SAFETY DATA SHEET

1. Identification

Product identifier: SUPER NARTAR R

Other means of identification

Brand Code: 8720

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 1-800-424-9300

2. Hazard(s) identification

Classified hazards

This item is defined as an article per OSHA (29 CFR 1910.1200) and is therefore exempt from labeling. A Safety Data Sheet is available.

This item is not hazardous per OSHA 29 CFR 1910.1200(c). However, individual customer processes (such as grinding, sawing, or blasting) may result in the formation of dust that may present health hazards. May cause respiratory irritation, lung injury, or cancer by inhalation. Limit skin contact. Wash hands after handling. Dispose of waste and residues in accordance with local authority requirements. Wear protective gloves/protective clothing/eye protection. Dust may cause cancer.

Label elements

This item is defined as an article per OSHA (29 CFR 1910.1200) and is therefore exempt from labeling. A Safety Data Sheet is available.

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Hazard(s) not otherwise classified (HNOC)

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This item is not hazardous per OSHA 29 CFR 1910.1200(c). However, individual customer processes (such as grinding, sawing, or blasting) may result in the formation of dust that may present health hazards. May cause respiratory irritation, lung injury, or cancer by inhalation. Limit skin contact. Wash hands after handling. Dispose of waste and residues in accordance with local authority requirements. Wear protective gloves/protective clothing/eye protection. Dust may cause cancer.

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>90 - 100</td>
</tr>
<tr>
<td>Formaldehyde, Oligomeric Reaction Products</td>
<td></td>
<td>9003-35-4</td>
<td>2.5 - 10</td>
</tr>
<tr>
<td>Aluminium</td>
<td></td>
<td>7429-90-5</td>
<td>1 - 2.5</td>
</tr>
<tr>
<td>Carbon Black</td>
<td></td>
<td>1333-86-4</td>
<td>1 - 2.5</td>
</tr>
<tr>
<td>Graphite</td>
<td></td>
<td>7782-42-5</td>
<td>1 - 2.5</td>
</tr>
</tbody>
</table>

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

Inhalation
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or
artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance.
Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other
proper respiratory medical device. Call a POISON CENTER or doctor/physician.

Skin contact
Take off immediately all contaminated clothing. Wash off with soap and water. Get medical
advice/attention if you feel unwell. Get medical attention if irritation develops and persists. 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. Get medical attention if irritation
develops and persists.

Ingestion
Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Get medical advice/attention if you feel unwell.

Most important
symptoms/effects, acute and
delayed
Coughing.

Indication of immediate
medical attention and special
treatment needed
Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim
under observation. Symptoms may be delayed.

General information
Take off immediately all contaminated clothing. If concerned: Get medical advice. Ensure that
medical personnel are aware of the material(s) involved, and take precautions to protect
themselves. Show this safety data sheet to the doctor in attendance.

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. Avoid inhalation of dust. 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
Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Stop the flow of
material, if this is without risk. Cover with plastic sheet to prevent spreading. Absorb in vermiculite,
dry sand or earth and place into containers.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste
container. Prevent product from entering drains. 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.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions
Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid
discharge into drains, water courses or onto the ground. Inform appropriate managerial or
supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling
Obtain special instructions before use. Do not handle until all safety precautions have been read
and understood. Minimize dust generation and accumulation. Avoid breathing dust. Avoid contact
with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using,
do not eat, drink or smoke. Should be handled in closed systems, if possible. Use only outdoors or in
a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly
after handling. Avoid release to the environment. Wash contaminated clothing before reuse.
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

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium (CAS 7429-90-5)</td>
<td>PEL</td>
<td>5 mg/m3</td>
<td>Respirable dust.</td>
</tr>
<tr>
<td>Carbon Black (CAS 1333-86-4)</td>
<td>PEL</td>
<td>3.5 mg/m3</td>
<td>Total dust.</td>
</tr>
<tr>
<td>Graphite (CAS 7782-42-5)</td>
<td>PEL</td>
<td>5 mg/m3</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td>Magnesium Oxide (CAS 1309-48-4)</td>
<td>PEL</td>
<td>15 mg/m3</td>
<td>Total dust.</td>
</tr>
</tbody>
</table>

US. OSHA Table Z-3 (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphite (CAS 7782-42-5)</td>
<td>TWA</td>
<td>15 mppcf</td>
</tr>
</tbody>
</table>

US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium (CAS 7429-90-5)</td>
<td>TWA</td>
<td>1 mg/m3</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td>Carbon Black (CAS 1333-86-4)</td>
<td>TWA</td>
<td>3 mg/m3</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td>Graphite (CAS 7782-42-5)</td>
<td>TWA</td>
<td>2 mg/m3</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td>Magnesium Oxide (CAS 1309-48-4)</td>
<td>TWA</td>
<td>10 mg/m3</td>
<td>Inhalable fraction.</td>
</tr>
</tbody>
</table>

US. NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium (CAS 7429-90-5)</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td>Welding fume or pyrophoric powder.</td>
</tr>
<tr>
<td>Carbon Black (CAS 1333-86-4)</td>
<td>TWA</td>
<td>0.1 mg/m3</td>
<td>Total</td>
</tr>
<tr>
<td>Graphite (CAS 7782-42-5)</td>
<td>TWA</td>
<td>2.5 mg/m3</td>
<td>Respirable.</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.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

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

Keep away from food and drink. 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
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: Toxic if inhaled.
- Skin contact: Toxic in contact with skin.
- Eye contact: Direct contact with eyes may cause temporary irritation.
- Ingestion: Harmful if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics: Coughing.
Information on toxicological effects:
Acute toxicity: Toxic if inhaled. Toxic in contact with skin. Harmful if swallowed.
Skin corrosion/irritation: Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation: Direct contact with eyes may cause temporary irritation.
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
Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity
Carbon Black (CAS 1333-86-4) 2B Possibly carcinogenic to humans.

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. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity
Harmful to aquatic life with long lasting effects.

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. 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)
Not 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 - Yes
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)
Chemical name | CAS number | % by wt.
--- | --- | ---
Aluminium | 7429-90-5 | 1 - 2.5

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.
Safe Drinking Water Act (SDWA)
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
Aluminium (CAS 7429-90-5)
Carbon Black (CAS 1333-86-4)
Graphite (CAS 7782-42-5)
Magnesium Oxide (CAS 1309-48-4)

US. New Jersey Worker and Community Right-to-Know Act
Aluminium (CAS 7429-90-5)
Carbon Black (CAS 1333-86-4)
Graphite (CAS 7782-42-5)
Magnesium Oxide (CAS 1309-48-4)

US. Pennsylvania Worker and Community Right-to-Know Law
Aluminium (CAS 7429-90-5)
Carbon Black (CAS 1333-86-4)
Graphite (CAS 7782-42-5)
Magnesium Oxide (CAS 1309-48-4)

US. Rhode Island RTK
Aluminium (CAS 7429-90-5)

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
Carbon Black (CAS 1333-86-4) | Listed: February 21, 2003

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>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</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>Yes</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>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Country(s) or region</td>
<td>Inventory name</td>
<td>On inventory (yes/no)*</td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</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>05-19-2015</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 | Product and Company Identification: Material Attributes  
Composition / Information on Ingredients: After Reaction Composition |