

# RI-77AA Cement Grinding Aid

## Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Trade name : RI-77AA Cement Grinding Aid  
Product form : Mixture

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Liquid Cement Grinding Aid

#### 1.3. Details of the supplier of the safety data sheet

ROAN Industries, Inc.  
100 Chet Burluson Road  
Bakersville, NC 28705  
T (828) 688-5888 or (610) 759-4234 or (800) 804-4806

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: (800) 424-9300

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Acute Tox. 4 (Oral) H302  
Skin Irrit. 2 H315  
Eye Dam. 1 H318  
STOT SE 2 H371  
STOT RE 2 H373

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

**Danger**

Hazard statements (GHS-US) :

H302 - Harmful if swallowed  
H315 - Causes skin irritation  
H318 - Causes serious eye damage  
H371 - May cause damage to organs (kidneys, central nervous system)  
H373 - May cause damage to organs (kidneys, liver, central nervous system) through prolonged or repeated exposure

Precautionary statements (GHS-US) :

P260 - Do not breathe vapors, spray, mist, fume  
P264 - Wash hands, forearms and face, clothing thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P280 - Wear eye protection, face protection, protective clothing, protective gloves  
P301+P312 - If swallowed: Call a doctor, a poison center if you feel unwell  
P302+P352 - If on skin: Wash with plenty of water  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310 - Immediately call a doctor, a poison center  
P314 - Get medical advice/attention if you feel unwell  
P321 - Specific treatment (see first aid instructions on this label)  
P330 - Rinse mouth  
P332+P313 - If skin irritation occurs: Get medical advice/attention  
P362 - Take off contaminated clothing and wash before reuse  
P405 - Store locked up  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

No data available

# RI-77AA Cement Grinding Aid

## Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

Name	Product identifier	%
Diethylene glycol	(CAS No) 111-46-6	< 90
Acetic acid	(CAS No) 64-19-7	< 25
Ethylene glycol	(CAS No) 107-21-1	1 - 9
Pentaethylene glycol	(CAS No) 4792-15-8	1 - 9
Diethanolamine	(CAS No) 111-42-2	< 1

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures general : If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person.
- First-aid measures after inhalation : IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if breathing is affected. If breathing is difficult, supply oxygen.
- First-aid measures after skin contact : IF ON SKIN (or clothing): Remove affected clothing and wash all exposed skin with water for at least 15 minutes. If irritation develops or persists, get medical attention.
- First-aid measures after eye contact : IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. If pain, blinking, or irritation develops or persists, get medical attention. Continue rinsing.
- First-aid measures after ingestion : IF SWALLOWED: rinse mouth thoroughly. Do not induce vomiting without advice from poison control center or medical professional. Get medical attention immediately.

#### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Causes skin irritation. Causes serious eye damage. Harmful if swallowed. May cause damage to organs through prolonged or repeated exposure. May cause damage to organs.
- Symptoms/injuries after inhalation : May cause respiratory irritation.
- Symptoms/injuries after skin contact : Causes skin irritation.
- Symptoms/injuries after eye contact : Causes serious eye damage.
- Symptoms/injuries after ingestion : Harmful if swallowed. May cause gastrointestinal irritation.
- Chronic symptoms : May cause damage to organs through prolonged or repeated exposure.

#### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire. Water spray. Foam. Dry powder. Dry chemical. Alcohol-resistant foam.
- Unsuitable extinguishing media : None known.

#### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Combustible if heated.
- Explosion hazard : Product is not explosive.
- Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

#### 5.3. Advice for firefighters

- Firefighting instructions : Use cold water spray to cool fire-exposed containers to minimize risk of rupture. 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.
- Protection during firefighting : Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Ventilate area. Evacuate area. Keep upwind. Spill should be handled by trained clean-up crews properly equipped with respiratory equipment and full chemical protective gear (see Section 8).

##### 6.1.1. For non-emergency personnel

- Protective equipment : Wear Protective equipment as described in Section 8.
- Emergency procedures : Evacuate unnecessary personnel.

