



MATERIAL SAFETY DATA SHEET

PACZOL

Version: 1.0
DATE OF ISSUE: 11/02/2005
Date printed: 11/02/2005

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : PACZOL

Chemical name: Paclobutrazol

Use of substance/preparation: Plant Growth Regulator

Supplier: Crompton Manufacturing Co., a Chemtura Company
Chemtura Corporation (Worldwide HQ)
199 Benson Road
Middlebury, CT 06749 USA

Emergency telephone number CHEMTREC (24 hours) 800-424-9300
Chemtura Corporation Emergency Response
(24 hours) 800-292-5898
**For additional emergency telephone numbers
see section 16 of the Safety Data Sheet.**

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

2. COMPOSITION / INFORMATION ON INGREDIENTS

| INGREDIENT | % BY WEIGHT |
|------------|-------------|
|------------|-------------|

This product does not contain reportable hazardous ingredients as defined by the OSHA Hazard Communication Standard 29 CFR 1910.120

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION!

NORMAL PRECAUTIONS COMMON TO SAFE MANUFACTURING PRACTICE SHOULD BE FOLLOWED IN HANDLING AND STORAGE.



PACZOL

Version: 1.0
DATE OF ISSUE: 11/02/2005
Date printed: 11/02/2005

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.

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.
Wash skin with soap and water., Remove contaminated clothing., Wash clothing before re-use., Obtain medical attention if irritation persists.

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.
Remove to fresh air., Obtain medical attention.
Remove to fresh air., Give artificial respiration if not breathing., Obtain medical attention.

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.
Immediately flush eyes with water and continue washing for at least 15 minutes., Obtain medical attention.

5. FIRE-FIGHTING MEASURES

Flash point: > 199 °F > 93.3 °C

Flammable limits

Lower limit: Not available
Upper limit: Not available

Autoignition

temperature: Not available

NFPA CLASSIFICATION

| | | | |
|-----------|-----------------|---------------|---------------------|
| Health: 1 | Flammability: 1 | Reactivity: 0 | Special provisions: |
|-----------|-----------------|---------------|---------------------|

Hazardous combustion products

Burning can produce the following combustion products:
Oxides of nitrogen.



PACZOL

Version: 1.0
DATE OF ISSUE: 11/02/2005
Date printed: 11/02/2005

Oxides of carbon.
Ammonia.
Halogens and halogen oxides.

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

Unsuitable: - water jets

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear suitable protective equipment., Avoid contact with eyes and skin.

Environmental precautions

Prevent from entering sewer system, surface water or soil.

Methods for cleaning up

Observe government regulations.

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

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

Do not get in eyes., Avoid prolonged or repeated contact with skin., Avoid breathing vapor., Use with adequate ventilation., Wash thoroughly after handling.



PACZOL

Version: 1.0
DATE OF ISSUE: 11/02/2005
Date printed: 11/02/2005

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

No other exposure limits have been established

PERSONAL PROTECTION

Respiratory protection

Self-contained breathing apparatus in high vapor concentrations.

Hand protection / protective gloves

Chemical resistant protective gloves

Eye protection

Safety glasses with side shields.

Skin protection

Wear protective clothing, such as long sleeves to minimize skin contact.

Other protective equipment

Eye bath, Safety shower

ENGINEERING CONTROLS

Ventilation

General (mechanical) room ventilation is expected to be satisfactory., Special, local ventilation is needed at points where vapors can be expected to escape to the workplace air.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

| | |
|----------------|---------------|
| Physical state | Liquid |
| Color | Greyish |
| Odor | Musty |
| Odor threshold | Not available |

OTHER PROPERTIES

| | |
|---------------|----------|
| Boiling point | > 100 °C |
|---------------|----------|



MATERIAL SAFETY DATA SHEET

PACZOL

Version: 1.0
DATE OF ISSUE: 11/02/2005
Date printed: 11/02/2005

| | |
|---------------------------------------|--|
| | 212 °F |
| Melting point | 165 - 166 °C |
| pH | 7.9 (5 % H ₂ O) |
| Density | 1.05 g/cm ³ |
| Solubility in water | Slightly soluble |
| Solubility in organic solvents | No data available. |
| Partitioning coefficient | Not available |
| Flash point | > 199 °F > 93.3 °C Method: Setflash closed cup ASTM D 3828 |
| Autoignition temperature | Not available |
| Upper explosion limits | Not available |
| Lower explosion limits | Not available |

10. STABILITY AND REACTIVITY

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

Incompatible materials

Oxidizing agents.

Hazardous combustion products

Burning can produce the following combustion products:

Oxides of nitrogen.

Oxides of carbon.

Ammonia.

