

## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Product Identification

Product Name: PASS ® - mfg. under patent #5,180,428 and other patents pending

Synonyms: Cationic Asphalt Emulsion  
CAS Number: Blend

#### Company Identification

Reed & Graham, Inc.  
690 Sunol Street  
San Jose, CA 95126 USA  
408-287-1400 (For product information)  
800-424-9300 CHEMTREC (For emergencies)

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

#### COMPONENT LISTING:

Chemical Name	Amount	CAS Number
ASPHALT (PETROLEUM)	< 60.0 %	8052-42-4
WATER	< 45.0 %	7732-18-5
HEAVY NAPHTHENIC DISTILLATE SOLVENT EXTRACT	< 20.0 %	6472-11-6
Confidential Ingredient A	< 5.0 %	Trade Secret
HYDROCHLORIC ACID	< 0.5 %	7647-01-0
HYDROGEN SULFIDE	< 0.5 %	7783-06-4
Confidential Ingredient B	< 0.5 %	Trade Secret
Confidential Ingredient C	< 0.5 %	Trade Secret

(See Section 8 for exposure guidelines)  
(See Section 15 for regulatory information)

#### COMPOSITION COMMENT:

Concentration values are typical and may vary. Although specific identities of some product components are being withheld as trade secrets, known pertinent hazards are addressed in this MSDS.

Hydrogen sulfide may be present as a by-product of asphalt processing.

#### HAZARDS DISCLOSURE:

This product contains hazardous materials as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200. As defined under Sara 311 and 312, this product contains materials that are acute hazards.

#### MISCELLANEOUS:

This material does not have established exposure limits.

### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW / CAUTION

May cause skin and eye irritation. Dilute with water. For hot product, immediately immerse in or flush the affected area with large amounts of cold Water to dissipate heat. Do not allow material to completely dry. Fumes from heated material may be irritating. Aspiration hazard if swallowed – can cause lung damage.

HMIS Rating -	Health:	2
	Flammability:	0
	Reactivity:	0
	Personal Protection Index:	1
NFPA Rating -	Health:	2
	Flammability:	0
	Reactivity:	0
	Special Hazard:	Corrosive

#### POTENTIAL HEALTH EFFECTS

##### EYE:

Corrosive. Direct contact may cause eye irritation. Exposure to vapors, fumes, or mists may cause irritation. Contact with heated material may cause eye burns and permanent tissue damage.

##### SKIN:

Avoid prolonged or repeated contact with skin. Prolonged or repeated contact may irritate the skin and cause a skin rash (dermatitis).

##### INHALATION:

Avoid breathing vapors or mists. Prolonged or excessive inhalation may cause respiratory tract irritation.

Hydrogen sulfide can cause respiratory paralysis and death depending on the concentration and duration of exposure.

##### INGESTION:

Substance may be harmful if swallowed. Irritating to mouth, throat, and stomach.

##### SIGNS AND SYMPTOMS OF EXPOSURE:

Exposure to hot material may cause thermal burns. Vapors may have a strong offensive odor which may cause headaches, nausea, and vomiting. Symptoms of overexposure include: fatigue, tearing of eyes, burning sensation in the throat, cough, chest discomfort and skin irritation.

##### CHRONIC EFFECTS:

No known hazards in normal industrial use.

##### CARCINOGENICITY INFORMATION:

Refer to Section 15.

##### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Disorders of the kidney, liver, skin and respiratory system.

#### 4. FIRST AID MEASURES

**EYE CONTACT FIRST AID:**

Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists. Burns due to contact with heated material require immediate medical attention.

**SKIN CONTACT FIRST AID:**

Wash skin with soap and water. Wear protective gloves to minimize skin contamination. For hot material exposure, DO NOT attempt to remove solidified material from the skin. DO NOT attempt to dissolve with solvents or thinners.

**INHALATION FIRST AID:**

At elevated temperatures may cause irritation of the eyes and respiratory tract. Although this product is not known to cause respiratory problems, if breathing is difficult, safely remove victim to fresh air and provide oxygen. Get immediate medical attention.

**INGESTION FIRST AID:**

Get immediate medical attention. Do not induce vomiting due to danger of aspirating liquid into lungs. Gastric lavage may be required.

**STATEMENT OF PRACTICAL TREATMENT:**

Get prompt medical attention. Dilute with water. If solidified, treat as neat asphalt.

#### 5. FIRE FIGHTING MEASURES

**FLAMMABLE PROPERTIES**

COC Flash Point: None

TCC Flash Point: None

Auto Ignition Temperature: N/A

**FLAMMABLE LIMITS IN AIR**

LEL: N/A

UEL: N/A

**FLAMMABLE PROPERTIES:**

Product is an aqueous solution. Heated product may produce hazardous fumes, decomposition products or residues. Small quantities of hydrogen sulfide may be released upon heating.

**EXTINGUISHING MEDIA:**

Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material. Exercise care when using water as contact with hot asphalt products may produce steam and violent foaming.

**FIRE FIGHTING INSTRUCTIONS:**

As in any fire, wear self-contained breathing apparatus pressure-demand MSHA/NIOSH (approved or equivalent) and full protective gear. Decomposition may produce fumes, smoke, oxides of carbon and hydrocarbons, and possible small quantities of hydrogen sulfide.

**COMBUSTION PRODUCTS:**

Avoid breathing vapors from heated material. Combustion may produce CO, NOx, SOx and reactive hydrocarbons.

## 6. ACCIDENTAL RELEASE MEASURES

### SAFEGUARDS (PERSONNEL):

Clean up spills immediately, observing precautions in Protective Equipment section.

