

MATERIAL SAFETY DATA SHEET



MSDS - HG-R20, 11 & 7
Pad Print Machinery of VT, Inc.
P.O. Box 720
East Dorset, VT 05253

Information Ph: 800-272-7764
24 Hour Emergency # 800-535-5053

1. PRODUCT IDENTIFICATION

Product Name HG-R20
Product Description SCARLET
Product Category
MSDS Identification No. 000001047363
MSDS Date 03/23/06

2. COMPOSITION (Hazardous Components)

The components listed below are identified as hazardous chemicals based upon the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Chemical Name	CAS Number	Concentration (wt %)
Hydroxyacetic Acid Butyl Ester	7397-62-8	19.27
Cyclohexanone	108-94-1	14.09
n-Butyl Acetate	123-86-4	10.18
Diacetone Alcohol	123-42-2	7.00
1-Methoxy-2-Propanol Acetate	108-65-6	5.39
2-Butoxyethyl Acetate	112-07-2	4.00

For further information on the individual hazardous component(s) listed above, please refer to the Toxicological Information section of the MSDS (Section 11).

3. PRODUCT HAZARDS IDENTIFICATION

Emergency Overview

Combustible Liquid and Vapor.
Material may be irritating to skin and eyes.
May cause respiratory tract irritation.
May cause central nervous system effects.

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Potential Health Effects

Inhalation and dermal contact are expected to be the primary routes of occupational exposure. The following statements are based upon an assessment of the health effects associated with the components present in this product mixture.

Eye

Direct contact with this product or excessive exposure to vapors may cause moderate to severe eye irritation. Symptoms may include stinging, tearing, redness, swelling and/or burning. This product contains component(s) known to cause severe irritation and/or injury to the eye.

Skin

This product may cause mild to moderate skin irritation. Prolonged or repeated exposure may result in contact dermatitis which is characterized by redness, itching, drying and/or cracking of the skin.

Inhalation

Inhalation of excessive quantities of vapors may cause irritation of the nose, throat and respiratory tract, as well as headache, nausea, dizziness, loss of coordination and fatigue.

Ingestion

Ingestion of this product may cause gastrointestinal irritation, headache, nausea, vomiting, diarrhea, dizziness, loss of coordination and fatigue.

Chronic Effects

Chronic overexposure may result in liver abnormalities, kidney damage and blood disorders.

Medical Conditions Aggravated by Exposure

Preexisting skin disorders may be aggravated by exposure to this product.

4. FIRST AID MEASURES

Eye Contact

In case of direct contact, flush eyes with clean water for at least 15 minutes. Seek medical attention if irritation or redness develops and persists.

Skin Contact

Remove contaminated clothing. Wash affected area thoroughly with soap and water. Seek medical attention if irritation or redness develops and persists.

Inhalation

Remove affected person away from source of exposure and into fresh air. If breathing difficulties develop, oxygen should be administered by qualified personnel. If breathing has stopped give artificial respiration. Seek immediate medical attention.

Ingestion

Ingestion is an unlikely route of exposure under normal industrial conditions. However, if appreciable quantities of this product are accidentally swallowed, seek immediate medical attention.

5. FIRE FIGHTING MEASURES

Flash Point (degree F)	Equal or greater than 100 F and less than or equal to 141 F (Closed Cup)
Flash Point Category (OSHA/NFPA)	II - Combustible
Lower Flammability Limit in Air (% by Vol)	.9

NOTE : Flash point value/category has been derived from testing of products of similar composition.

Extinguishing Media

Extinguish with a multipurpose fire fighting foam, water spray, dry chemical or carbon dioxide.

Fire Fighting Instructions

The use of self-contained breathing apparatus is recommended for firefighters. Water spray may be used to cool containers exposed to heat near flame. Avoid spreading burning liquid with water used for cooling purposes.

Fire and Explosion Hazards

This product is (OSHA) combustible and may be ignited by heat, sparks, flame or static electricity. Closed containers may build up pressure and rupture when subjected to extreme heat. Vapors are heavier than air, may travel along the ground and may be moved by ventilation; flashback along vapor trail may occur.

6. ACCIDENTAL RELEASE MEASURES

Eliminate all sources of ignition. Keep unnecessary personnel away from spill area. Ventilate area of spill; use appropriate personal protective equipment.

For large spills, a multipurpose foam may be used to suppress vapors. Contain the spill by diking with sand or other inert material. Keep out of drains, sewers or waterways. Transfer product to suitable containers for recovery or disposal. Do not flush area with water. If necessary, follow emergency response procedures.

For small spills, do not flush with water; use an inert absorbent material.

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7. HANDLING AND STORAGE

Keep containers tightly closed. Keep containers cool and dry. Protect from freezing. Use and store this product with adequate ventilation. Use appropriate protective equipment when handling this product and maintain good personal hygiene practices.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Provide adequate general (dilution) and/or local exhaust ventilation to maintain airborne contaminants below the established exposure limits. It is suggested that a source of clean water be made available in work area for flushing eyes and skin.