Halogens and halogen oxides.

11. TOXICOLOGICAL INFORMATION

SWALLOWING

Test results

Acute toxicity: LD50 Rat
Result: 5,346 g/kg

| | |
|----------------|------------|
| Component data | LD50 - Rat |
|----------------|------------|



MATERIAL SAFETY DATA SHEET

PACZOL

Version: 1.0
DATE OF ISSUE: 11/02/2005
Date printed: 11/02/2005

| | |
|--|---------------------|
| Paclobutrazol Acute toxicity - Swallowing: | Result: 1,300 mg/kg |
|--|---------------------|

| | |
|--|-------------------------------------|
| <u>Component data</u> Paclobutrazol Acute toxicity - Skin absorption: | LD50 - Rat Result: > 1,000 mg/kg |
|--|-------------------------------------|

| | |
|---|--|
| <u>Component data</u> Paclobutrazol Acute toxicity - Inhalation: | LD50 - Rat Result: 369 mg/l Exposure time: 4 h |
|---|--|

SKIN CONTACT

Test results

Skin irritation: Species: Rabbit
Result: Not irritating

EYE CONTACT

Test results

Eye irritation: Species: Rabbit
Result: No irritation

SENSITIZATION

Test results: Species: - Guinea pigs
Result: Negative

12. ECOLOGICAL INFORMATION

This product is not tested.
The following information is based on analogy with a similar material:

| | |
|---|--|
| <u>Component ecotoxicology</u> Paclobutrazol <u>Acute toxicity fish:</u> | LC50 - Bluegill (<i>Lepomis macrochirus</i>) Result: 23.6 mg/l Exposure time: 96 h |
| <u>Component ecotoxicology</u> Paclobutrazol <u>Acute toxicity to aquatic invertebrates:</u> | EC50 - Water flea (<i>Daphnia magna</i>) Result: 33.2 mg/l Exposure time: 48 h |

13. DISPOSAL CONSIDERATIONS

General: Dispose of in accordance with appropriate Federal, State, and local regulations., Avoid discharge to sewers and natural waters.



PACZOL

Version: 1.0
DATE OF ISSUE: 11/02/2005
Date printed: 11/02/2005

Non-cleaned packages

Empty drums should be decontaminated and either passed to an approved drum reconditioner or destroyed., Containers that cannot be cleaned must be treated as waste.

14. TRANSPORT INFORMATION

DOT Classification

This product is not regulated by DOT.

IMDG Classification

This product is not regulated by IMDG.

ICAO Classification

This product is not regulated by ICAO.

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:

**** 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 ****

Massachusetts Right-To-Know Substance List (MSL)--Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products.

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

**** NONE ****

Pennsylvania Right-To-Know Hazardous Substance List--Hazardous Substances and Special Hazardous Substances on the list must be identified when present in products.

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



MATERIAL SAFETY DATA SHEET

PACZOL

Version: 1.0
 DATE OF ISSUE: 11/02/2005
 Date printed: 11/02/2005

Paclobutrazol 76738-62-0

Inerts -

EPA Hazard Categories (SARA 311, 312): Immediate Health Hazard

California Proposition 65

**** NONE ****

16. OTHER INFORMATION

RECOMMENDED USES AND RESTRICTIONSNOTE 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.

FURTHER INFORMATION

MAY BE ON THE INVENTORY LIST BUT NOT NECESSARILY REGISTERED, (Korea, China, New Zealand) CONSULT REGULATORY SPECIALIST.

Emergency Telephone Numbers

| | | |
|----------------|-----|---------------------|
| Latin America: | All | +44 (0)208 762 8322 |
|----------------|-----|---------------------|

HMIS RATING

| | | | |
|-----------|-----------------|---------------|--------|
| Health: 1 | Flammability: 1 | Reactivity: 0 | PPI: X |
|-----------|-----------------|---------------|--------|

| | |
|----------|---|
| STP | Standard temperature and pressure |
| W/W | 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 |

Copyright
 2005
 Chemtura
 Corporati
 on

THE OPINIONS EXPRESSED HEREIN ARE THOSE OF QUALIFIED EXPERTS WITHIN CHEMTURA CORPORATION. WE BELIEVE THAT THE INFORMATION CONTAINED HEREIN IS CURRENT AS OF THE DATE OF THIS SAFETY DATA SHEET. SINCE THE USE OF THIS INFORMATION AND OF THESE OPINIONS AND THE CONDITIONS OF USE OF THIS PRODUCT ARE NOT WITHIN THE CONTROL OF CHEMTURA CORPORATION, IT IS THE USER'S OBLIGATION TO DETERMINE THE CONDITIONS OF SAFE USE OF THE PRODUCTS.