

Section 1: Identification

1.1 Product identification

Product identifier : Mixture
Product name : PROMASTER G Creyell 5MG 【Cream Colorant】
Product code : Not available
Recommended uses : Cosmetics – Hair Coloring Product
Restrictions on uses : No information available

1.2 Identification of company

Manufacturer/Supplier name : Hoya America Co.
Division :
Address : 6265 Phyllis Drive Cypress, CA 90630 US
Telephone number : 714-230-3000
FAX number : 714-230-3060
E-mail : info@hoyu-usa.com

1.3 Emergency telephone number : 1-800-848-4980

1.4 Reference number :

Section 2: Hazard Identification

2.1 Classification of the substance or mixture

2.1.1 Physico-Chemical hazard

2.1.2 Health Hazard

Acute Toxicity (oral) : Not classified
Acute Toxicity (inhalation: dusts/mists) : Not classified
Skin Corrosion/Irritation : Category 2
Serious Eye Damage/Eye Irritation : Category 1
Respiratory Sensitization : Not classified
Skin Sensitization : Category 1
Reproductive Toxicity : Not classified
Specific Target Organ Toxicity (single exposure) : Category 2
Specific Target Organ Toxicity (repeated exposure) : Category 2
Aspiration Hazard : Not classified

2.1.3 Environmental Hazard

Hazardous to the Aquatic Environment (acute) : Not classified

* For those not listed on “2.1 Classification of the Substance or Mixture” are either “Not Applicable” or “Classification not Possible.”

* Hazard identification is made according to the 2012 OSHA communication Standard (29 CFR 1910.1210) and GHS rev. 6.

2.2 Label Element

Hazard Pictograms :



Signal Word : Danger

Hazard Statement : H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H371 May cause damage to organs, respiratory tract, central nervous system.
H373 May cause damage to organs, systemic toxicity, through prolonged or repeated exposure.

Precautionary Statement

General Precautions : - -

Preventions	:	P260	Do not breathe dusts /fume /gas /mist /vapors / spray.
		P264	Wash face, hands and any exposed skin thoroughly after handling.
		P270	Do not eat, drink or smoke when using this product.
		P272	Contaminated work clothing should not be allowed out of the workplace.
		P280	Wear protective gloves/protective clothing/eye protection/face protection.
Responses	:	P302+P352	IN ON SKIN: Wash with plenty of water and soap.
		P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P308+P311	IF exposed or concerned: Call a POISON CENTER/doctor.
		P310	Immediately call a POISON CENTER/doctor.
		P314	Get medical advice/attention if you feel unwell.
		P321	Specific treatment (see section 4 on this SDS).
		P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
		P362+P364	Take off contaminated clothing and wash it before reuse.
Storage	:	P405	Store locked up.
Disposal	:	P501	Dispose of contents/container to an approved waste disposal plant in accordance with local/regional/national/international regulations.

2.3 Other hazards

8.69 % of the mixture consists of ingredient(s) of unknown acute toxicity (oral).

Harmful to aquatic life with long lasting effects.

Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Use of alcoholic beverages may enhance toxic effects.

Section 3: Composition/Information on Ingredients

3.1 Substance :

Chemical Name	CAS No.	Concentration (w/w %)
Not applicable	Not applicable	Not applicable

3.2 Mixtures :

Chemical Name	CAS No.	Concentration (w/w %)
AMMONIUM CHLORIDE	12125-02-9	0.1 – 1
AMMONIUM HYDROXIDE	1336-21-6	1 – 5
AMODIMETHICONE	71750-79-3 106842-44-8 68554-54-1	0.1 – 1
BEHENTRIMONIUM CHLORIDE	68607-24-9	0.1 – 1
CETETH-6	68439-49-6	1 – 5
HEXYLDECANOL	2425-77-6	0.1 – 1
ISOPROPYL ALCOHOL	67-63-0	0.1 – 1
MINERAL OIL	8042-47-5	0.1 – 1

