



MATERIAL SAFETY DATA SHEET

ROYAL MH-30® XTRA

Version: 1.7
Date of Issue: 10/26/2007
Date printed: 10/27/2007

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : ROYAL MH-30® XTRA EPA Reg. No.: 400-452

Chemical name: Maleic Hydrazide

Use of substance/preparation: Plant Growth Regulator

Supplier: Chemtura Corporation
199 Benson Road
Middlebury, CT 06749 USA

Emergency telephone number: CHEMTREC (24 hours) 800-424-9300, 703-527-3887
Chemtura Corporation Emergency Response (24 hours) 800-292-5898

Environmental, Health and Safety Department: 866-430-2775

Prepared by Product Safety Department Date of Issue: 10/26/2007
(US) +1 866-430-2775
(EU) +44 (0) 1753.603.000
Email: MSDSRequest@chemtura.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION!

CAUSES SEVERE EYE IRRITATION.
MAY CAUSE MILD IRRITATION OF THE SKIN.
MAY BE HARMFUL IF ABSORBED THROUGH SKIN.

3. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT	% BY WEIGHT
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1,2-Dihydro-3,6-pyridazinedione, potassium salt CAS# 28382-15-2	30.3
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Ingredients not precisely identified are non-hazardous and/or proprietary.



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4. FIRST AID MEASURES

Swallowing

Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

Inhalation

Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Skin contact

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

Eye contact

Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lens, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

5. FIRE-FIGHTING MEASURES

Flash point: 212 °F 100 °C
Autoignition temperature: 418.2 °C (784 °F)
Fire point

Hazardous combustion products

Irritating fumes.
Oxides of carbon.

Special fire fighting procedures

Do not discharge extinguishing waters into streams, rivers and lakes.

Special protective equipment for firefighters

Body covering protective clothing, full "turn-out" gear.
Self-contained breathing apparatus.

Extinguishing media

Suitable: **Large fires:**
- alcohol-type foam or universal-type foams
Small fires:
- CO2
- dry chemical
- water spray

Unsuitable: - water jets

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear suitable protective equipment.

Environmental precautions

Prevent from entering sewer system, surface water or soil., May be harmful to aquatic life.

Methods for cleaning up

Observe government regulations.

Small spills: Absorb on inert material such as sand, earth, vermiculite.
Collect for disposal.



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Large spills **Dike to contain spill.**
Pump excess material into suitable container (metal drums, metal tank, or such).

7. HANDLING AND STORAGE

HANDLING

Handling precautions

Avoid contact with eyes, skin and clothing., Use with adequate ventilation.

Other precautions

NOTE TO END-USERS: The employee protection recommendations on this MSDS may differ from those on the product label. For normal use of this product, always refer to the personal protective equipment requirements on the product label.

STORAGE

Storage requirements

Store in a cool, dry place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

PERSONAL PROTECTION

Respiratory protection

May be needed if product is used in a confined or poorly ventilated area., All respirators must be NIOSH approved.

Hand protection / protective gloves

Chemical resistant protective gloves

Eye protection

Safety glasses with side shields.

Skin protection

Wear protective clothing.

Other protective equipment

Eye bath, Safety shower

ENGINEERING CONTROLS

Ventilation

General (mechanical) room ventilation is expected to be satisfactory., Local ventilation is needed in the presence of airborne mists, sprays or aerosols and/or high vapor concentrations.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Physical state	Liquid
Color	Pale yellow
Odor	Sweet
Odor threshold	Not available

OTHER PROPERTIES

Boiling point	Not available
Melting point	Not available



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pH	7.8 1 % suspension in water
Density Vapor pressure	1.137 g/cm ³ at 20 °C
Solubility in water	Soluble
Partitioning coefficient	Not applicable
Flash point	>212 °F 100 °C
Autoignition temperature	418.2 °C (784 °F) Fire point
Dynamic viscosity	Not applicable

10. STABILITY AND REACTIVITY

Stability: This product is stable under normal storage and handling conditions.

Incompatible materials:

Oxidizing agents.
Strong acids.
Strong bases.

Hazardous combustion products:

Irritating fumes.
Oxides of carbon.

Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

SWALLOWING

Test results

Acute toxicity: LD50 Rat
Result: > 5,000 mg/kg

SKIN ABSORPTION

Test results

Acute toxicity: LD50 - Rabbit
Result: > 2,000 mg/kg

INHALATION

Test results

Acute toxicity: LC50 - Rat
Result: > 6.6 mg/l
Exposure time: 4 h

SKIN CONTACT

Test results

Skin irritation: Species: Rabbit
Result: Mild irritation

EYE CONTACT



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Test results
Eye irritation: Species: Rabbit
Result: Severe irritation

SENSITIZATION
Test results: Species: - Guinea pigs
Remark: Non sensitizing.

MUTAGENICITY
Assessment: Negative

CARCINOGENICITY
Assessment: Negative

TOXICITY TO REPRODUCTION/FERTILITY
Assessment: Negative

12. ECOLOGICAL INFORMATION

The following information is applicable to a component of this material:

Table with 2 columns: Component ecotoxicology (Maleic Hydrazide, Potassium Salt) and test results (LC50, IC50, etc.) for various organisms like Rainbow trout, Algae, and Water flea.

13. DISPOSAL CONSIDERATIONS

General: Dispose of in accordance with appropriate Federal, State, and local regulations., Do not discharge to sewers and natural waters.

14. TRANSPORT INFORMATION

DOT Classification

Not regulated if shipped or transported in containers less than 400 KG.

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class: 9
UN ID #: UN3082
Packing group: III



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IMDG Classification

This product is not regulated by IMDG.

ICAO Classification

Not regulated if shipped or transported in containers less than 400 KG.

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 Class: 9
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15. REGULATORY INFORMATION

Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of hazardous substances equal to or greater than the reportable quantities (RQ's) in 40CFR302.4.

Components present in this product at a level which could require reporting under the statute are:

Chemical name	CAS#	Max weight %
Proprietary additive	Trade secret	0.09

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQ's) and release reporting based on Reportable Quantities (RQ's) in 40CFR355 (used for SARA 302 and 304).

Components present in this product at a level which could require reporting under the statute are:

**** NONE ****

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40CFR372 (for SARA 313). This information must be included in MSDS's that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are:

**** NONE ****

New Jersey Worker and Community Right-To-Know Act (Labeling Requirements)

Chemical name	CAS#	New Jersey TS Number
1,2-Dihydro-3,6-pyridazinedione, potassium salt	28382-15-2	
Water	7732-18-5	
Proprietary additive	Trade secret	CHEM464

EPA Hazard Categories (SARA 311, 312): None

California Proposition 65

**** NONE ****

CHEMICAL INVENTORY

United States: This product is subject to regulation under the US Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and is therefore exempt from TSCA Inventory listing requirements.

16. OTHER INFORMATION



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RECOMMENDED USES AND RESTRICTIONS: NOTE TO END-USERS: This MSDS is being provided to all interested persons in accordance with federal and state right-to-know laws. Precautionary Statements, First Aid Statements and Directions for Use of this product by end-users are contained on the product label and must be followed at all times.

STP	Standard temperature and pressure
W/W	Weight/Weight
0 (HMIS)	0 (HMIS)
1 (HMIS)	Slight hazard
2 (HMIS)	Moderate hazard
3 (HMIS)	Serious hazard
4 (HMIS)	Severe hazard
X (HMIS)	Personal protection rating to be supplied by user depending on use conditions

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