


# SAFETY DATA SHEET

## Section 1. Identification

<b>Product identifier</b>	: Additin® RC 8220
<b>Material Number</b>	: 56771526
<b>Identified uses</b>	: Corrosion inhibitor and Reducing agent.
<b>Supplier/Manufacturer</b>	: LANXESS Corporation Rhein Chemie Additives 111 RIDC Park West Drive Pittsburgh, PA 15275-1112 USA  For information: US/Canada (800) LANXESS International +1 412 809 1000
<b>In case of emergency</b>	: Chemtrec (800) 424-9300 International (703) 527-3887 Lanxess Emergency Phone (800) 410-3063.

## Section 2. Hazards identification

<b>HAZCOM Standard Status</b>	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
<b>Physical state</b>	: Powder.
<b>Color</b>	: White. to Slight dyed
<b>Classification of the substance or mixture</b>	: COMBUSTIBLE DUSTS ACUTE TOXICITY (oral) - Category 4 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
<b>Hazard pictograms</b>	: 
<b>Signal word</b>	: Warning
<b>Hazard statements</b>	: May form combustible dust concentrations in air. Harmful if swallowed. Causes serious eye irritation.
<b>Hazard Not Otherwise Classified (HNOC)</b>	: None known.
<b>Precautionary statements</b>	
<b>Prevention</b>	: Wear eye/face protection. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
<b>Response</b>	: Get medical attention if you feel unwell. IF SWALLOWED: Rinse mouth. 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 attention.
<b>Storage</b>	: Not applicable.
<b>Disposal</b>	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Supplemental label elements</b>	: Keep container tightly closed. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Prevent dust accumulation. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink. COMBUSTIBLE DUSTS

## Section 3. Composition/information on ingredients

**Substance/mixture** : Substance

**CAS number** : 95-14-7

<b>Ingredient name</b>	<b>%</b>	<b>CAS number</b>
Benzotriazole	100	95-14-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.**

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of first aid measures

- Eye contact** : Check for and remove any contact lenses. Get medical attention. In case of contact, flush eyes with plenty of water for at least 20 minutes. Use fingers to ensure that eyelids are separated and that the eye is being irrigated.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. If not breathing, if breathing is irregular or respiratory arrest occurs, provide artificial respiration, or oxygen by a trained professional, using a pocket type respirator.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Potential acute health effects

- Eye contact** : Causes serious eye irritation. May cause mechanical irritation (abrasion).
- Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
- Skin contact** : May cause mechanical irritation (abrasion).
- Ingestion** : Harmful if swallowed. Irritating to mouth, throat and stomach.

### Over-exposure signs/symptoms

- Eye contact** : Causes irritation with symptoms of reddening, tearing, stinging, and swelling.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : Symptoms of ingestion may include abdominal pain, nausea, vomiting, and diarrhea.

### Potential chronic health effects

Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

**Notes to physician** : Treat symptomatically. No specific treatment.

**Protection of first-aiders** : No special measures required.

## Section 4. First aid measures

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media** : Use dry chemical powder.

**Unsuitable extinguishing media** : Do not use water jet.

**Specific hazards arising from the chemical** : In the event of fire be aware of formation of noxious fumes. Fine dust clouds may form explosive mixtures with air.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**Methods and materials for containment and cleaning up** : Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. Remove mechanically by a method that minimizes the generation of airborne dust (vacuum cleaner, wet mopping, etc.) Ensure vacuum cleaners are approved for explosive dusts. Prevent entry into sewers, water courses, basements or confined areas.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product

## Section 7. Handling and storage

residue and can be hazardous. Do not reuse container. Remove contaminated clothing and protective equipment before entering eating areas. Workers should wash hands and face before eating, drinking and smoking. Put on appropriate personal protection equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Use non-sparking tools and equipment. Consult National Fire Protection Association (NFPA) 654 Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids for details on the safe handling and equipment design.

**Conditions for safe storage :** Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Empty containers retain product residue and can be hazardous. Do not reuse container. Minimize dust generation and accumulation, especially on elevated surfaces (e.g., roof beams and trusses, ventilation ducts, wall sills). A dust layer just 1/32nd of an inch(0.793 mm) deep on elevated surfaces may create a dust cloud explosion hazard.

## Section 8. Exposure controls/personal protection

### Occupational exposure limits

No exposure limit value known.

**Appropriate engineering controls :** Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

### Personal protection

**Hygiene measures :** Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Respiratory protection :** Although no exposure limit has been established for this product, the OSHA PEL for Particulates Not Otherwise Regulated (PNOR) of 15 mg/m<sup>3</sup> - total dust, 5 mg/m<sup>3</sup> - respirable fraction is recommended. In addition, the ACGIH recommends 3 mg/m<sup>3</sup> - respirable particles and 10 mg/m<sup>3</sup> - inhalable particles for Particles (insoluble or poorly soluble) Not Otherwise Specified (PNOS). The following respirator is recommended if airborne concentrations exceed the appropriate standard/guideline. NIOSH approved, air-purifying particulate respirator with N-95 filters.

**Skin protection :** Wear suitable protective clothing and gloves. Suitable protective footwear.

**Eye/face protection :** chemical splash goggles.

**Medical Surveillance :** Not available.

## Section 9. Physical and chemical properties

**Physical state :** Solid. [Crystalline powder.]

**Color :** White. to Slight dyed

**Odor :** Characteristic. [Slight]

**Odor threshold :** Not available.

**pH :** Not available.

**Boiling point :** >200 °C (1013 hPa)

**Melting point :** 94 to 99°C (201.2 to 210.2°F)

## Section 9. Physical and chemical properties

<b>Flash point</b>	: Closed cup: 195°C (383°F) [DIN 51758]
<b>Evaporation rate</b>	: Not available.
<b>Explosion limits</b>	: Not available.
<b>Vapor pressure</b>	: <0.0001 hPa (25°C)
<b>Density</b>	: 1.36 g/cm <sup>3</sup>
<b>Specific gravity (Relative density)</b>	: Not available.
<b>Solubility</b>	: 19 g/l (water)
<b>Partition coefficient: n-octanol/water</b>	: not available
<b>Vapor density</b>	: Not available.
<b>Viscosity</b>	: Not available.
<b>Combustibility at 20 °C</b>	: BZ 1 = no ignition (VDI 2263).
<b>Combustibility at 100 °C</b>	: BZ 2 = brief ignition and rapid extinction (VDI 2263).
<b>Ignition temperature</b>	: 400°C
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: Extremes of temperature and direct sunlight.
<b>Incompatible materials</b>	: Reducing agents, oxidizing agents, acids and bases
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

<b>Information on the likely routes of exposure</b>	: Dermal contact. Eye contact. Inhalation. Ingestion.
<b><u>Potential acute health effects</u></b>	
<b>Eye contact</b>	: Causes serious eye irritation. May cause mechanical irritation (abrasion).
<b>Inhalation</b>	: May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
<b>Skin contact</b>	: May cause mechanical irritation (abrasion).
<b>Ingestion</b>	: Harmful if swallowed. Irritating to mouth, throat and stomach.
<b><u>Symptoms related to the physical, chemical and toxicological characteristics</u></b>	
<b>Eye contact</b>	: Causes irritation with symptoms of reddening, tearing, stinging, and swelling.
<b>Inhalation</b>	: No specific data.
<b>Skin contact</b>	: No specific data.
<b>Ingestion</b>	: Symptoms of ingestion may include abdominal pain, nausea, vomiting, and diarrhea.
<b><u>Potential chronic health effects</u></b>	
<b><u>Short term exposure</u></b>	
<b>Potential immediate effects</b>	: Not available.
<b><u>Long term exposure</u></b>	
<b>Potential delayed effects</b>	: Not available.
<b>General</b>	: Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

## Section 11. Toxicological information

- Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Teratogenicity** : No known significant effects or critical hazards.  
**Developmental effects** : No known significant effects or critical hazards.  
**Fertility effects** : No known significant effects or critical hazards.

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure	Test
Benzotriazole	LD50 Oral	Rat	560 mg/kg	-	-
Benzotriazole	LD50 Dermal	Rabbit	>2000 mg/kg	-	-
Benzotriazole	LC50 Inhalation Dusts and mists	Rat	1910 mg/m <sup>3</sup>	3 hours	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation	Reversibility
Benzotriazole	Skin - Erythema/Eschar	Rabbit	0	72 hours	-	-
	Skin - Edema	Rabbit	0	72 hours	-	-
	Eyes - Cornea opacity	Rabbit	0	72 hours	-	-
	Eyes - Iris lesion	Rabbit	0	72 hours	-	-
	Eyes - Edema of the conjunctivae	Rabbit	0.66	72 hours	-	Fully reversible in more than 7 days
	Eyes - Redness of the conjunctivae	Rabbit	0	72 hours	-	-
	Eyes - Cornea opacity	Rabbit	1	24 hours	-	-
	Eyes - Cornea opacity	Rabbit	0.66	48 hours	-	-
	Eyes - Iris lesion	Rabbit	0.33	24 hours	-	-
	Eyes - Iris lesion	Rabbit	0.33	48 hours	-	-
	Eyes - Edema of the conjunctivae	Rabbit	1.33	24 hours	-	Fully reversible in more than 7 days
	Eyes - Edema of the conjunctivae	Rabbit	1.66	48 hours	-	Fully reversible in more than 7 days
	Eyes - Redness of the conjunctivae	Rabbit	1.33	24 hours	-	-
	Eyes - Redness of the conjunctivae	Rabbit	0.33	48 hours	-	-

#### Conclusion/Summary

**Skin** : Benzotriazole:Non-irritating: tested on rabbits.

**Eyes** : Benzotriazole:slightly irritant: tested on rabbit eyes.

#### Sensitization

Product/ingredient name	Route of exposure	Species	Result
Benzotriazole	skin	Guinea pig	Not sensitizing

## Section 11. Toxicological information

### Mutagenicity

Product/ingredient name	Test	Experiment	Result
Benzotriazole	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative
	OECD 476 <i>In vitro</i> Mammalian Cell Gene Mutation Test	Experiment: In vitro	Negative
	OECD 474 Mammalian Erythrocyte Micronucleus Test	Experiment: In vivo Subject: Mammalian-Animal	Negative

### Carcinogenicity

Product/ingredient name	CAS #	IARC	NTP	OSHA
Benzotriazole	95-14-7	Not classified.	Not classified.	Not classified.

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Test	Result	Species	Exposure
Benzotriazole	-	Acute EC50 75 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours
	-	Acute EC50 15.8 mg/l	Daphnia - Daphnia magna	48 hours
	-	Acute LC50 180 mg/l	Fish - Danio rerio	96 hours
	-	Chronic EC10 1.18 mg/l	Algae - Desmodesmus subspicatus	72 hours
	-	Chronic EC50 0.97 mg/l	Daphnia - Daphnia galeata	21 days

**Conclusion/Summary** : Not available.

### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Benzotriazole	OECD 302B Inherent Biodegradability: Zahn-Wellens/EMPA Test	83 % - Inherent - 28 days	-	-
	Closed bottle test.	0 % - Not readily - 5 days	-	-

**Conclusion/Summary** : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Benzotriazole	-	-	Not readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Benzotriazole	1.34	4.14	low

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

## Section 12. Ecological information

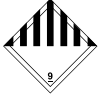



**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Waste disposal should be in accordance with existing federal state, provincial and or local environmental controls laws.

**RCRA classification** : : If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

## Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
<b>DOT Classification</b>	-	-	-	-		Not regulated.
<b>IMDG Class</b>	UN3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (BENZOTRIAZOLE)	9	III	 	<b>Emergency schedules (EmS)</b> F-A, S-F
<b>IATA-DGR Class</b>	UN3077	Environmentally hazardous substance, solid, n.o.s. (BENZOTRIAZOLE)	9	III	 	<b>Passenger aircraft</b> 956: 400 kg <b>Cargo aircraft</b> 956: 400 kg

PG\* : Packing group

**RQ** : 0 lbs

## Section 15. Regulatory information

**SARA 311/312** : Fire hazard  
Immediate (acute) health hazard

**SARA Title III Section 302 Extremely Hazardous Substances** : None

**SARA Title III Section 313 Toxic Chemicals** : None

**US EPA CERCLA Hazardous Substances (40 CFR 302.4)** : None

### State regulations

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections on the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.



## Section 15. Regulatory information

<u>Ingredient name</u>	<u>CAS number</u>	<u>State Code</u>	<u>Concentration (%)</u>
Benzotriazole	95-14-7	MA - S	100
Massachusetts Substances: MA - S			
Massachusetts Extraordinary Hazardous Substances: MA - Extra HS			
New Jersey Hazardous Substances: NJ - HS			
Pennsylvania RTK Hazardous Substances: PA - RTK HS			
Pennsylvania Special Hazardous Substances: PA - Special HS			

### California Prop. 65

To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

**U.S. Toxic Substances Control Act** : Listed on the TSCA Inventory.

## Section 16. Other information

### Hazardous Material Information System

Health	1
Flammability	1
Physical hazards	0

0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme  
\*=Chronic

The customer is responsible for determining the PPE code for this material. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

**National Fire Protection Association (U.S.A.)** :



0= Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

LANXESS' method of hazard communication is comprised of Product Labels and Safety Data Sheets. HMIS and NFPA ratings are provided by LANXESS as a customer service.

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Product Safety and Regulatory Affairs

Indicates information that has changed from previously issued version.

### Notice to reader

## **Section 16. Other information**

This information is furnished without warranty, express or implied. This information is believed to be accurate to the best knowledge of LANXESS Corporation. The information in this SDS relates only to the specific material designated herein. LANXESS Corporation assumes no legal responsibility for use of or reliance upon the information in this SDS.