Personal Protective Equipment

Eye / Face Protection

The use of chemical splash goggles or safety glasses is recommended to prevent eye contact.

Skin Protection

The use of impermeable, solvent resistant gloves is advised to prevent skin contact. Use chemical resistant apron if splash hazard exists.

Respiratory Protection

If vapor concentration does not exceed established exposure limits, respiratory protection is not normally required.

If vapor concentration exceeds established exposure limits, use a NIOSH/ MSHA approved respirator. Respirators should be selected and used in accordance with OSHA directive 29 CFR 1910.134.

Established Exposure Guidelines

Chemical Name	ACGIH-TLV		OSHA-PEL		
	TWA	STEL	TWA	STEL	
Cyclohexanone	25.00 ppm	N/E	25.00 ppm	N/E	(skin)
n-Butyl Acetate	150.00 ppm	200.00 ppm	150.00 ppm	200.00 ppm	
Diacetone Alcohol	50.00 ppm	N/E	50.00 ppm	N/E	

N/E = Not Established

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point / Range (degree F)	257 F - 392 F
Typical Density (lbs/gal)	8.63
Vapor Density (excluding water) vs. Air	Heavier
Evaporation Rate (vs. Butyl Acetate)	Slower
Appearance	Viscous Liquid
Volatile Organic Compounds (wt%)	60.13

10. STABILITY AND REACTIVITY

Stability

Stable. Hazardous polymerization will not occur.

Conditions to Avoid

Keep product away from heat, sparks, and open flames.

Incompatibility

This product is incompatible with strong acids or bases and oxidizing agents.

Hazardous Decomposition Products

By high heat and fire: carbon dioxide, carbon monoxide and/or oxides of nitrogen and sulfur.

11. TOXICOLOGY OF COMPONENTS

Information pertaining to the health effects and toxicity of the "pure" form of the hazardous components identified in Section 2 is presented below. This information reflects the known hazards associated with the component and may not reflect that of the purchased material due to concentration (dilution) effects. Review and interpretation by your Hazard Communication Department is recommended.

Hydroxyacetic Acid Butyl Ester (19.27 %)

Can cause severe eye irritation. Direct contact may cause redness, swelling and possible eye injury.

Cyclohexanone (14.09 %)

May cause eye and skin irritation. Inhalation of excessive vapor concentrations can cause nose and throat irritation. Ingestion may cause gastrointestinal tract irritation. Inhalation or ingestion of excessive amounts may cause central nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination and fatigue).

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n-Butyl Acetate (10.18 %)

Causes eye and skin irritation. Eye contact may cause stinging, watering and redness. Skin contact may cause redness and burning of skin. Repeated or prolonged exposure may cause drying and cracking of skin. Other effects of overexposure may include irritation of the nose and throat, irritation of the respiratory tract and signs of nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination and fatigue).

Diacetone Alcohol (7.00 %)

May cause eye and skin irritation. Eye contact may cause stinging, watering and redness. Other effects of overexposure may include irritation of the nose and throat, irritation of the digestive tract, and vomiting. Exposure to excessive amounts may cause nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination and fatigue). Repeated, intentional mis-use or ingestion can cause liver, kidney and blood disorders.

1-Methoxy-2-Propanol Acetate (5.39 %)

Can cause severe eye irritation. Direct contact may cause redness, swelling and possible eye injury.

2-Butoxyethyl Acetate (4.00 %)

This material may cause eye and skin irritation. Eye contact may cause redness and tearing. Repeated or prolonged skin contact may cause redness, and swelling. May be absorbed through the skin in harmful amounts. Ingestion can cause irritation of the digestive tract, nausea, vomiting, diarrhea and signs of nervous system depression, (i.e., drowsiness, dizziness, loss of coordination and fatigue). Chronic overexposure has shown liver, kidney and blood disorders in laboratory animals.

12. DISPOSAL CONSIDERATIONS

Dispose of product in accordance with local, county, state and federal environmental regulations. Do not introduce this product directly into public sewer systems.

Since emptied containers may retain product residues, all hazard precautions given in this data sheet should be observed.

13. REGULATORY INFORMATION

Toxic Substances Control Act (TSCA)

The chemical components of this product are listed or have been registered for inclusion on the Section 8(B) Chemical Substance Inventory List (40 CFR 710).

This product contains a chemical which is reportable under the export notification requirements of TSCA, Section 12(B).

EPCRA Section 313 Supplier Notification

This product contains the following substance(s) which are subject to the supplier notification requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372).

Chemical / Category	CAS #	Concentration (wt %)
Glycol Ethers	Not Applicable	4.00

Clean Air Act Amendment (HAPs)

This product contains the following substance(s) which are defined as Hazardous Air Pollutants under Title III of the Clean Air Act Amendments of 1990.

Chemical Name	CAS #	Concentration (wt %)
Glycol Ethers	Not Applicable	4.00

Clean Air Act Amendment (ODC's)

This product does not contain and is not manufactured with any of the ozone depleting chemicals listed under Section 602 of the Clean Air Amendments of 1990.

