1. Identification

Product identifier: NARSPRAY M-77 US

Other means of identification:
- Brand Code: 691A

Recommended use: For Industrial Use Only

Recommended restrictions: None known.

Manufacturer/Supplier information

Manufacturer:
- Company name: HarbisonWalker International
- Address: 1305 Cherrington Parkway, Suite 100, Moon Township, Pennsylvania 15108 US
- Telephone: General Phone: 412-375-6600
- Website: www.thinkHWI.com
- Emergency phone number: CHEMTREC 24 HOUR
  - EMERGENCY #: 1-800-424-9300

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards:
- Skin corrosion/irritation: Category 1
- Serious eye damage/eye irritation: Category 1

Environmental hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements

Signal word: Danger

Hazard statement: Causes severe skin burns and eye damage. Causes serious eye damage.

Precautionary statement:


Response: If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. 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/doctor. Wash contaminated clothing before reuse.

Storage: Store locked up.

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

Hazard(s) not otherwise classified (HNOC): None known.

Supplemental information: None.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium Oxide</td>
<td></td>
<td>1309-48-4</td>
<td>60 - 80</td>
</tr>
<tr>
<td>Fumes, Silica</td>
<td></td>
<td>69012-64-2</td>
<td>2.5 - 10</td>
</tr>
<tr>
<td>Calcium Oxide</td>
<td></td>
<td>1305-78-8</td>
<td>1 - 2.5</td>
</tr>
</tbody>
</table>
## Chemical composition

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cellulose</td>
<td></td>
<td>9004-34-6</td>
<td>1 - 2.5</td>
</tr>
<tr>
<td>Expanded Perlite</td>
<td></td>
<td>93763-70-3</td>
<td>1 - 2.5</td>
</tr>
<tr>
<td>Silicon Dioxide</td>
<td></td>
<td>7631-86-9</td>
<td>1 - 2.5</td>
</tr>
<tr>
<td>Aluminium Oxide (Non-Fibrous)</td>
<td></td>
<td>1344-28-1</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td>Chromium</td>
<td></td>
<td>7440-47-3</td>
<td>0 - 0.1</td>
</tr>
<tr>
<td>Nickel</td>
<td></td>
<td>7440-02-0</td>
<td>0 - 0.1</td>
</tr>
</tbody>
</table>

Other components below reportable levels: 20 - 40

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

## 4. First-aid measures

### Inhalation
Move to fresh air. Call a physician if symptoms develop or persist.

### Skin contact
Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

### Eye contact
Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

### Ingestion
Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

### Most important symptoms/effects, acute and delayed
Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Coughing.

### Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

### General information
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

### Suitable extinguishing media
Use fire-extinguishing media appropriate for surrounding materials.

### Unsuitable extinguishing media
Not available.

### Specific hazards arising from the chemical
Not applicable.

### Special protective equipment and precautions for firefighters
Not available.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. 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
Stop the flow of material, if this is without risk. Absorb in vermiculite, dry sand or earth and place into containers. Collect dust using a vacuum cleaner equipped with HEPA filter.

#### Large Spills:
Wet down with water and dike for later disposal. Shovel the material into waste container. Avoid the generation of dusts during clean-up. Following product recovery, flush area with water.

#### Small Spills:
Sweep up or vacuum up spillage and collect in suitable container for disposal. Wipe up with absorbent material (e.g. cloth, fleece). 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.
7. Handling and storage