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PEG-32	25322-68-3	5 – 10
PETROLATUM	8009-03-8	1 – 5
SODIUM LAURETH SULFATE	9004-82-4	0.1 – 1
SODIUM SULFITE	7757-83-7	0.1 – 1
2,4-DIAMINOPHENOXYETHANOL HCl	66422-95-5	0.1 – 1
m-AMINOPHENOL	591-27-5	0.1 – 1
p-PHENYLENEDIAMINE	106-50-3	0.1 – 1
RESORCINOL	108-46-3	0.1 – 1
TOLUENE-2,5-DIAMINE	95-70-5	0.1 – 1

Section 4 : First-aid Measures

4.1 Description of First Aid Measures

- Inhalation : Remove to fresh air. Get medical attention immediately if symptoms occur.
- Skin Contact : Wash off immediately with soap and plenty of water for at least 15 minutes. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
- Eye Contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area. Seek immediate medical attention/advice.
- Ingestion : Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. DO NOT induce vomiting. Call a physician.

4.2 Most Important Symptoms/Effects

- Acute : Burning sensation, itching, rashes, and/or hives.
- Delayed : Burning sensation, itching, rashes, and/or hives.

4.3 Protection for Person who gives First-Aids

Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wear personal protective clothing (see section 8).

4.4 Indication of Immediate Medical Attention and Special Treatment Needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. May cause sensitization of susceptible persons. Treat symptomatically.

Section 5: Fire-Fighting Measures

5.1 Extinguishing Media

Suitable Extinguishing Media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Inappropriate Extinguish Media : CAUTION: Use of water spray when fighting fire may be inefficient.

5.2 Specific Hazards Arising from the Chemicals

: May produce carbon oxides, ammonia and/or nitrogen oxide.

5.3 Special Extinguishing Method

Sensitivity to mechanical impact: No

Sensitivity to static discharge: No

5.4 Special Protective Actions for Fire-fighter

: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Protective Equipment : Refer to protective measures listed in Section 7 and 8. Prevent further leakage or spillage if safe to do so.

Appropriate Procedure : Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required.

Emergency Procedure : Evacuate personnel to safe areas.

6.2 Environmental Precautions

: Refer to protective measures listed in Section 7 and 8. Prevent further leakage or spillage if safe to do so.

6.3 Methods and Materials for Containment and Cleaning up

- For Containment : Prevent further leakage or spillage if safe to do so.
 For Cleaning up : Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.
 Other Information : Not available

Section 7: Handling and Storage

7.1 Precautions for Safe Handling

- General Precautions : Use personal protection equipment. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Take off contaminated clothing and wash before reuse.
 General Hygiene : Do not eat, drink or smoke when using this product.

7.2 Conditions for Safe Storage

- General Information : Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.
 Storage Conditions : Do not store with strong acids, strong oxidizing agents and/or strong bases.
 Other Information : Not available

Section 8: Exposure Controls/Personal Protection

8.1 Occupational Exposure Limits :

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
AMMONIUM CHLORIDE	-	-	TWA: 10 mg/m ³ ST: 20 mg/m ³
ISOPROPYL ALCOHOL	TWA: 200 ppm ST: 400 ppm	TWA: 400 ppm (980 mg/m ³)	TWA: 400 ppm (980 mg/m ³) ST: 500 ppm (1225 mg/m ³) IDLH: 2000 ppm [10 %LEL]
MINERAL OIL	TWA: 5 mg/m ³	TWA: 5 mg/m ³	TWA: 5 mg/m ³ ST: 10 mg/m ³ IDLH: 2500 mg/m ³
p-PHENYLENEDIAMINE	TWA: 0.1 mg/m ³	TWA: 0.1 mg/m ³ [skin]	TWA: 0.1 mg/m ³ [skin] IDLH: 25 mg/m ³
RESORCINOL	-	-	TWA: 10 ppm (45 mg/m ³) ST: 20 ppm (90 mg/m ³)

ACGIH TLV: American Conference of Governmental Industrial Hygienists – Threshold limit value.

OSHA PEL: Occupational safety and Health Administration – Permissible Exposure Limits

Immediately Dangerous to Life or Health.