California Proposition 65

This product does not contain any chemicals which are defined by the state of California to cause cancer and/or reproductive toxicity.

CONEG

This product is certified to be in full compliance with CONEG Model Toxics Legislation for packaging and packaging components.

OSHA Hazard Communication Label for Product**WARNING!**

COMBUSTIBLE LIQUID AND VAPOR
MAY CAUSE SKIN AND EYE IRRITATION
MAY CAUSE RESPIRATORY TRACT IRRITATION
MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS

Please refer to the MSDS for more details.

Keep away from heat and flame.

Keep containers closed.

Use with adequate ventilation.

Avoid contact with eyes, skin and clothing.

Use appropriate personal protective equipment.

Avoid breathing vapor.

Wash thoroughly after handling.

FIRST AID : In case of contact, flush eyes or skin with plenty of water.

Remove contaminated clothing. Seek medical attention if irritation develops or persists. If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.

Seek medical attention.

IN CASE OF FIRE, use a multipurpose fire fighting foam, water spray, dry

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chemical or carbon dioxide.

Empty containers may retain product residues, all hazard precautions given on this label should be observed.

DO NOT REMOVE THIS LABEL.

14. ADDITIONAL COMMENTS

Hazardous Materials Information System (HMIS)

Health 2

Flammability 2

Reactivity 0

NOTICE : These ratings are intended only for the immediate and general identification of acute hazards. Pad Print Machinery is providing this information on a voluntary basis as a guide for our customers. The use and interpretation of this information may vary from company to company. All information contained in this data sheet should be considered in order to adequately deal with the safe handling of this material.

Revision Date

01/21/06

The information presented in this data sheet represents a compilation of information generated from our suppliers and other recognized sources of scientific evidence and chemical information. To the best of our knowledge and belief, it is accurate and reliable as of the date of issue. However, no warranty, express or implied, including any warranty of merchantability, fitness for any use, or any other guarantee is offered or implied regarding the accuracy of such data, the results to be obtained from the use thereof, the safety of this product, or the hazards connected with the use of this material. Since the conditions of handling and use of this material are beyond our control, Pad Print Machinery shall assume no liability for damages incurred by the use of the material. This information and product are furnished on the condition that the person receiving them shall make his own determination as to the suitability and completeness of this information, the safety measures necessary to handle this product, and the actions needed to comply with all applicable Federal, State, and Local Legislation.

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VOLATILE COMPONENT INFORMATION

US EPA
Designate

A. Product Density:

1.) 8.63 LB Product /gal Product = (Dc)s

B. Nonvolatile Content:

1.) 39.85 Weight percent of nonvolatiles in product = (Wn)s
 2.) 34.29 Volume percent of nonvolatiles in product = (Vn)s
 3.) 10.03 Density, lb nonvolatiles/gal nonvolatiles = (Dn)s

C. Volatiles:

1.) 60.15 Weight percent of total volatiles in product = (Wv)s
 2.) 7.90 Density, lb volatiles/gal volatiles = (Dv)s

D. Water Content:

1.) 0.02 Weight percent of water in product = (Ww)s
 2.) 0.02 Volume percent of water in product = (Vw)s

E. Organic Volatiles, (VOCs):

1.) 60.13 Weight percent of organic volatiles in product = (Wo)s
 2.) 65.73 Volume percent of organic volatiles in product = (Vo)s
 3.) 7.90 Density, lb organic volatiles /gal organic volatiles = (Do)s
 4.) 99.97 Weight percent of VOCs in total volatiles = (Wo)v
 5.) 99.97 Volume percent of VOCs in total volatiles = (Vo)v

F. VOC Content in Product Expressed in Other Terms:

1.) a.) 5.19 lb VOC / gal Product
 1.) b.) 622.05 grams VOC / liter Product
 2.) a.) 5.19 lb VOC / gal Product less water & exempt solvent
 2.) b.) 622.15 grams VOC / liter Product less water & exempt solvent
 3.) 15.13 lb VOC / gal total nonvolatiles

G. Volatiles: (all VOCs, HAPs, water & ammonia)

Ingredient	CAS Number	Weight Percent	Density (lb/gal)
Hydroxyacetic Acid Butyl Ester	7397-62-8	19.27	8.33
Cyclohexanone	108-94-1	14.09	7.92
n-Butyl Acetate	123-86-4	10.18	7.31
Diacetone Alcohol	123-42-2	7.00	7.84
1-Methoxy-2-Propanol Acetate	108-65-6	5.39	7.75

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2-Butoxyethyl Acetate	112-07-2	4.00	7.84
N-Butanol	71-36-3	0.20	6.76
Non HAP/SARA Organic Volatiles		0.00	7.75
Water	7732-18-5	0.02	8.34

NOTE : The term Volatile Organic Compounds (VOC) refers only to volatile organic materials as defined by the US EPA and does not include water, ammonia, acetone or other exempt solvents. Unless otherwise stated, the VOC values reported above are based on materials of construction.

See Section 13 of the MSDS for identification of the HAPs ingredients.