### INITIAL CONTAINMENT:

Clean up spills immediately, observing precautions in Protective Equipment section. Contain spilled liquid with sand or earth.

### LARGE SPILLS PROCEDURE:

Stop the source of the leak or release. Clean up releases as soon as possible, observing precautions in Exposure Controls/Personal Protection. Contain liquid to prevent further contamination of soil, surface water or groundwater. Large spillage should be dammed-off and pumped into containers.

### SMALL SPILLS PROCEDURE:

Absorb spills with inert material.

## 7. HANDLING AND STORAGE

### HANDLING (PHYSICAL ASPECTS):

When handling hot material, use protective clothing impervious to this material.

### STORAGE PRECAUTIONS:

Do not store at temperatures above 82°C.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### ENGINEERING CONTROLS:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

### EYE / FACE PROTECTION REQUIREMENTS:

Where contact with this material is likely, eye protection is recommended.

### SKIN PROTECTION REQUIREMENTS:

Selection of specific items such as gloves, boots, apron, or full-body suit will depend on operation and potential exposure.

### RESPIRATORY PROTECTION REQUIREMENTS:

When there is potential for airborne exposures in excess of applicable limits, wear NIOSH/MSHA approved respiratory protection.

EXPOSURE GUIDELINES:

HYDROCHLORIC ACID

Recommended Exposure Limit: 5 ppm  
OSHA PEL: 5 ppm, 7 mg/m<sup>3</sup>  
OSHA TWA: 5 ppm, 7.5 mg/m<sup>3</sup>  
OSHA Ceiling Limit: 5 ppm, 7 mg/m<sup>3</sup>  
Skin Designation: Yes

HYDROGEN SULFIDE

OSHA TWA: 10 ppm, 14 mg/m<sup>3</sup>  
OSHA STEL: 15 ppm

**9. PHYSICAL AND CHEMICAL PROPERTIES**

FORM:	Liquid
COLOR:	Brown to Black
ODOR:	Asphalt Odor
BOILING POINT:	100 C @ 760 mm Hg
VAPOR PRESSURE:	Same as water mm Hg @ 21 C
VAPOR DENSITY:	Same as water (Air = 1)
SOLUBILITY IN WATER:	Dispersible
SPECIFIC GRAVITY:	1.0 - 1.1 (Water = 1)
MELTING/FREEZING POINT:	0 C
pH:	2-6
% VOLATILES:	<35 % @ 21 C @ 760 mm Hg
VOC:	<2

**10. STABILITY AND REACTIVITY**

STABILITY:  
This compound is stable at ambient conditions.

POLYMERIZATION:  
Hazardous polymerization will not occur.

INCOMPATIBILITY WITH OTHER MATERIALS:  
Avoid contact with strong bases.

DECOMPOSITION:  
Decomposition will not occur if handled and stored properly.

CONDITIONS TO AVOID:  
Avoid extreme temperatures.

**11. TOXICOLOGICAL INFORMATION**

EYE EFFECTS:  
Irritating, and may injure eye tissue if not removed promptly.

## 12. ECOLOGICAL INFORMATION

### ENVIRONMENTAL HAZARDS:

This material should be prevented from uncontrolled applications to soil or earth. This material is a water pollutant and should be prevented from entering storm water, sewage drainage systems and bodies of water.

## 13. DISPOSAL CONSIDERATIONS

### WASTE DISPOSAL:

Treat or dispose of waste material in accordance with all local, state/provincial, and national requirements. Avoid disposal into waste water treatment facilities.

### CONTAMINATED MATERIALS:

Treat as product waste.

### CONTAINER DISPOSAL:

Unclean empty containers should be disposed of in the same manner as the contents.

## 14. TRANSPORTATION INFORMATION

PRODUCT LABEL: PASS ®  
D.O.T. SHIPPING NAME: Non Regulated, Water Based Asphalt Emulsion  
D.O.T. HAZARD CLASS: Non-Hazardous

## 15. REGULATORY INFORMATION

### EEC Symbols and Indications of Danger:

Irritant (Xi), Corrosive (C)

### R-Phrases:

R34 - Causes burns.

R36/37/38 - Irritating to eyes, respiratory system, and skin.

### WHMIS Hazard Symbols:

Class E - Corrosive Material

### CERCLA Hazardous Substances

HYDROCHLORIC ACID (7647-01-0) -- RQ 5000 lb

HYDROGEN SULFIDE (7783-06-4) -- RQ 100 lb

### RCRA Hazardous Substances

HYDROGEN SULFIDE (7783-06-4) -- RCRA Code: U135

### California Proposition 65:

This product contains one or more chemicals known to the State of California to cause cancer and/or reproductive harm.

### Clean Air Act - Section 112

HYDROCHLORIC ACID (7647-01-0)

Title V

HYDROCHLORIC ACID (7647-01-0)  
HYDROGEN SULFIDE (7783-06-4)

SC Toxic Air Pollutants List

HYDROCHLORIC ACID (7647-01-0)  
HYDROGEN SULFIDE (7783-06-4)

SARA Title II – Section 313

There are no known ingredients subject to reporting.

TSCA Inventory Status

All ingredients of this product are listed.

## 16. OTHER INFORMATION

REASON FOR ISSUE: Original  
PREPARED BY: Amy Carpenter  
APPROVED BY: Jack Dougherty  
TITLE: Emulsion Division Operations Manager  
APPROVAL DATE: 8/19/03  
SUPERCEDES DATE: 8/19/03

*This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Reed & Graham. The data on this sheet are related only to the specific material designated herein. Reed & Graham assumes no legal responsibility for use or reliance upon these data.*

END OF MSDS