NIOSH IDLH: The National Institute for Occupational Safety and Health – Immediately Dangerous to Life or Health Concentrations.

- 8.2 Engineering Controls : Showers
 Eyewash station
 Ventilation system

8.3 Individual Protection Measures

- Eye/Face Protection : Tight sealing safety goggles.
 Skin Protection : Wear protective gloves and protective clothing. Long sleeved clothing. Impervious gloves.
 Respiratory Protection : No protective equipment is needed under normal use conditions.

Thermal Hazard	: Not available
Other Requirements	: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the products.

Section 9: Physical and Chemical Properties

Physical State	: Cream	
Color	: Milky white	
Odor	: Characteristic odor	
pH	: 9.4 – 10.4	pH meter (1% aq. sol.)
Melting/Freezing Point	: No data available	Not known
Initial Boiling Point and Boiling Range	: No data available	Not known
Flash Point	: No data available	Not known
Evaporation Rate	: No data available	Not known
Flammability (Solid, Gas)	: No data available	Not known
Upper/lower Flammability or Explosive Limits	: No data available	Not known
Vapor Pressure	: No data available	Not known
Density	: No data available	Not known
Relative Vapor Density	: No data available	Not known
Solubility	: Completely soluble in water	Not known
Partition Coefficient: n-octanol/water	: No data available	Not known
Autoignition temperature	: No data available	Not known
Decomposition temperature	: No data available	Not known
Viscosity	: 5000 – 30000 mPa•s	Type B viscometer (No. 4 rotor/12 rpm/1 min)
Kinetic viscosity	: No data available	Not known
Particle characteristics	: No data available	Not known
Explosive property	: No data available	Not known
Oxidizing property	: No	
VOC contents (%)	: No data available	
Other Information	: No information available	

Section 10: Stability and Reactivity

Reactivity	: No data available
Chemical Stability	: Stable under recommended storage conditions.
Possibility of Hazardous Reactions	: None under normal processing.
Conditions to Avoid	: None known
Incompatible Materials	: Oxidative agent and acid materials.
Hazardous Decomposition Products	: Carbon oxides, ammonia, and/or nitrogen oxide.

Section 11: Toxicological Information

Information on Toxicological Effects	
Acute Toxicity	:
AMMONIUM CHLORIDE	LD50 (oral, rat) = 1410 mg/kg
AMMONIUM HYDROXIDE	LD50 (oral, rat) = 350 mg/kg
CETETH-6	LD50 (oral, rat) = 1260 mg/kg
SODIUM LAURETH SULFATE	LD50 (oral, rat) = 1600 mg/kg
2,4-DIAMINOPHENOXYET HANOL HCl	LD50 (oral, rat) = 1000 mg/kg

