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory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

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

16. Other information

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

| | |
|----------------------------|-----|
| HEALTH | / 1 |
| FLAMMABILITY | 3 |
| PHYSICAL HAZARD | 0 |
| PERSONAL PROTECTION | X |



Disclaimer

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Issue date

28-July-2020

Version #

02

Effective date

04-May-2020

Prepared by

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

Further information

Not available.

Other information

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