Precautions for safe handling
Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities
Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)</th>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium Oxide (CAS 1305-78-8)</td>
<td>PEL</td>
<td>5 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cellulose (CAS 9004-34-6)</td>
<td>PEL</td>
<td>5 mg/m³ Respirable fraction.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium (CAS 7440-47-3)</td>
<td>PEL</td>
<td>1 mg/m³ Total dust.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnesium Oxide (CAS 1309-48-4)</td>
<td>PEL</td>
<td>15 mg/m³ Total particulate.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nickel (CAS 7440-02-0)</td>
<td>PEL</td>
<td>1 mg/m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. OSHA Table Z-3 (29 CFR 1910.1000)</th>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fumes, Silica (CAS 69012-64-2)</td>
<td>TWA</td>
<td>0.8 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Silicon Dioxide (CAS 7631-86-9)</td>
<td>TWA</td>
<td>20 mppcf</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. ACGIH Threshold Limit Values</th>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium Oxide (CAS 1305-78-8)</td>
<td>TWA</td>
<td>2 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cellulose (CAS 9004-34-6)</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium (CAS 7440-47-3)</td>
<td>TWA</td>
<td>0.5 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnesium Oxide (CAS 1309-48-4)</td>
<td>TWA</td>
<td>10 mg/m³ Inhalable fraction.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nickel (CAS 7440-02-0)</td>
<td>TWA</td>
<td>1.5 mg/m³ Inhalable fraction.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. NIOSH: Pocket Guide to Chemical Hazards</th>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium Oxide (CAS 1305-78-8)</td>
<td>TWA</td>
<td>2 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cellulose (CAS 9004-34-6)</td>
<td>TWA</td>
<td>5 mg/m³ Respirable.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium (CAS 7440-47-3)</td>
<td>TWA</td>
<td>0.5 mg/m³ Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expanded Perlite (CAS 93763-70-3)</td>
<td>TWA</td>
<td>5 mg/m³ Respirable.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fumes, Silica (CAS 69012-64-2)</td>
<td>TWA</td>
<td>10 mg/m³ Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nickel (CAS 7440-02-0)</td>
<td>TWA</td>
<td>0.015 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silicon Dioxide (CAS 7631-86-9)</td>
<td>TWA</td>
<td>6 mg/m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Biological limit values
No biological exposure limits noted for the ingredient(s).
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. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

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

Skin protection
Hand protection
Wear appropriate chemical resistant gloves.

Other
Wear appropriate chemical resistant clothing.

Respiratory protection
Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations
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.

9. Physical and chemical properties

Appearance

Physical state
Solid.

Form
Solid Powder.

Color
Not available.

Odor
Not available.

Odor threshold
Not available.

pH
Not available.

Melting point/freezing point
Not available.

Initial boiling point and boiling range
Not available.

Flash point
Not available.

Evaporation rate
Not available.

Flammability (solid, gas)
Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)
Not available.

Flammability limit - upper (%)
Not available.

Explosive limit - lower (%)
Not available.

Explosive limit - upper (%)
Not available.

Vapor pressure
Not available.

Vapor density
Not available.

Relative density
Not available.

Solubility(ies)

Solubility (water)
Not available.

Partition coefficient (n-octanol/water)
Not available.

Auto-ignition temperature
Not available.

Decomposition temperature
Not available.

Viscosity
Not available.

10. Stability and reactivity

Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability
Material is stable under normal conditions.

Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.

Conditions to avoid
Contact with incompatible materials.

Incompatible materials
Phosphorus, Chlorine.
Incompatibility is based strictly upon potential theoretical reactions between chemicals and may not be specific to industrial application exposure. Contact your sales representative for clarification.

Hazardous decomposition products
No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
Dust may irritate respiratory system. Prolonged inhalation may be harmful.

Skin contact
Causes severe skin burns.

Eye contact
Causes serious eye damage.

Ingestion
Causes digestive tract burns.

Symptoms related to the physical, chemical and toxicological characteristics
Burning pain and severe corrosive skin damage. Causes serious eye damage. Dusts may irritate the respiratory tract, skin and eyes. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Coughing.

Information on toxicological effects

Acute toxicity
Not available.

Skin corrosion/irritation
Causes severe skin burns and eye damage.

Serious eye damage/eye irritation
Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization
Not a respiratory sensitizer.

Skin sensitization
This product is not expected to cause skin sensitization.

