Cationic Emulsions
R&G SDS Number: 002

SAFETY DATA SHEET

Section 1: Identification of product / manufacturer / utilization

Product form: Liquid
Product name: PMCQS-1h, LMCQS-1h, CQS-1h, PMCRS-2h, LMCRS-2h, CRS-2h, CSS-1h, MSE, PMAS

Synonyms: Cationic Asphalt Emulsion

Manufacturer

Reed & Graham, Inc.
690 Sunol Street
San Jose, CA 95126 USA
(408) 287-1400

Emergency telephone number

CHEMTREC 1-800-424-9300

Section 2: Hazards identification

Classification of mixture:

- Eye Irritant – Category 2A
- Skin Corrosion/Irritation – Category 2
- Respiratory/Skin Sensitizer – Category 1

Signal word: *WARNING*

Hazard Statements:

- May cause skin and eye irritation.
- Vomiting may occur if swallowed.
- Substance may be harmful if swallowed irritating mouth, throat and / or stomach
- Fumes from heated material may be irritating.
- Prolonged or excessive inhalation may cause respiratory tract irritation.
- 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, and chest discomfort and skin irritation.

Precautionary Statements:

- Obtain and read product data sheet for instructions of use
- Do not handle material until all the safety data sheet has been obtain, read and understood.
- Contact with hot material may cause thermal burns

Prevention

- Do not eat, drink or smoke when using this product
- Do not breathe fume/gas/mist/vapors/spray
- Wear protective gloves/protective clothing/eye protection/face protection
- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood

Response

- If swallowed: Rinse mouth. DO NOT induce vomiting. Immediately call a poison center/doctor
- If on skin or hair: take off immediately all contaminated clothing. Rinse skin with water/shower.
- If inhaled: Remove person to fresh air and keep comfortable for breathing
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
- Continue rinsing. Immediately call a poison center / doctor

GHS pictogram

Storage

- Store in an appropriate container or containment structure

Disposal

- Dispose of contents/container in accordance with local/regional/national regulations

Section 3: Composition / Information on Ingredients

Chemical Name	*Amount*	*CAS Number*
Asphalt (Petroleum)	60 - 70 %	8052-42-4
Water	< 3.0%	7732-18-5
Hydrochloric Acid	< 2.0%	7647-01-0
Hydrogen Sulfide	< 0.5%	7783-06-4
Emulsifier (Confidential Ingredient A)	< 3.0%	TRADE SECRET
Latex (Confidential Ingredient B)	0.0 – 5.0%	TRADE SECRET

Component Information/Information on Non-Hazardous Components
General Information
Concentration values are typical and may vary. Although specific identities of some products components are being withheld as trade secrets, known pertinent hazard are addressed in individual SDS.

Section 4: First Aid Measures

GENERAL FIRST AID MEASURES:

Get prompt medical attention. Cool exposed area with water to dissipate heat. Get prompt medical attention. If solidified, do not attempt to remove; only medically approved solvents can be removed affected area.

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 try to remove solidified material from the skin. DO NOT try to dissolve with solvents or thinners. Get medical attention immediately.

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.

Section 5: Fire Fighting Measures

EXTINGUISHING MEDIA:

Suitable extinguishing media:
Use alcohol foam, carbon dioxide or water spray when fighting fires involving this material

Unsuitable extinguishing media:
Exercise care when using water as contact with hot asphalt products – may produce steam and violent foaming.

SPECIAL HAZARDS:

Fire Hazard:	Product is an aqueous solution. Heated product may produce hazardous fumes, decomposition products or residues. Small quantities of hydrogen sulfide may be release upon heating.
Explosion Hazard:	None
Reactivity:	Avoid contact with strong bases
Advice for Firefighters:	Decomposition may produce fumes, smoke, oxides of carbon and hydrocarbons and possible small quantities of hydrogen sulfide. Avoid breathing vapors from heated material. Combustion may produce CO, NOx, SOx and reactive hydrocarbons
Protection for firefighting:	As in any fire, wear self-contained breathing apparatus pressure-demand MSHA/NIOSH approved and full protective gear

Section 6: Accidental Release Measures

General Measures:	Clean up spills immediately using appropriate personal protective equipment.
Non-Emergency Personnel:	
Protective equipment:	Glove, safety glasses, boots.
Emergency procedures:	Absorb spills with absorbent material or sand.
For Emergency Responders:	
Protective equipment:	Gloves, safety glasses, boots

Emergency procedures:	Stop the source of the release. Clean up release as soon as possible.
Environmental precaution:	Prevent contamination of soil, surface water or groundwater
***Method for containment/clean up*:**	Absorb spills with absorbent materials. Contain spilled liquid with sand or earth. Contain liquid to prevent contamination of soil, surface water or groundwater. Large spillage would be dammed off and pumped into containers. Prevent materials from entering streams, drainages or sewers.

Section 7: Handling and Storage

Shelf life:	1 day @ 82°C (in original, sealed containers)
Additional Hazard:	When handling hot material, use protective clothing impervious to this material.
Safe Handling:	Use good hygiene measure: wash exposed areas with mild soap and water before eating, drinking or smoking and again when leaving work.
Storage conditions:	Do not store at temperatures above 82°C
Additional handling:	When sampling containers use appropriate personal protective equipment such as gloves that are heat resistant, safety glasses, work boots and appropriate clothing. Avoid breathing vapors from heated material. Avoid contact with eyes, skin, and clothing.

Sections 8: Exposure Controls / Personal Protections

Engineering measures:	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.	
Eye/Face protection:	Where contact with this material is likely, eye protection is recommended.	
Skin protection:	Selection of specific items such as gloves, boots, apron or full body suit will depend on operation and potential exposure**.**	
Respiratory Protection:	Where there is potential for airborne exposure in excess of applicable limit, wear NIOSH/MSHA approved respiratory protection.	
Exposure Guidelines:		
Hydrochloric Acid:	NIOSH REL	5 ppm
	OSHA PEL	5 ppm, 7mg/m3
	OSHA Ceiling Limit	5 ppm, 7mg/m3
	Skin designation	
Hydrogen Sulfide:	NIOSH REL	C 10ppm, 15mg/m3 (10min)
	OSHA PEL	C 20ppm, 50ppm (10min)

Sections 9: Physical and chemical properties

Information of basic physical and chemical properties

Physical state:	Liquid
Appearance:	Brown to Black
Odor:	Asphalt odor
pH	2-6
Melting point:	0°C
Freezing point:	0°C
Specific gravity:	1.0-1.1(water = 1)
Boiling point:	100°C @ 7600mm Hg
Flash point	None
UEL:	N/A
LEL:	N/A
Vapor pressure:	Same as water mmHg @21°C
Relative vapor density at 20°C	1
Solubility:	Soluble in water
%Volatiles:	<35% @21°C @ 760b mmHg
VOC:	<2%

Section 10: Stability and Reactivity

Reactivity:	Low
Chemical stability:	This compound is stable at ambient conditions.
Conditions to avoid:	Avoid extreme high temperatures
Possibility of hazardous reactions:	Low
Hazardous decomposition products:	Decomposition will not occur if handled and stored properly
Incompatible materials:	Avoid contact with strong bases.

Section 11: Toxicological Information

Skin corrosion:	May cause irritation and a rash with prolonged or repeated contact with skin
Serious eye damage:	Irritating, may injure eye tissue if not removed promptly.
Respiratory or skin sensitization:	Repeated contact may cause skin irritation; prolonged inhalation may cause respiratory tract irritation

Germ cell mutagenicity:	None
Carcinogenicity:	IARC has determined hydrochloric acid may be carcinogenic in humans
Reproductive toxicity:	This product contains one or more chemicals known to cause reproductive harm.
Specific target organ toxicity (single exposure):	Skin and or respiratory irritation, mild
Specific target organ toxicity (repeated exposure):	Skin, respiratory, kidney and liver
Aspiration hazard:	Respiratory distress as a result of aspiration
Symptoms after inhalation:	Respiratory tract irritation, cough, chest discomfort
Symptoms after eye contact:	Eye Tearing, irritation burns if contact made with heated material
Symptoms after ingestions:	Harmful if swallowed, irritating to mouth, throat and stomach

Section 12: Ecological Information

Environmental Hazards
This material should be prevented from uncontrolled applications to soil or earth. This material should be prevented from entering storm water, sewage drainage system and bodies of water.

Section 13: Disposal Consideration

Waste Disposal Instructions
This product, as supplied, when discarded or disposed of, may be a hazardous waste according to Federal regulations (40 CFR 261). Under the Resource Recovery Act (RCRA), it is the responsibility of the user of the product to determine whether the material is a hazardous waste subject to RCRA. Treat or dispose of waste material in accordance with all local, state/provincial and national requirements. Avoid disposal into wastewater treatment facilities.

Disposal of Contaminated Containers or Packaging
Unclean empty containers should be disposed of in the same manner as the contents.

Contaminated Materials
Treat as product waste.

Section 14: Transport Information

Product label:	PMCQS-1h, LMCQS-1h, CQS-1h, PMCRS-2h, LMCRS-2h, CRS-2h, CSS-1h, MSE, PMAS
UN Number:	Non-hazardous, no UN number
DOT Shipping Name:	Non Regulated, Water Based Asphalt Emulsion

DOT Hazard Class: Non-hazardous

Section 15: Regulatory Information

EEC Symbols and Indications of Danger:	Irritant (Xi)
R-Phrases:	R36/37/38 – Irritating to eyes, respiratory system and skin
WHMIS Hazard symbols:	Class D – irritant
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 – 112:	Hydrochloric acid (7647-01-0)
Title V:	Hydrochloric acid (7647-01-0) Hydrogen sulfide (7783-06-4)
CERCLA Hazardous sub:	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 0- Section 313:	There are no known ingredients subject to reporting
TSCA Inventory Status:	All ingredients of the product are listed.

Section 16: Other Information

Hazardous Material Information System (HMIS):	Health	1
	Flammability	1
	Physical Hazard	
	Personal Protection	B

NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme
Protective Equipment: Safety glasses, gloves, respirator

Key/Legend
EPA – Environmental Protection Agency; TSCA = Toxic Substance Control Act: ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute of Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration, CERCLA = Comprehensive Environmental Response Compensation & Liability Act of 1980, WHMIS = Workplace Hazardous Materials Information System

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