

Date of PDF Creation 07/26/2013

Reviewed on 03/03/2011

## 1 Identification

- **Product identifier**
- **Trade name:** Aromatic AR55200
- **Article number:** 6017
- **Relevant identified uses of the substance or mixture and uses advised against** No further relevant information available.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Rainbow Turf Products  
3125 Skyway Circle  
Melbourne, FL 32934  
USA  
  
Toll Free: (888) 653-7529  
Telephone: (321) 775-0600  
Fax: (321) 242-2216  
Contact: Dave Antonacci
- **Information department:** Product Development Department
- **Emergency telephone number:** During Normal Business Hours: 1-304-624-7002

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS07

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

- **Storage:**

Store in a well-ventilated place. Keep container tightly closed. In closed containers, there may be a risk of pressure build up due to water contamination (Liberated CO2 Gas). Store locked up.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Harmful

Harmful by inhalation. Harmful: danger of serious damage to health by prolonged exposure through inhalation.



Irritant

Irritating to eyes, respiratory system and skin. May cause sensitisation by inhalation and skin contact.

- **Information concerning particular hazards for human and environment:**

The product has to be labeled due to the calculation procedure of international guidelines.

- **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

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- **Label elements**

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with directives on hazardous materials.

- **Code letter and hazard designation of product:**



Harmful

- **Hazard-determining components of labeling:**

methylenediphenyl diisocyanate (MDI) Mixed Isomers

- **Risk phrases:**

Harmful by inhalation.

Irritating to eyes, respiratory system and skin.

May cause sensitisation by inhalation and skin contact.

Harmful: danger of serious damage to health by prolonged exposure through inhalation.

- **Safety phrases:**

Keep locked up and out of the reach of children.

Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

Avoid contact with skin and eyes.

Wear suitable gloves.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Dispose of this material and its container to hazardous or special waste collection point.

In case of accident by inhalation: remove casualty to fresh air and keep at rest.

- **Special labeling of certain preparations:**

Contains isocyanates. See information supplied by the manufacturer.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 1

Reactivity = 1

- **HMIS-ratings (scale 0 - 4)**



Health = \*2

Fire = 1

Reactivity = 1

- **Other hazards**

- **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

· **Description:** Polyurethane Binder

- **Dangerous components:**

26447-40-5	methylenediphenyl diisocyanate (MDI) Mixed Isomers ⚠ H334; ⚠ H332; ⚠ H315; H319; H317; H335	< 25%
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### 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Symptoms of poisoning may even occur after several hours; therefore, medical observation is required for at least 48 hours after the accident.
- **After inhalation:**  
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.  
Seek medical treatment in case of complaints.  
In case of respiratory failure or breathing irregularities, commence resuscitation or administer oxygen.  
In case of unconsciousness, place patient stably in side position for transportation.
- **After skin contact:**  
Instantly wash with water and soap and rinse thoroughly. Remove any contaminated clothing. If skin irritation persists, seek medical advice.  
Immediately wash with water and soap and rinse thoroughly.  
If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Do not induce vomiting; immediately call for medical help.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**  
Can be released in case of fire:  
Nitrogen Oxides (NO<sub>x</sub>)  
Carbon Monoxide (CO)  
Hydrogen Cyanide (HCN)
- **Advice for firefighters**
- **Protective equipment:**  
Wear breathing apparatus  
Wear full protective suit with self-contained breathing apparatus  
See section 8
- **Additional information** Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Mount respiratory protective device.  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow product to reach sewage system or bodies of water.
- **Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Transfer to a waste container. Keep the material damp and exposed to the air in a secure area (CO<sub>2</sub>-formation!) until completely solidified. The waste can then be disposed of on an approved landfill or a special refuse dump. Ensure adequate ventilation.  
In the event of a large spill, treat spill area with decontamination solution. Preparation of decontamination solution: Prepare a mixture of 0.2 - 0.5% liquid detergent and 3 - 8% concentrated ammonium hydroxide in water (5 - 10% sodium carbonate may be substituted for the ammonium hydroxide).
- **Reference to other sections**  
See Section 7 for information on safe handling.

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See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
  - Ensure good ventilation/exhaust at the workplace.
  - Keep containers tightly sealed.
  - Prevent formation of aerosols.
  - Exhaust ventilation required during spraying or when material is being used at temperatures above 100 degrees F.
- **Information about protection against explosions and fires:** Pay attention to the general rules of internal fire prevention.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
  - Recommended ideal storage temperature range: 59 - 77 degrees F. Product should not be stored below 40 degrees or above 110 degrees F.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

#### 26447-40-5 methylenediphenyl diisocyanate (MDI) Mixed Isomers

ACGIH TLV	Short-term value: 0.05 mg/m <sup>3</sup>
NIOSH REL/CEILING	Short-term value: 0.2 mg/m <sup>3</sup>
NIOSH REL/TWA	Short-term value: 0.05 mg/m <sup>3</sup>
OSHA PEL	Short-term value: 0.2 mg/m <sup>3</sup>