m-AMINOPHENOL	LD50 (oral, rat) = 693 mg/kg
p-PHENYLENEDIAMINE	LD50 (oral, rat) = 80 mg/kg
RESORCINOL	LC50 (inhalation: dusts/mists, rat) = 0.92 mg/L
TOLUENE-2,5-DIAMINE	LD50 (oral, rat) = 301 mg/kg
Skin Corrosion/Irritation	LD50 (oral, rat) = 102 mg/kg
AMMONIUM HYDROXIDE	: Corrosive (rabbit, 20 % aq. sol.) (SIDS 2008).
AMODIMETHICONE	: Weak irritant (rabbit, 500 mg/24 hrs.).
BEHENTRIMONIUM CHLORIDE	: Irritant (rabbit, OECD404).
CETETH-6	: Moderate irritant (rabbit, 500 µL/24hrs., Draize).
SODIUM LAURETH SULFATE	: HSDB (2002) reported that there are skin irritation and dryness on human for a prolonged occupational contact and irritation was observed on skin of guinea pig and rabbit.
p-PHENYLENEDIAMINE	: Slightly irritant at 2.5 % and moderately irritant at 10 – 50 % on rabbit and its PII was 1.4 – 3.4 (BUA 97, 1995).
RESORCINOL	: Mild or moderate irritant, PII = 2.8 and 4.4 (rabbit, 24 hrs.) (DFGOT vol. 20, 2003, CICADs No. 71, 2006).
TOLUENE-2,5-DIAMINE	: Mild irritant (rabbit) (EHC74, 1987 and RTECS, 2002).
Serious Eye Damage/Irritation	:
AMMONIUM CHLORIDE	: Mild irritant on rabbit (ACGIH (7th, 2001)), also moderate irritation was observed 10 minutes, 1 hour, and 24 hours after application, but redness, edema, and/or corneal opacity were recovered within 8 days.
AMMONIUM HYDROXIDE	: Corrosive (rabbit, 28.5 % aq. sol.) (HSDB (Access on June 2014)).
AMODIMETHICONE	: Weak irritant (rabbit).
BEHENTRIMONIUM CHLORIDE	: Risk to cause serious eye damage (rabbit, OECD405).
CETETH-6	: Moderate irritant (rabbit, 100 µL/24hrs., Draize).
HEXYLDECANOL	: Slightly irritating (rabbit, IUCLID).
ISOPROPYL ALCOHOL	: Mild to strong irritation (rabbit) (EHC, 1990, SIDS, 2002, PATTY 6th, 2012, and ECETOC TR48, 1998).
PEG-32	: Mild irritant (rabbit), but recovered within 24 to 48 hrs.
PETROLATUM	: Slightly irritating (rabbit) (IUCLID, 2000).
SODIUM LAURETH SULFATE	: Moderate to severe irritant (rabbit, Draize, 24 hrs.) (RTECS, 1997 and RTECS, 1999).
SODIUM SULFITE	: Mild irritant (rabbit).
2,4-DIAMINOPHENOXYET HANOL HCl	: Strong irritant.
p-PHENYLENEDIAMINE	: Slightly irritant (Draize, rabbit) (BUA 97, 1995).
RESORCINOL	: Extremely irritation (rabbit) (ACGIH 7th, 2001, CICADs vol. 71, 2006).
TOLUENE-2,5-DIAMINE	: Strong irritant (rabbit) (PATTY 5th, 2001).
Respiratory or Skin Sensitization	:
p-PHENYLENEDIAMINE	: Listed as sensitizing substance at Japan Society for Occupational Health.
RESORCINOL	: Positive ratio = 30 – 70 % (guinea pig, Maximization test) (DFGOT vol. 20, 2003).
TOLUENE-2,5-DIAMINE	: Showed sensitizing potential on guinea pigs (EHC74, 1987 and HSDB, 2002).
Germ Cell Mutagenicity	: No information available.
Carcinogenicity	: No information available.
Reproductive Toxicity	:
ISOPROPYL ALCOHOL	: Two generation test on rat by oral exposure showed decrease in copulation rate on parent and decrease in weight and increase in death rate (PATTY6th, 2012 and SIDS(2002)).