# RI-77AA Cement Grinding Aid

## Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 6.1.2. For emergency responders

Protective equipment : For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Notify authorities if product enters sewers or public waters. Prevent entry to sewers and public waters. Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Wear suitable protective clothing. Soak up residue with an absorbent such as clay, sand or other suitable material. Dispose of material in compliance with local, state, and federal regulations.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Wear personal protective equipment. Do not handle until all safety precautions have been read and understood. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid contact with skin and eyes. Avoid ingestion. Avoid inhaling fumes or vapors.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep container tightly closed.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Diethylene glycol (111-46-6)	
Remark (ACGIH)	OELs not established
Remark (OSHA)	OELs not established
Ethylene glycol (107-21-1)	
ACGIH Ceiling (mg/m <sup>3</sup> )	100 (aerosol only)
OSHA PEL (Ceiling) (mg/m <sup>3</sup> )	125 Vacated
OSHA PEL (Ceiling) (ppm)	50 Vacated
Diethanolamine (111-42-2)	
ACGIH TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> inhalable fraction and vapor
OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> vacated
OSHA PEL (TWA) (ppm)	3 ppm vacated
Acetic acid (64-19-7)	
ACGIH TWA (ppm)	10 ppm
ACGIH STEL (ppm)	15 ppm
OSHA PEL (TWA) (mg/m <sup>3</sup> )	25 mg/m <sup>3</sup>
OSHA PEL (TWA) (ppm)	10 ppm

### 8.2. Exposure controls

Appropriate engineering controls : Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment with flammable materials. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment : Gloves. Protective goggles. Protective clothing.

Hand protection : Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Gloves should be classified under Standard EN 374 or ASTM F1296. Change contaminated gloves immediately. Suitable gloves for this specific application can be recommended by the glove supplier. Suggested glove materials are: Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, PVC or vinyl.

Eye protection : Wear eye protection, including chemical splash goggles and a face shield when possibility exists for eye contact due to spraying liquid or airborne particles.

Skin and body protection : Wear long sleeves, and chemically impervious PPE/coveralls to minimize bodily exposure.

Respiratory protection : Use NIOSH-approved dust/particulate respirator. Where vapor, mist, or dust exceed PELs or other applicable OELs, use NIOSH-approved respiratory protective equipment.

# RI-77AA Cement Grinding Aid

## Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Amber.
Odor	: Characteristic.
Odor Threshold	: No data available
pH	: 6 - 11.4
Relative evaporation rate (butylacetate=1)	: No Information Found
Melting point	: No Information Found
Freezing point	: No data available
Boiling point	: 100 - 165 °C (212-329°F)
Flash point	: 160 °C (320°F) Open Cup
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No Information Found
Relative vapor density at 20 °C	: No data available
Relative density	: 1.06 - 1.16 H <sub>2</sub> O = 1@25°C
Solubility	: Water: Miscible
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

Incompatible materials.

#### 10.5. Incompatible materials

Strong alkalis. Strong acids. Strong oxidizing agents. Halogenated compounds. Bases. Nitrites. Contact with certain metals.

#### 10.6. Hazardous decomposition products

Oxides of nitrogen and carbon. Aldehydes. Alcohols. Ethers.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

Diethylene glycol (111-46-6)	
LD50 dermal rabbit	11890 mg/kg
ATE CLP (oral)	500.000 mg/kg bodyweight
Ethylene glycol (107-21-1)	
LD50 dermal rabbit	10600 mg/kg
ATE CLP (oral)	500.000 mg/kg bodyweight
Acetic acid (64-19-7)	
LD50 oral rat	3310 mg/kg

# RI-77AA Cement Grinding Aid

## Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>Acetic acid (64-19-7)</b>	
LC50 inhalation rat (mg/l)	11.4 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation. pH: 6 - 11.4
Serious eye damage/irritation	: Causes serious eye damage. pH: 6 - 11.4
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified.
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: May cause damage to organs (kidneys, central nervous system).
Specific target organ toxicity (repeated exposure)	: May cause damage to organs (kidneys, liver, central nervous system) through prolonged or repeated exposure.
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: May cause respiratory irritation.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye damage.
Symptoms/injuries after ingestion	: Harmful if swallowed.
Chronic symptoms	: May cause damage to organs through prolonged or repeated exposure.

### SECTION 12: Ecological information

#### 12.1. Toxicity

<b>Ethylene glycol (107-21-1)</b>	
LC50 fishes 1	16000 mg/l 96 Hr; Poecilia reticulata; [static]
EC50 Daphnia 1	46300 mg/l 48 Hr; Daphnia magna

#### 12.2. Persistence and degradability

<b>Diethanolamine (111-42-2)</b>	
Persistence and degradability	Not established.

#### 12.3. Bioaccumulative potential

<b>Diethanolamine (111-42-2)</b>	
Bioaccumulative potential	Not established.

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste treatment methods	: Do not discharge to public wastewater systems without permit of pollution control authorities.
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.

### SECTION 14: Transport information

In accordance with DOT

Not hazardous for transport

#### Additional information

Other information	: Environmentally hazardous substance, liquid, n.o.s. (Ethylene glycol) DOT Class: UN3082 Class: 9 Packing Group: III Reportable quantity 5000 lbs / 2270 kg [565.73 gal / 2141.5 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
-------------------	---

#### Transport by sea

No additional information available

# RI-77AA Cement Grinding Aid

## Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Air transport

No additional information available

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

RI-77AA Cement Grinding Aid	
All components of this product are listed on the TSCA Inventory or are exempt	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
Diethylene glycol (111-46-6)	
Section 302 (EHS) TPQ	
Section 304 EHS RQ	
CERCLA RQ	
Section 313	Listed on US SARA Section 313
Ethylene glycol (107-21-1)	
Section 302 (EHS) TPQ	
Section 304 EHS RQ	
CERCLA RQ	5000 lbs
Section 313	Listed on US SARA Section 313
1,4-Dioxane (123-91-1)	
Section 302 (EHS) TPQ	
Section 304 EHS RQ	
CERCLA RQ	100 lbs
Section 313	Listed on US SARA Section 313
Acetaldehyde (75-07-0)	
Section 302 (EHS) TPQ	
Section 304 EHS RQ	
CERCLA RQ	
Section 313	Listed on US SARA Section 313
2-Methoxyethanol (109-86-4)	
Section 302 (EHS) TPQ	
Section 304 EHS RQ	
CERCLA RQ	
Section 313	Listed on US SARA Section 313
Diethanolamine (111-42-2)	
Section 302 (EHS) TPQ	
Section 304 EHS RQ	
CERCLA RQ	100 lbs
Section 313	Listed on US SARA Section 313
Acetic acid (64-19-7)	
Section 302 (EHS) TPQ	
Section 304 EHS RQ	
CERCLA RQ	5000 lbs
Section 313	Not Listed on US SARA Section 313

#### 15.2. International regulations

No additional information available.

#### 15.3. US State regulations

##### California Proposition 65

WARNING! This product contains chemicals known to the state of California to cause cancer, birth defects, or other reproductive harm.

1,4-Dioxane (123-91-1)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	30 µg/day
Ethyl alcohol (64-17-5)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity -	U.S. - California - Proposition 65 - Reproductive Toxicity -	No significance risk level (NSRL)

# RI-77AA Cement Grinding Aid

## Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>Ethyl alcohol (64-17-5)</b>				
		Female	Male	
No	Yes	No	No	
<b>Acetaldehyde (75-07-0)</b>				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	90 µg/day (inhalation)
<b>2-Methoxyethanol (109-86-4)</b>				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
No	Yes	No	Yes	
<b>Diethanolamine (111-42-2)</b>				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	
<b>Diethylene glycol (111-46-6)</b>				
U.S. - Pennsylvania - RTK (Right to Know) List				
<b>Ethylene glycol (107-21-1)</b>				
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List				
<b>Triethylene glycol (112-27-6)</b>				
U.S. - Pennsylvania - RTK (Right to Know) List				
<b>1,4-Dioxane (123-91-1)</b>				
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances				
<b>Ethyl alcohol (64-17-5)</b>				
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List				
<b>Acetaldehyde (75-07-0)</b>				
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List				
<b>2-Methoxyethanol (109-86-4)</b>				
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List				
<b>Triethanolamine (102-71-6)</b>				
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List				
<b>Diethanolamine (111-42-2)</b>				
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List				
<b>Ethanolamine (141-43-5)</b>				
U.S. - Massachusetts - Right To Know List				

# RI-77AA Cement Grinding Aid

## Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Ethanolamine (141-43-5)

U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List

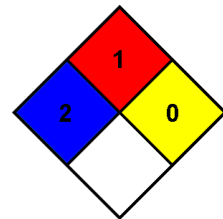
### Acetic acid (64-19-7)

U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Massachusetts - Right To Know List  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

## SECTION 16: Other information

Indication of changes : Revision 1.0: New SDS Created.  
Revision date : 5/27/2015  
Other information : Author: OAB.

NFPA health hazard : 2  
NFPA fire hazard : 1  
NFPA reactivity : 0



### HMIS III Rating

Health : 2\*  
Flammability : 1  
Physical : 0  
Personal Protection : **The customer is responsible for determining the PPE code for this material.**

DISCLAIMER: INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BASED ON DATA BELIEVED TO BE CORRECT. HOWEVER, NO GUARANTEE OR WARRANTY IS IMPLIED OR MADE WITH RESPECT TO THE INFORMATION CONTAINED HEREIN.