

Issue Date: 06-May-2015

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Version 1

## 1. IDENTIFICATION

**Product Identifier**

**Product Name** ToughAir® RS-211, ToughAir® RS-422, ToughAir® RS-644

**Other means of identification**

**SDS #** MT-001

**Recommended use of the chemical and restrictions on use**

**Recommended Use** For industrial and professional use.

**Details of the supplier of the safety data sheet**

**Supplier Address**

Miracon Technologies  
401 S. Sherman Street  
Suite 101  
Richardson, TX 75081

**Emergency Telephone Number**

**Company Phone Number** Phone: 972-387-3099  
Fax: 972-387-2066  
**Emergency Telephone (24 hr)** INFOTRAC 1-352-323-3500 (International)  
1-800-535-5053 (North America)

## 2. HAZARDS IDENTIFICATION

**Appearance** Clear to slight yellow liquid      **Physical State** Liquid      **Odor** None

**Classification**

Serious eye damage/eye irritation	Category 2
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**Signal Word**

Warning

**Hazard Statements**

Causes serious eye irritation



**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Wear eye/face protection

**Precautionary Statements - 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

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Proprietary Material 2	Proprietary	0-2

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.\*\*

### 4. FIRST-AID MEASURES

**First Aid Measures**

<b>General Advice</b>	Provide this SDS to medical personnel for treatment.
<b>Eye Contact</b>	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.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes.
<b>Inhalation</b>	Remove to fresh air.
<b>Ingestion</b>	Rinse mouth. Drink plenty of water. Never give anything by mouth to an unconscious person. Seek medical attention.

**Most important symptoms and effects**

<b>Symptoms</b>	Causes serious eye irritation.
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**Indication of any immediate medical attention and special treatment needed**

<b>Notes to Physician</b>	Treat symptomatically.
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### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

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

**Unsuitable Extinguishing Media** Not determined.

**Specific Hazards Arising from the Chemical**

Not determined.

**Hazardous Combustion Products** Carbon oxides. Sodium oxides. Nitrogen oxides (NOx). Sulfur oxides. Fluorine compounds.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

- Personal Precautions**                      Use personal protective equipment as required. Spills may be slippery.
- Environmental Precautions**            See Section 12 for additional Ecological Information.

**Methods and material for containment and cleaning up**

- Methods for Containment**                Prevent further leakage or spillage if safe to do so.
- Methods for Clean-Up**                    For small spills, mop or soak up with rags and flush with water. Place in appropriate containers for disposal.

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

- Advice on Safe Handling**                Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands, and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing and eye/face protection.

**Conditions for safe storage, including any incompatibilities**

- Storage Conditions**                      Keep container tightly closed and store in a cool, dry and well-ventilated place. Do not puncture or incinerate container. Keep locked up and out of reach of children.
- Incompatible Materials**                Materials that react with water. Strong acids. Strong bases. Strong oxidizers.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

- Exposure Guidelines**                    This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

**Appropriate engineering controls**

- Engineering Controls**                    Apply technical measures to comply with the occupational exposure limits. Showers. Eyewash stations. Ventilation systems.

**Individual protection measures, such as personal protective equipment**

- Eye/Face Protection**                    Wear goggles or chemical safety glasses.
- Skin and Body Protection**            Wear rubber or plastic gloves. Suitable protective clothing.
- Respiratory Protection**                No protective equipment is needed under normal use conditions.
- General Hygiene Considerations**    Handle in accordance with good industrial hygiene and safety practice.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Physical State</b>	Liquid	<b>Odor</b>	None
<b>Appearance</b>	Clear to slight yellow liquid	<b>Odor Threshold</b>	Not determined
<b>Color</b>	Slight yellow		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	11	
Melting Point/Freezing Point	0 °C / 32 °F	
Boiling Point/Boiling Range	105 °C / 221 °F	
Flash Point	Not Applicable	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Liquid- Not Applicable	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	
Vapor Density	Not determined	
Specific Gravity	1.01 g/cm <sup>3</sup>	
Water Solubility	Completely soluble	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

## 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions.

### Chemical Stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Conditions to Avoid

Keep out of reach of children.

### Incompatible Materials

Materials that react with water. Strong acids. Strong bases. Strong oxidizers.

### Hazardous Decomposition Products

Carbon oxides. Nitrogen oxides (NO<sub>x</sub>). Sodium oxides. Sulfur oxides. Fluorine compounds.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

**Eye Contact** Causes serious eye irritation.

**Skin Contact** Avoid contact with skin.

**Inhalation** Do not inhale.

**Ingestion** Do not ingest.

**Component Information**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Proprietary Material 2	= 1658 mg/kg ( Rat ) = 10 g/kg ( Rat )	-	-
Proprietary Material 3	= 20000 mg/kg ( Rat )	= 20800 mg/kg ( Rabbit )	-
Proprietary Material 5	= 13300 mg/kg ( Rat )	> 20 mL/kg ( Rabbit )	-
Proprietary Material 4	= 3 g/kg ( Rat )	> 10 g/kg ( Rabbit )	> 42 g/m <sup>3</sup> ( Rat ) 1 h

**Information on physical, chemical and toxicological effects****Symptoms**

Please see section 4 of this SDS for symptoms.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Carcinogenicity**

Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

**Numerical measures of toxicity**

Not determined

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

This product as a whole has not been tested for ecotoxicity.

**Component Information**

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Proprietary Material 2	1.01: 72 h Desmodesmus subspicatus mg/L EC50	41: 96 h Lepomis macrochirus mg/L LC50 static 59.8: 96 h Pimephales promelas mg/L LC50 static		610: 24 h Daphnia magna mg/L EC50
Proprietary Material 3	19000: 96 h Pseudokirchneriella subcapitata mg/L EC50	51400: 96 h Pimephales promelas mg/L LC50 static 710: 96 h Pimephales promelas mg/L LC50 51600: 96 h Oncorhynchus mykiss mg/L LC50 static 41 - 47: 96 h Oncorhynchus mykiss mL/L LC50 static		1000: 48 h Daphnia magna mg/L EC50 Static 10000: 24 h Daphnia magna mg/L EC50
Proprietary Material 4		5560 - 6080: 96 h Lepomis macrochirus mg/L LC50 flow-through 12946: 96 h Lepomis macrochirus mg/L LC50 static 6020 - 7070: 96 h Pimephales promelas mg/L LC50 static 7050: 96 h Pimephales promelas mg/L LC50 semi-static 6420 - 6700: 96 h Pimephales promelas mg/L LC50 static 4747 - 7824: 96 h Oncorhynchus mykiss mg/L LC50 flow-through		1000: 48 h Daphnia magna mg/L EC50 340.7 - 469.2: 48 h Daphnia magna mg/L EC50 Static
Proprietary Material 5		5000: 24 h Carassius auratus mg/L LC50 static		

**Persistence/Degradability**

Not determined.

**Bioaccumulation**

Not determined.

**Mobility**

Not determined

**Other Adverse Effects**

Not determined

**13. DISPOSAL CONSIDERATIONS****Waste Treatment Methods****Disposal of Wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**14. TRANSPORT INFORMATION****Note**

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**DOT**

Not regulated

**IATA**

Not regulated

**IMDG**

Not regulated

**15. REGULATORY INFORMATION****International Inventories**

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Proprietary Material 2	Present	X		Present		Present	X	Present	X	X

**Legend:***TSCA - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS - Japan Existing and New Chemical Substances**IECSC - China Inventory of Existing Chemical Substances**KECL - Korean Existing and Evaluated Chemical Substances**PICCS - Philippines Inventory of Chemicals and Chemical Substances**AICS - Australian Inventory of Chemical Substances***US Federal Regulations****SARA 313**

Not determined

**US State Regulations**

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Proprietary Material 3	X		X
Proprietary Material 5			X

**16. OTHER INFORMATION**

<b><u>NFPA</u></b>	<b>Health Hazards</b> Not determined	<b>Flammability</b> Not determined	<b>Instability</b> Not determined	<b>Special Hazards</b> Not determined
<b><u>HMIS</u></b>	<b>Health Hazards</b> 1	<b>Flammability</b> 0	<b>Physical Hazards</b> 0	<b>Personal Protection</b> Not determined

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**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**