2,4-DIAMINOPHENOXYET HANOL HCl	As a result of oral exposure test on 24 female rat in accordance with OECD 414 showed teratogenicity of fetus at concentration causing general toxicity (SCCP Report "Opinion on 2,4-Diaminophenoxyethanol and its salts"(2006/3/28)).
TOLUENE-2,5-DIAMINE	There was a report showing teratosis on face, and exencephalia on baby mice born from female mice which was administered intraperitoneally (EHC74, 1987).
STOT – Single Exposure AMMONIUM CHLORIDE	: Oral exposure of 1000 mg/kg bw on rat showed breathing difficulty, acidia, abnormal posture, and/or stagger symptom (SIDS, 2009).
AMMONIUM HYDROXIDE	This substance has a respiratory irritation and causes severe irritation and pain on airway mucosa. Also, severe corrosive effects are known for mouth, throat and stomach by oral route (HSDB, 2014). There is known neurological effect due to oral and dermal exposure, which normally limited to blurred vision on topically applied region, but severe exposure causes increase in concentration of blood ammonia, attack, coma, Nonspecific diffuse brain disorder, loss in muscle strength, decreased deep tendon reflex, loss of consciousness, and death (ATSDR, 2004).
ISOPROPYL ALCOHOL	This substance showed systematic hazardous effect including the central nervous depression such as lethargy, coma and respiratory depression, irritation on the alimentary canal, effect on the circulatory system such as blood pressure, body temperature decrease, and abnormal cardiac rhythm (SIDS (2002), EHC 103 (1990)).
SODIUM LAURETH SULFATE m-AMINOPHENOL	Nausea, vomiting and diarrhea are observed by ingestion as human acute toxic symptom (HSDB, 2002). Acute toxicity test (oral) on rat (OECD TG401, GLP) showed occurrence of death at 700 mg/kg and thrill, salivation, brown urine, prone, and decumbence at 500 mg/kg. Autopsy showed enlargement of spleen due to congestion for the dead case and dark red of spleen and dark brown of kidney at 700 and 1000 mg/kg.
p-PHENYLENEDIAMINE	Ingestion of this substance on human showed breathing difficulty and edema on face, neck, tongue and throat, increase of CPK in blood, hypouresis, renal tubular degeneration and rhabdomyolysis. Then, subject caused acute kidney failure and death (DFGMAK-Doc.6, 1994).
RESORCINOL	After application of cream contain this substance, human subjects showed unconsciousness, thrill, spasm, mydriasis, disarray, amnesia, cognitive dysfunction (DFGOT vol. 20, 2003, PATTY 5th, 2001). Also, main symptom of resorcinol poisoning is influence on central nervous system (ACGIH 7th, 2001 and DFGOT vol. 20, 2003). Furthermore, it showed hemoglobinuria, cyanosis, methemoglobinemia in infants (DFGOT vol. 20, 2003 and PATTY 5th, 2001).
TOLUENE-2,5-DIAMINE	Exposure to this substance caused the liver toxicity and hemolytic anemia (PATTY 5th, 2001).
STOT – Repeated Exposure AMMONIUM CHLORIDE	: Ingestion of ammonium chloride for 6 months showed hospitalization by acidosis (metabolic) due to exhaustion, air hunger, or accelerated respiration and disarray (SIDS 2009, ACGIH 2001). NOAEL = 206 mg/kg bw/day (cow, 112 days) (SIDS, 2009).
BEHENTRIMONIUM CHLORIDE	Estimated data from main ingredient on digestive tract.
ISOPROPYL ALCOHOL	Vapor exposure of this substance on rat for 4 month showed decrease

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MINERAL OIL in number of leucocyte at 100 mg/m³, and pathologic effect on organs of respiration such as lung and respiratory tract, liver and spleen at 500 mg/m³ (EHC 103 (1990)).
 Effects on liver and mesenteric node by repeated oral exposure test using rat (IUCLID, 2000) and on lung due to aerosol exposure on rat (US HPVIS, 2011).

2,4-DIAMINOPHENOXYET HANOL HCl Repeated administration test for 13 weeks at 0.4, 20, 100 mg/kg/day on rat showed brown pigmentation on thyroid and severe thesaurismosis on spleen (SCCP Report "Opinion on 2,4-Diaminophenoxyethanol and its salts"(2006/3/28)).

m-AMINOPHENOL The result of feeding test on female rat for 90 days at 0, 0.1, 0.25, and 1 %, rat applied with 1 % group which is about 500 mg/kg/day showed decrease in number of red blood cell and concentration of hemoglobin, increase in average red blood cell volume, and hemosiderosis and hemolyzing property on spleen, liver and kidney.

p-PHENYLENEDIAMINE The regular use of retail hair coloring product containing this substance on humans caused inflammation on liver and spleen and developed progressive neurological disorders for 11 weeks and final death of subject (ACGIH, 2001). Also, the regular use of retail hair coloring product containing this substance showed chronic kidney disorder, uremia, minimization of kidney and death of subject (DFGMAK-Doc.6, 1994). 90 days oral application test on rabbit at 10 mg/kg showed edema, swollen muscle fiber, etc. on myocardium (ACGIH, 2001).