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing.
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the eyes and skin.
  - Gases fumes and aerosols should not be inhaled.
- **Breathing equipment:**
  - In case of brief exposure or low pollution, use respiratory filter device. In case of intensive or longer exposure, use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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The following glove types are recommended: neoprene, nitrile rubber, PVC or butyl rubber. Thin, disposable latex gloves should be avoided for repeated or long term handling of the material. Recommended thickness of the glove material: 5 - 6 mil

Selection of the glove material should be based on the consideration of penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

### 9 Physical and chemical properties

· <b>Information on basic physical and chemical properties</b>	
· <b>General Information</b>	
· <b>Appearance:</b>	
Form:	Liquid
Color:	Light to dark amber
· <b>Odor:</b>	Characteristic
· <b>Odour threshold:</b>	Not determined.
· <b>pH-value:</b>	Not determined.
· <b>Change in condition</b>	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· <b>Flash point:</b>	> 200 °C (> 392 °F)
· <b>Ignition temperature:</b>	
Decomposition temperature:	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
Lower:	Not determined.
Upper:	Not determined.
· <b>Vapor pressure:</b>	Not determined.
· <b>Density at 20 °C (68 °F):</b>	1.09 g/cm <sup>3</sup> (9.096 lbs/gal)
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with</b>	
Water:	Insoluble, Reacts
· <b>Partition coefficient (n-octanol/water):</b> Not determined.	

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· <b>Viscosity:</b>	
<i>Dynamic at 20 °C (68 °F):</i>	6500 mPas
<i>Kinematic:</i>	Not determined.
· <b>Solvent content:</b>	
<i>Organic solvents:</i>	0.0 %
<i>Solids content:</i>	100.0 %
· <b>Other information</b>	No further relevant information available.

### 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions**  
Exothermic reaction with amines and alcohols  
Reacts with water to liberate CO<sub>2</sub> gas which may build pressure in closed containers
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**  
By Fire and High Heat: Carbon Monoxide, Carbon Dioxide, Oxides of Nitrogen and traces of HCN.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· <b>LD/LC50 values that are relevant for classification:</b>		
<b>26447-40-5 methylenediphenyl diisocyanate (MDI) Mixed Isomers</b>		
Oral	LD50	> 5000 mg/kg (rat)
Dermal	LD50	> 5000 mg/kg (rabbit)
Inhalative	LC50/4 h	2240 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:**  
Sensitization possible through inhalation.  
Sensitization possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful  
Irritant
- **Carcinogenic categories**

· <b>IARC (International Agency for Research on Cancer)</b>
None of the ingredients is listed.
· <b>NTP (National Toxicology Program)</b>
None of the ingredients is listed.

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.

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- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
This product is not miscible with water. Reacts with water at the interface producing CO<sub>2</sub> gas and forming a solid and insoluble product with high melting point (polyurea). This reaction is accelerated by surfactants (eg. detergents) or by water-soluble solvents. Previous experience demonstrates that polyurea is inert and non-degradable.  
Water hazard class 1 (self-assessment): slightly hazardous for water.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:**  
Disposal must be made according to official regulations.  
Empty containers may only be disposed of after neutralising any product remaining on the walls of the containers with a mixture of isopropanol, ammonia and water and removal of the warning labels. For preparation of decontamination solution, refer to section 6.

### 14 Transport information

<ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>	Void
<ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>	Void
<ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> <li>· <b>Class</b></li> </ul>	Void
<ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>	Void
<ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> </ul>	No
<ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b></li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· <b>Transport/Additional information:</b></li> <li>· <b>DOT</b></li> <li>· <b>Hazardous substance:</b></li> </ul>	Single containers less than 5,000 lbs are not regulated. Single containers with 5,000 lbs or more of 4,4' methylenediphenyl diisocyanate are regarded as class 9, NA3082, PG III.
<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>	-

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### 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**



Harmful

· **Hazard-determining components of labeling:**

methylenediphenyl diisocyanate (MDI) Mixed Isomers

· **Risk phrases:**

Harmful by inhalation.

Irritating to eyes, respiratory system and skin.

May cause sensitisation by inhalation and skin contact.

Harmful: danger of serious damage to health by prolonged exposure through inhalation.

· **Safety phrases:**

Keep locked up and out of the reach of children.

Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

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*Avoid contact with skin and eyes.**Wear suitable gloves.**In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).**Dispose of this material and its container to hazardous or special waste collection point.**In case of accident by inhalation: remove casualty to fresh air and keep at rest.***· Special labeling of certain preparations:***Contains isocyanates. See information supplied by the manufacturer.***· Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.***16 Other information***This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.***· Department issuing MSDS:** *Product Development Department***· Contact:** *Bryan R. Morris***· Abbreviations and acronyms:***ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)**RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)**IMDG: International Maritime Code for Dangerous Goods**DOT: US Department of Transportation**IATA: International Air Transport Association**IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)**ICAO: International Civil Aviation Organization**ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)**ACGIH: American Conference of Governmental Industrial Hygienists**NFPA: National Fire Protection Association (USA)**HMS: Hazardous Materials Identification System (USA)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent*