

Safety Data Sheet

Issue Date: 01-Sep-2005

Revision Date: 04-Dec-2015

Version 1

1. IDENTIFICATION

Product Identifier

Product Name HMC-25

Other means of identification

SDS # RAM-005-R

Recommended use of the chemical and restrictions on use

Recommended Use For industrial use.

Details of the supplier of the safety data sheet

Manufacturer Address

Red Arrow Manufacturing
1761 East 64th Avenue
Denver, CO 80229-7403

Emergency Telephone Number

Company Phone Number Phone: 1-303-375-0908
Fax: 1-303-375-9090
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Green liquid

Physical State Liquid

Odor Mild solvent

Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Carcinogenicity	Category 2

Hazards Not Otherwise Classified (HNOC)

May be harmful if swallowed

Signal Word

Danger

Hazard Statements

Causes skin irritation
Causes serious eye damage
May cause an allergic skin reaction
Suspected of causing cancer



Precautionary Statements - Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Wear protective gloves/protective clothing/eye protection/face protection
 Wash face, hands and any exposed skin thoroughly after handling
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Contaminated work clothing must not be allowed out of the workplace

Precautionary Statements - Response

If exposed or concerned: Get medical advice/attention
 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 or doctor
 IF ON SKIN: Wash with plenty of water and soap
 Take off contaminated clothing and wash it before reuse
 If skin irritation or rash occurs: Get medical advice/attention

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Harmful to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Proprietary	Proprietary	1-10
Proprietary	Proprietary	<5
Proprietary	Proprietary	<5
Proprietary	Proprietary	<1
Proprietary	Proprietary	<1

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

General Advice	If exposed or concerned: Get medical advice/attention.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
Skin Contact	Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention.
Inhalation	Remove to fresh air.
Ingestion	Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects

Symptoms	May be harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. Suspected of causing cancer.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Carbon dioxide (CO₂). Dry chemical. Foam. Water. Any "ABC" class.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Pressure may develop in closed containers if temperatures over 90.6°C (195°F) are achieved.

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. Water can be used to cool fire exposed containers.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Personal Precautions Use personal protective equipment as required.

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 minor spills, flush away with water or soak up with sweeping compound or sand and transfer to a disposal container.

7. HANDLING AND STORAGE**Precautions for safe handling**

Advice on Safe Handling Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing and eye/face protection. Wash face, hands and any exposed skin thoroughly after handling. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store locked up. Storage between 4.4°C (40°F) and 37.8°F (100°F) is recommended. If frozen, thaw out at room temperature and remix until clear. Store in DOT plastic container or similar plastic bulk tank.

Incompatible Materials Strong oxidizing agents or anything reactive with water.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Proprietary	TWA: 20 ppm	TWA: 50 ppm TWA: 240 mg/m ³ (vacated) TWA: 25 ppm (vacated) TWA: 120 mg/m ³ (vacated) S* S*	IDLH: 700 ppm TWA: 5 ppm TWA: 24 mg/m ³
Proprietary	STEL: 6 ppm TWA: 3 ppm	TWA: 3 ppm TWA: 6 mg/m ³ (vacated) TWA: 3 ppm (vacated) TWA: 8 mg/m ³ (vacated) STEL: 6 ppm (vacated) STEL: 15 mg/m ³	IDLH: 30 ppm TWA: 3 ppm TWA: 8 mg/m ³ STEL: 6 ppm STEL: 15 mg/m ³
Proprietary	TWA: 1 mg/m ³ inhalable fraction and vapor S*	(vacated) TWA: 3 ppm (vacated) TWA: 15 mg/m ³	TWA: 3 ppm TWA: 15 mg/m ³

Appropriate engineering controls

Engineering Controls

Showers. Eyewash stations. Local exhaust ventilation is preferable, mechanical exhaust ventilation is acceptable.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Chemical safety goggles/face shield. Refer to 29 CFR 1910.133 for eye and face protection regulations.

Skin and Body Protection

Rubber gloves. Other protective clothing or equipment is usually not needed unless splashing is excessive. Refer to 29 CFR 1910.138 for appropriate skin and body protection.

Respiratory Protection

Not normally needed. Refer to 29 CFR 1910.134 for respiratory protection requirements.

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

Physical State	Liquid	Odor	Mild solvent
Appearance	Green liquid	Odor Threshold	Not determined
Color	Green		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	5% solution approximately 9.7	
Melting Point/Freezing Point	N/A	
Boiling Point/Boiling Range	90.6 °C / 195 °F	
Flash Point	N/A	
Evaporation Rate	N/A	
Flammability (Solid, Gas)	Liquid-Not applicable	
Upper Flammability Limits	N/A	
Lower Flammability Limit	N/A	
Vapor Pressure	N/A	
Vapor Density	Heavier than air	
Specific Gravity	1.03	
Water Solubility	Completely soluble	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
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.

Hazardous Polymerization

Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to Avoid

Incompatible Materials.

Incompatible Materials

Strong oxidizing agents or anything reactive with water.

Hazardous Decomposition Products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Causes serious eye damage.

Skin Contact Causes skin irritation.

Inhalation Not determined.

Ingestion May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Proprietary	= 470 mg/kg (Rat)	= 99 mg/kg (Rabbit)	= 450 ppm (Rat) 4 h
Proprietary	= 1720 mg/kg (Rat)	= 1 mL/kg (Rabbit) = 1000 mg/kg (Rabbit)	-
Proprietary	Not available	-	-
Proprietary	= 7400 mg/kg (Rat)	-	-
Proprietary	= 1400 mg/kg (Rat) = 1378 mg/kg (Rat)	> 2 g/kg (Rabbit)	-
Proprietary	= 625 mg/kg (Rat)	= 2115 mg/kg (Rabbit)	-
Proprietary	= 620 µL/kg (Rat) = 0.62 mL/kg (Rat)	= 7640 µL/kg (Rabbit)	-

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

Sensitization May cause an allergic skin reaction.

Carcinogenicity Suspected of causing cancer.

Chemical Name	ACGIH	IARC	NTP	OSHA
Proprietary	A3	Group 3		
Proprietary		Group 2B		X
Proprietary	A3	Group 2B		X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
 A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
 Group 2B - Possibly Carcinogenic to Humans
 Group 3 IARC components are "not classifiable as human carcinogens"
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
 X - Present

Numerical measures of toxicity

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Proprietary		1490: 96 h Lepomis macrochirus mg/L LC50 static 2950: 96 h Lepomis macrochirus mg/L LC50		1000: 48 h Daphnia magna mg/L EC50 1698 - 1940: 24 h Daphnia magna mg/L EC50
Proprietary	15: 72 h Desmodesmus subspicatus mg/L EC50	200: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 114 - 196: 96 h Oncorhynchus mykiss mg/L LC50 static 3684: 96 h Brachydanio rerio mg/L LC50 static 300 - 1000: 96 h Lepomis macrochirus mg/L LC50 static 227: 96 h Pimephales promelas mg/L LC50 flow-through		65: 48 h Daphnia magna mg/L EC50
Proprietary	7.8: 72 h Desmodesmus subspicatus mg/L EC50 2.1 - 2.3: 96 h Pseudokirchneriella subcapitata mg/L EC50	4460 - 4980: 96 h Pimephales promelas mg/L LC50 flow-through 1200 - 1580: 96 h Pimephales promelas mg/L LC50 static 600 - 1000: 96 h Lepomis macrochirus mg/L LC50 static	EC50 = 73 mg/L 5 min EC50 > 16 mg/L 16 h	55: 48 h Daphnia magna mg/L EC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Proprietary	0.81
Proprietary	-1.91
Proprietary	-2.18

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.

US EPA Waste Number

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Proprietary	U240			U240

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**Marine Pollutant**

This material may meet the definition of a marine pollutant

15. REGULATORY INFORMATION

International Inventories

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

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Proprietary	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ
Proprietary	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ
Proprietary	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ

SARA 313

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Proprietary -		1-10	1.0
Proprietary -		<1	1.0

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Proprietary -	Carcinogen
Proprietary -	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Proprietary	X	X	X
Proprietary	X	X	X

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Proprietary		X	
Proprietary		X	X
Proprietary	X	X	X

16. OTHER INFORMATION

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

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 Revision Note: New format

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