Aspiration Hazard :
 MINERAL OIL Inhalation of oil or liquid to ling may cause lipid or chemical pneumonia and/or lipid granuloma.
 SODIUM LAURETH SULFATE There is a report on causing edema on upper respiratory tract and breathing difficulties on human due to inhalation (HSDB, 2002).

Information on the Likely Routes of Exposure

Inhalation : Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.

Eye contact : Specific test data for the substance or mixture is not available. Expected to be an irritant based on components. Severely irritating to eyes. Cause serious eye damage. May cause burns. May cause irreversible damage to eyes.

Skin contact : Specific test data for the substance or mixture is not available. Ingestion may cause irritation based on components. Irritating to skin. Prolonged contact may cause redness and irritation.

Ingestion : Specific test data for the substance or mixture is not available. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed (based on components).

Symptoms related to the Physical, Chemical and Toxicological Characteristics : Erythema (skin redness). May cause redness and tearing of the eyes. May cause blindness. Burning, itching, rushes and/or hives.

Delayed, Immediate, and Chronic Effects from Short and Long Term Exposure : May cause sensitization of susceptible persons. May cause sensitization by skin contact.

Carcinogenicity : The table below indicates whether each agency has listed any ingredient as carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
ISOPROPYL ALCOHOL	A4	Group 3	-	-

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MINERAL OIL	-	Group 3	-	-
p-PHENYLENEDIAMINE	A4	Group 3	-	-
RESORCINOL	A4	Group 3	-	-
TOLUENE-2,5-DIAMINE	-	Group 3	-	-

ACGIH: A1 – Confirmed human carcinogen, A2 – Suspected human carcinogen, A3 – Confirmed animal carcinogen with unknown relevance to humans, A4 – Not classifiable as a human carcinogen, A5 – Not suspected as a human carcinogen

IARC: International Agency for Research and Cancer (Group 1 – Carcinogenic to humans, Group 2A – Probably Carcinogenic to humans, Group 2B – Possibly carcinogenic to humans, Group 3 – Not classifiable as to carcinogenicity in humans, Group 4 – Probably not carcinogenic to humans)

NTP: National Toxicology Program (NA = none assigned, Known = Known to be a human carcinogen, RAHC = Reasonably anticipated to be a human carcinogen)

Other Information : No information available.

Section 12: Ecological Information

Toxicity on Aquatic Organisms :

AMMONIUM CHLORIDE LC50 (Lepomis macrochirus, 96 hrs.) = 74.2 mg/L (ECETOC TR91, 2003)

AMMONIUM HYDROXIDE LC50 (Mysidopsis bahia, 96 hrs.) = 2.81 - 98.9 mg total NH₃/L (SIDS, 2007)

BEHENTRIMONIUM LC50 (Danio rerio, 96 hrs., OECD 203) = 0.5 mg/L

CHLORIDE EC50 (Daphnia magna, 21 days, OECD 211) = 0.13 mg/L

EC50 (Desmodesmus subspicatus, 72 hrs., OECD 201) = 3.4 mg/L

NOEC (Artificial soil, 54 days, Eisenia foetida, OECD 222) = 250 mg/kg

NOEC (Bottom sediment DW, Lubriculus variegatus, 28 days, OECD 225) = 169 mg/kg

SODIUM LAURETH EC50 (Ceriodaphnia quadrangular, 48 hrs.) = 3.12 mg/L (AQUIRE, 2008)

SULFATE EC50 (Daphnia magna, 48 hrs.) = 0.447 mg/L

m-AMINOPHENOL NOEC (Daphnia magna, 21 days) = 0.050 mg/L

p-PHENYLENEDIAMINE LC50 (Oryzias latipes, 96 hrs.) = 0.066 mg/L

NOEC (Daphnia magna, 21 days) = 0.043 mg/L

RESORCINOL EC50 (Daphnia magna, 48 hrs.) = 1.28 mg/L

Toxicity on Terrestrial Organisms : No information available.

Persistence and Degradability :

BEHENTRIMONIUM 80 % (28 days, OECD 301B)

CHLORIDE Persistent (IUCLID, 2000)

MINERAL OIL Acute environmental toxicity was classified as category 2 and there are no rapid degradability reported.

SODIUM LAURETH Persistent (BOD = 0 %)

SULFATE m-AMINOPHENOL BOD = 5 %

p-PHENYLENEDIAMINE Bioaccumulative Potential :

BEHENTRIMONIUM Low

CHLORIDE Log Koc = 3 - 5.7

MINERAL OIL Log Pow < 3

Mobility in Soil Log Pow > 6 (IUCLID, 2000)

Other Adverse Effects : No information available.

Other Adverse Effects : No information available.

Section 13: Disposal Considerations

Product/Packaging Disposal : This material, as supplied, is not a hazardous waste according to Federal regulation (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if

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chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

- Waste Treatment-Relevant Information : No information available.
 Sewage Disposal-Relevant Information : No information available.
 Other Disposal Recommendation : Dispose of contents/containers in accordance with local regulation (refer to Section 15).

Section 14: Transport Information

	DOT	IATA/ICAO	IMDG/IMO
UN Number	Not Regulated	Not Regulated	Not Regulated
UN Proper Shipping Name			
Transport Hazard Classes			
Packing Group			

DOT: US Department of Transportation

IATA/ICAO: International Air Transport Association/International Civil Aviation Organization

IMDG/IMO: International Maritime Dangerous Goods/International Maritime Organization

Environmental Hazards : No information available.

Special Precautions for User : No information available.

Transport in Bulk According to ANNEX II of MARPOL 73/78 and IBC Code : No information available.

Section 15: Regulatory Information

Safety, Health, and Environmental Regulations Specific for the Product

International chemical inventories

Toxic substances control act (TSCA) : All components of this product are either listed or are exempt on the TSCA inventory.

Domestic Substance list (DSL) : Substances comply or are exempt.

US Federal Regulation

Title III of the Superfund Amendments and Reauthorization act of 1986 (SARA 313) : Section 313 of Title III of the Superfund Amendments and Reauthorization act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the act and title 40 of the Code of Federal Regulations (CFR), Part 372.

Chemical Name	SARA 313 – Threshold values (%)
AMMONIUM CHLORIDE	1.0 as ammonia
AMMONIUM HYDROXIDE	1.0 as ammonia
ISOPROPYL ALCOHOL	1.0
p-PHENYLENEDIAMINE	1.0

SARA 311/312 Hazard Category : Acute health hazard Yes
 Chronic health hazard No
 Fire hazard No
 Sudden release of pressure hazard No
 Reactive hazard No

Clean Water Act (CWA) : This product contains the substances which are regulated as pollutant pursuant to the Clean Water Act (40 CFR 122).

Clean Air Act (CAA) : This product contains the substances which are regulated as pollutant pursuant to the Clean Air Act (40 CFR 50 - 99).

Comprehensive Environmental Response Compensation and Liability Act (CERCLA) : This material, as supplied, contains one or more substances regulated as hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (40 CFR 302).

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Hazardous Substance	Statutory Code*	RCRA Waste No.	Final RQ Pounds
AMMONIUM CHLORIDE	1	-	5000 lb (2270 kg)
AMMONIUM HYDROXIDE	1	-	1000 lb (454 kg)
p-PHENYLENEDIAMINE	3	-	5000 lb (2270 kg)
RESORCINOL	1,4	U201	5000 lb (2270 kg)

* According to 40 CFR 302, The "Statutory Code" column indicates the statutory source for designating each substance as a CERCLA hazardous substance:

"1" indicates that the statutory source is section 311(b)(2) of the Clean Water Act,

"2" indicates that the source is section 307(a) of the Clean Water Act,

"3" indicates that the source is section 112 of the Clean Air Act, and

"4" indicates that the source is section 3001 of the Resource Conservation and Recovery Act (RCRA).

US State Regulations

California Hazardous Waste Code : 135 (unspecified aqueous solution)

This product contains one or more substances that are listed with the state of California as hazardous waste.

Chemical Name	California Hazardous Waste Code
AMMONIUM HYDROXIDE	X, C
ISOPROPYL ALCOHOL	X, I
p-PHENYLENEDIAMINE	X

California Hazardous Waste Code: X – Toxic, C – Corrosive, I – Ignitable, R - reactive

California Proposition 65 : This product does not contain any Proposition 65 chemicals.

