

Material Safety Data Sheet



Renovate MAX G

1. Product and company identification

| | |
|--------------------------------|--|
| Product name | : Renovate MAX G |
| EPA Registration Number | : 67690-50 |
| Material uses | : Aquatic herbicide. |
| Supplier/Manufacturer | : SePRO Corporation 11550 North Meridian Street Suite 600 Carmel, IN 46032 U.S.A. Tel: 317-580-8282 Toll free: 1-800-419-7779 Fax: 317-428-4577 Monday - Friday, 8am to 5pm E.S.T. www.sepro.com |
| Responsible name | : KMK Regulatory Services inc. |
| In case of emergency | : INFOTRAC - 24-hour service 1-800-535-5053 |

2. Hazards identification

| | |
|---|---|
| Physical state | : Solid. [Granules/Pellets] |
| Odor | : Amine/Organic |
| OSHA/HCS status | : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). |
| Emergency overview | : WARNING! MAY BE HARMFUL IF SWALLOWED. MAY CAUSE RESPIRATORY TRACT AND EYE IRRITATION. May be harmful if swallowed. Moderately irritating to the eyes and respiratory system. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling. |
| Routes of entry | : Dermal contact. Eye contact. Inhalation. Ingestion. |
| Potential acute health effects | |
| Inhalation | : Moderately irritating to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. |
| Ingestion | : May be harmful if swallowed. |
| Skin | : No known significant effects or critical hazards. |
| Eyes | : Moderately irritating to eyes. |
| Potential chronic health effects | |
| Chronic effects | : No known significant effects or critical hazards. |
| Carcinogenicity | : No known significant effects or critical hazards. |
| Mutagenicity | : No known significant effects or critical hazards. |
| Teratogenicity | : No known significant effects or critical hazards. |
| Developmental effects | : No known significant effects or critical hazards. |
| Fertility effects | : No known significant effects or critical hazards. |
| Over-exposure signs/symptoms | |
| Inhalation | : Adverse symptoms may include the following: respiratory tract irritation coughing |
| Ingestion | : No specific data. |
| Skin | : No specific data. |
| Eyes | : Adverse symptoms may include the following: irritation watering redness |

Medical conditions aggravated by over-exposure : None known.

See toxicological information (section 11)

3 . Composition/information on ingredients

| United States | | | |
|--|------------|---------|--|
| Name | CAS number | % | |
| Active ingredient | | | |
| Acetic acid, (2,4-dichlorophenoxy)-, compound with N-methylmethanamine (1:1) | 2008-39-1 | 14 | |
| Triclopyr TEA Salt | 57213-69-1 | 4 | |
| Inert ingredient | | | |
| Titanium dioxide | 13463-67-7 | 0.1 - 1 | |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

- Eye contact** : Check for and remove any contact lenses. In case of contact with eyes, rinse immediately with plenty of water. Get medical attention.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 20 minutes. Get medical attention.
- Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention.
- Ingestion** : Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5 . Fire-fighting measures

- Flammability of the product** : May be combustible at high temperature.
- Extinguishing media**
- Suitable** : In case of fire, use water spray (fog), foam, dry chemical or CO₂.
- Not suitable** : None known.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up**
- Small spill** : Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

| | United States |
|---------------------|---|
| Product name | Exposure limits |
| Titanium dioxide | OSHA PEL (United States, 11/2006). TWA: 15 mg/m ³ 8 hour(s). Form: Total dust ACGIH TLV (United States, 1/2008). TWA: 10 mg/m ³ 8 hour(s). |

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. **Applicators should refer to the product label for personal protective clothing and equipment.**

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Applicators should refer to the product label for personal protective clothing and equipment.

Eyes : Safety glasses.

Skin : Lab coat.

Respiratory : Disposable particulate mask

Hands : Nitrile gloves.

Personal protective equipment (Pictograms) :



HMIS Code/Personal protective equipment : E

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Solid. [Granules/Pellets]
Color : Gray.
Odor : Amine/Organic
pH : 8.25 at 25°C (77°F)
Relative density : 0.867 g/cc

10 . Stability and reactivity

Stability : The product is stable.
Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid : No specific data.
Materials to avoid : Reactive or incompatible with the following materials: oxidizing materials.
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 . Toxicological information

Acute toxicity

| Product/ingredient name | Species | Dose | Result | Exposure |
|--|---------|------------|-------------|----------|
| Acetic acid, (2,4-dichlorophenoxy)-, compound with N-methylmethanamine (1:1) | Rabbit | 2115 mg/kg | LD50 Dermal | - |
| | Rat | 625 mg/kg | LD50 Oral | - |

Inhalation : Moderately irritating to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion : May be harmful if swallowed.

Skin : No known significant effects or critical hazards.

Eyes : Moderately irritating to eyes.