Germ cell mutagenicity
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity
This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium</td>
<td>3 Not classifiable as to carcinogenicity to humans.</td>
</tr>
<tr>
<td>Fumes, Silica</td>
<td>3 Not classifiable as to carcinogenicity to humans.</td>
</tr>
<tr>
<td>Nickel</td>
<td>2B Possibly carcinogenic to humans.</td>
</tr>
<tr>
<td>Silicon Dioxide</td>
<td>3 Not classifiable as to carcinogenicity to humans.</td>
</tr>
</tbody>
</table>

US. National Toxicology Program (NTP) Report on Carcinogens

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel (CAS 7440-02-0)</td>
<td>Reasonably Anticipated to be a Human Carcinogen.</td>
</tr>
</tbody>
</table>

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

Reproductive toxicity
This product is not expected to cause reproductive or developmental effects.

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
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability
No data is available on the degradability of this product.

Bioaccumulative potential
No data available.

Mobility in soil
No data 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

This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

Hazardous waste code

Not applicable.

Waste from residues / unused products

Not available.

Contaminated packaging

Not available.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. One or more components are not listed on TSCA. All chemical substances in this product are listed on the TSCA chemical substance inventory where required.

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Chromium (CAS 7440-47-3) Listed.
Nickel (CAS 7440-02-0) Listed.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

No

SARA 313 (TRI reporting)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>% by wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel</td>
<td>7440-02-0</td>
<td>0 - 0.1</td>
</tr>
</tbody>
</table>

Other federal regulations

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

Chromium (CAS 7440-47-3)
Nickel (CAS 7440-02-0)

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

Not regulated.
US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)
Not listed.

US. Massachusetts RTK - Substance List
- Calcium Oxide (CAS 1305-78-8)
- Cellulose (CAS 9004-34-6)
- Chromium (CAS 7440-47-3)
- Expanded Perlite (CAS 93763-70-3)
- Fumes, Silica (CAS 69012-64-2)
- Magnesium Oxide (CAS 1309-48-4)
- Nickel (CAS 7440-02-0)
- Silicon Dioxide (CAS 7631-86-9)

US. New Jersey Worker and Community Right-to-Know Act
- Calcium Oxide (CAS 1305-78-8)
- Cellulose (CAS 9004-34-6)
- Chromium (CAS 7440-47-3)
- Expanded Perlite (CAS 93763-70-3)
- Fumes, Silica (CAS 69012-64-2)
- Magnesium Oxide (CAS 1309-48-4)
- Nickel (CAS 7440-02-0)
- Silicon Dioxide (CAS 7631-86-9)

US. Pennsylvania Worker and Community Right-to-Know Law
- Calcium Oxide (CAS 1305-78-8)
- Cellulose (CAS 9004-34-6)
- Chromium (CAS 7440-47-3)
- Expanded Perlite (CAS 93763-70-3)
- Fumes, Silica (CAS 69012-64-2)
- Magnesium Oxide (CAS 1309-48-4)
- Nickel (CAS 7440-02-0)
- Silicon Dioxide (CAS 7631-86-9)

US. Rhode Island RTK
- Chromium (CAS 7440-47-3)
- Nickel (CAS 7440-02-0)

US. California Proposition 65
WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance
- Nickel (CAS 7440-02-0) Listed: October 1, 1989
- Quartz (SiO2) (CAS 14808-60-7) Listed: October 1, 1988
- Titanium Dioxide (CAS 13463-67-7) Listed: September 2, 2011

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
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<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
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<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
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<td>New Zealand</td>
<td>New Zealand Inventory</td>
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<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

*"A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).
16. Other information, including date of preparation or last revision

<table>
<thead>
<tr>
<th>Issue date</th>
<th>05-22-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version #</td>
<td>01</td>
</tr>
<tr>
<td>Disclaimer</td>
<td>This information is based on our present knowledge on creation date. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.</td>
</tr>
</tbody>
</table>
| Revision Information | Ecological Information: Ecotoxicity  
Transport Information: Material Transportation Information |