US State Right-to-Know Regulations :

Chemical name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
AMMONIUM CHLORIDE	X	X	X	X	X
AMMONIUM HYDROXIDE	X	X	X	-	X
ISOPROPYL ALCOHOL	X	X	X	X	-
MINERAL OIL	X	X	X	X	-
p-PHENYLENEDIAMINE	X	X	X	X (Skin)	X
RESORCINOL	X	X	X	X	X

Section 16: Other Information

NFPA (National Fire Protection Association Code)	: Health hazard	3
	: Flammability hazard	0
	: Instability hazard	0
	: Special hazards	COR
HMIS (Hazardous Materials Identification System)	: Health	3
	: Flammability	0
	: Physical hazard	0
	: Personal protection	x

Reference :

- Globally Harmonized System of Classification and Labeling of Chemicals Revision 5, 2013
- National Institute of Technology and Evaluation (<http://www.nite.go.jp/en/index.html>)
- SDS provided from raw material manufactures
- United States Code (<http://uscode.house.gov/browse.xhtml>)
 - Title 21 Food and Drugs Chapter 9 Federal Food, Drug, and Cosmetic Act
 - Title 33 Navigation and Navigable Waters Chapter 26 Water Pollution Prevention and Control
 - Title 42 The Public Health and Welfare Chapter 85 Air Pollution Prevention and Control
 - Title 42 The Public Health and Welfare Chapter 103—Comprehensive Environmental Response, Compensation, and Liability
- Code of Federal Regulation (<https://www.gpo.gov/>)
 - 21 CFR parts 700 – 799 Cosmetics
 - 40 CFR Protection of Environment

6. US Right-to-Know Regulation
 - a) New Jersey administrative code Title 8 Health Chapter 59 Work and community right to know act rules Appendix A and B
 - b) New Jersey Register Volume 42, Issue 15, 42 N.J.R. 1709(a), August 2, 2010
 - c) Code of Massachusetts Regulations 105 CMR 670.000 Right to know
 - d) The Pennsylvania Code Title 34 Labor and Industry Chapter 323 Hazardous Substance List
 - e) State of Rhode Island General Laws Chapter 28-21 Hazardous Substances Right-to-Know Act
 - f) Rhode Island Hazardous Substance List
(<http://www.dlt.ri.gov/occusafe/pdfs/HazardousABC.pdf>)
 - g) Illinois Chemical Safety Act (430 ILCS 45)
 - h) Hazardous Materials Emergency Act (430 ILCS 50)
 - i) Illinois Emergency Planning and Community Right to Know Act (430 ILCS 100)
7. Domestic Substance List (<http://www.ec.gc.ca/LCPE-CEPA/default.asp?lang=En&n=5F213FA8-1>)
8. TSCA Chemical Substance Inventory (<https://www.epa.gov/tsca-inventory>)
9. International Agency for Research on Cancer (<http://www.iarc.fr/>)
10. American Conference of Governmental Industrial Hygienists (<http://www.acgih.org/>)
11. US Environmental Protection Agency (<https://www3.epa.gov/>)
12. US Department of Labor, Occupational Safety and Health Administration (<https://www.osha.gov/>)
13. The National Institute for Occupational Safety and Health
(<http://www.cdc.gov/niosh/about/default.html>)
14. US Department of Health and Human Services, National Toxicology Program
(<https://ntp.niehs.nih.gov/>)
15. US Department of Transportation (<https://www.transportation.gov/>)
16. International Air Transport Association (<http://www.iata.org/Pages/default.aspx>)
17. International Civil Aviation Organization (<http://www.icao.int/Pages/default.aspx>)
18. International Maritime Organization
(<http://www.imo.org/en/Publications/IMDGCode/Pages/Default.aspx>)
19. California Environmental Protection Agency (<http://oehha.ca.gov/>)
20. National Fire Protection Association (<http://www.nfpa.org/>)

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