Carcinogenicity

Classification

| Product/ingredient name | ACGIH | IARC | EPA | NIOSH | NTP | OSHA |
|-------------------------|-------|------|-----|-------|-----|------|
| Titanium dioxide | A4 | 2B | - | None. | - | - |

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

| Product/ingredient name | Test | Species | Exposure | Result |
|--|------|------------------------|----------|---------------------------------------|
| Acetic acid, (2,4-dichlorophenoxy)-, compound with N-methylmethanamine (1:1) | - | Crustaceans | 48 hours | Acute EC50 8 mg/L |
| | - | Daphnia | 48 hours | Acute EC50 4 mg/L |
| | - | Fish - 162.31 g | 96 hours | Chronic NOEC 27 ppm |
| Triclopyr TEA Salt | - | Daphnia - <24 hours | 48 hours | Acute EC50 1496 ppm |
| | - | Fish | 96 hours | Acute LC50 420000 ug/L |
| | - | Daphnia | 48 hours | Acute LC50 1170000 to 1340000 ug/L |
| Titanium dioxide | - | Daphnia | 48 hours | Acute EC50 >1000000 ug/L |
| | - | Fish | 96 hours | Acute LC50 >1000000 ug/L |

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14 . Transport information

AERG : Not applicable.

Regulatory information

DOT/IMDG/ IATA : Not regulated.

15 . Regulatory information

United States

HCS Classification : Irritating material

U.S. Federal regulations : **United States inventory (TSCA 8b)**: Not determined.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: No products were found.

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Acetic acid, (2,4-dichlorophenoxy)-, compound with N-methylmethanamine (1:1): Immediate (acute) health hazard

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

SARA 313

| | Product name | CAS number | Concentration |
|--|--|------------|---------------|
| Form R - Reporting requirements | [(3,5,6-trichloro-2-pyridyl)oxy]acetic acid, compound with triethylamine (1:1) | 57213-69-1 | 1 - 5 |
| Supplier notification | [(3,5,6-trichloro-2-pyridyl)oxy]acetic acid, compound with triethylamine (1:1) | 57213-69-1 | 1 - 5 |

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations :

- Connecticut Carcinogen Reporting**: None of the components are listed.
- Connecticut Hazardous Material Survey**: None of the components are listed.
- Florida substances**: None of the components are listed.
- Illinois Chemical Safety Act**: None of the components are listed.
- Illinois Toxic Substances Disclosure to Employee Act**: None of the components are listed.
- Louisiana Reporting**: None of the components are listed.
- Louisiana Spill**: None of the components are listed.
- Massachusetts Spill**: None of the components are listed.
- Massachusetts Substances**: None of the components are listed.
- Michigan Critical Material**: None of the components are listed.
- Minnesota Hazardous Substances**: None of the components are listed.
- New Jersey Hazardous Substances**: The following components are listed: Titanium dioxide
- New Jersey Spill**: None of the components are listed.
- New Jersey Toxic Catastrophe Prevention Act**: None of the components are listed.
- New York Acutely Hazardous Substances**: None of the components are listed.

New York Toxic Chemical Release Reporting: None of the components are listed.
Pennsylvania RTK Hazardous Substances: The following components are listed:
 Titanium dioxide
Rhode Island Hazardous Substances: None of the components are listed.

- California Prop. 65** : No products were found.
- International regulations**
- International lists** : This product, (and its ingredients) is (are) listed on national inventories, or is (are) exempted from being listed, in Australia (AICS), in Europe (EINECS/ELINCS), in Korea (TCCL), in Japan (METI), in the Philippines (RA6969).

16 . Other information

Label requirements : **MAY BE HARMFUL IF SWALLOWED. MAY CAUSE RESPIRATORY TRACT AND EYE IRRITATION.**

Hazardous Material Information System (U.S.A.) :

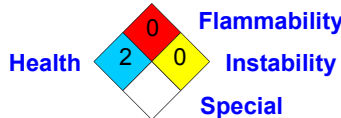
| | | |
|---------------------|---|---|
| Health | * | 2 |
| Fire hazard | | 0 |
| Physical Hazard | | 0 |
| Personal protection | | E |

HAZARD RATINGS

4- Extreme
 3- Serious
 2- Moderate
 1- Slight
 0- Minimal
 See section 8 for more detailed information on personal protection.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



References : ANSI Z400.1, MSDS Standard, 2004. - Manufacturer's Material Safety Data Sheet. - 29CFR Part1910.1200 OSHA MSDS Requirements. - 49CFR Table List of Hazardous Materials, UN#, Proper Shipping Names, PG.

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Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. The data in this MSDS relates only to the specific material designated herein. Possible adverse effects (see Section 2, 11 and 12) may occur if this material is not handled in the recommended manner.