Ref. No.: Ver. 1

Safety Data Sheet

Issue Date: Revised Date: 2017.3.31

Page 1 of 13

Section 1: Identification

1.1 Product identification

Product identifier : Mixture

Product name : PROMASTER G Creyell 5WB [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 : Hoyu 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 Not classified **Aspiration Hazard**

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 : - -

Ref. No.: Ver. 1

Safety Data Sheet

Issue Date: Revised Date: 2017.3.31

	J	Page 2 of 1
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
Responses	: P302+P352	protection/face protection. IN ON SKIN: Wash with plenty of water and
	P305+P351+P338	soap. 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
	1300 1311	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
Disposar	. 1301	waste disposal plant in accordance with
		local/regional/national/international regulations.
ther hazards		105aiations.

8.67% 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
	71750-79-3	
AMODIMETHICONE	106842-44-8	0.1 - 1
	68554-54-1	
BEHENTRIMONIUM CHLORIDE	68607-24-9	0.1 - 1
СЕТЕТН-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

Ref. No.: Ver. 1

Safety Data Sheet

Issue Date: Revised Date: 2017.3.31

Page 3 of 13

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
4-AMINO-2-HYDROXYTOLUENE	2835-95-2	< 0.1
m-AMINOPHENOL	591-27-5	0.1 - 1
p-AMINOPHENOL	123-30-8	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.

Ref. No.:

Safety Data Sheet

Issue Date: Revised Date: 2017.3.31

Ver. 1 Page 4 of 13

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

6.2 Environmental Precautions

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

Refer to protective measures listed in Section 7 and 8. Prevent

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	
			TWA: 400 ppm	
			(980 mg/m^3)	
ISOPROPYL ALCOHOL	TWA: 200 ppm	TWA: 400 ppm	ST: 500 ppm	
ISOTROI TE ALCOHOL	ST: 400 ppm	(980 mg/m^3)	(1225 mg/m^3)	
			IDLH: 2000 ppm	
			[10 %LEL]	
	TWA: 5 mg/m ³		TWA: 5 mg/m ³	
MINERAL OIL		TWA: 5 mg/m^3	ST: 10 mg/m^3	
	_	_	IDLH: 2500 mg/m ³	
		TWA: 0.1 mg/m^3	TWA: 0.1 mg/m^3	
p-PHENYLENEDIAMINE	TWA: 0.1 mg/m^3		[skin]	
-		[skin]	IDLH: 25 mg/m ³	
			TWA: 10 ppm	
DESORCINOL			(45 mg/m^3)	
RESORCINOL	-	-	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

Ref. No.: Ver. 1

Safety Data Sheet

Issue Date: Revised Date: 2017.3.31

Page 5 of 13

clothing. Impervious gloves.

Respiratory Protection : No protective equipment is needed under normal use conditions.

If exposure limits are exceeded or irritation is experienced,

ventilation and evacuation may be required.

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 : 9.5 - 10.5 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 No data available Not known

Limits

Vapor Pressure No data available Not known Density No data available Not known Relative Vapor Density No data available Not known Completely soluble in water Solubility 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

 $\begin{array}{ll} \text{AMMONIUM CHLORIDE} & \text{LD50 (oral, rat)} = 1410 \text{ mg/kg} \\ \text{AMMONIUM HYDROXIDE} & \text{LD50 (oral, rat)} = 350 \text{ mg/kg} \\ \text{CETETH-6} & \text{LD50 (oral, rat)} = 1260 \text{ mg/kg} \\ \text{SODIUM LAURETH} & \text{LD50 (oral, rat)} = 1600 \text{ mg/kg} \\ \end{array}$

SULFATE

Ref. No.: Ver. 1

Safety Data Sheet

Issue Date: Revised Date: 2017.3.31

Page 6 of 13

2.4-DIAMINOPHENOXYET LD50 (oral, rat) = 1000 mg/kg

HANOL HCL

m-AMINOPHENOL LD50 (oral, rat) = 693 mg/kgLD50 (oral, rat) = 375 mg/kgp-AMINOPHENOL

LC50 (inhalation: dusts/mists, rat) = 1.48 mg/L

LD50 (oral, rat) = 80 mg/kgp-PHENYLENEDIAMINE

LC50 (inhalation: dusts/mists, rat) = 0.92 mg/L

RESORCINOL LD50 (oral, rat) = 301 mg/kg**TOLUENE-2,5-DIAMINE** LD50 (oral, rat) = 102 mg/kg

Skin Corrosion/Irritation

AMMONIUM HYDROXIDE Corrosive (rabbit, 20 % aq. sol.) (SIDS 2008). Weak irritant (rabbit, 500 mg/24 hrs.). **AMODIMETHICONE** Irritant (rabbit, OECD404).

BEHENTRIMONIUM CHLORIDE

CETETH-6 Moderate irritant (rabbit, 500 µL/24hrs., Draize).

SODIUM LAURETH HSDB (2002) reported that there are skin irritation and dryness on **SULFATE** human for a prolonged occupational contact and irritation was

observed on skin of guinea pig and rabbit.

Mild to slightly irritating (rabbit) (RTECS (2006), IUCLID (2000)). p-AMINOPHENOL 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. Corrosive (rabbit, 28.5 % ag. sol.) (HSDB (Access on June 2014)).

AMMONIUM HYDROXIDE Weak irritant (rabbit).

AMODIMETHICONE

Risk to cause serious eye damage (rabbit, OECD405). **BEHENTRIMONIUM**

CHLORIDE

Moderate irritant (rabbit, 100 µL/24hrs., Draize). CETETH-6

HEXYLDECANOL Slightly irritating (rabbit, IUCLID).

Mild to strong irritation (rabbit) (EHC, 1990, SIDS, 2002, PATTY ISOPROPYL ALCOHOL

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 Moderate to severe irritant (rabbit, Draize, 24 hrs.) (RTECS, 1997)

SULFATE and RTECS, 1999). SODIUM SULFITE Mild irritant (rabbit).

2,4-DIAMINOPHENOXYET Strong irritant.

HANOL HCl

Mild to slightly irritating (rabbit) (RTECS (2006), IUCLID (2000)). p-AMINOPHENOL

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

4-AMINO-2-HYDROXYTO

Very week sensitizer (human, patch). LUENE

p-AMINOPHENOL There was a report causing contact dermatitis and bronchial asthma

(HSDB, 2003). Listed as sensitizing substance at Japan Society for

Occupational Health.

p-PHENYLENEDIAMINE Listed as sensitizing substance at Japan Society for Occupational

Ref. No.: Ver. 1

Safety Data Sheet

Issue Date: Revised Date: 2017.3.31

Page 7 of 13

Health.

Positive ratio = 30 - 70 % (guinea pig, Maximization test) (DFGOT RESORCINOL

vol. 20, 2003).

Showed sensitizing potential on guinea pigs (EHC74, 1987 and **TOLUENE-2,5-DIAMINE**

HSDB, 2002).

Germ Cell Mutagenicity

Carcinogenicity

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)).

: No information available.

No information available.

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-Diaminophenoxyetheanol and its salts" (2006/3/28)).

Teratogenicity test on rat by oral exposure showed toxicity on parent p-AMINOPHENOL

and teratogenicity on its child (PATTY 4th, 1999).

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 HYDROXIDE

AMMONIUM CHLORIDE Oral exposure of 1000 mg/kg bw on rat showed breathing difficulty,

accidia, abnormal posture, and/or stagger symptom (SIDS, 2009).

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

Nausea, vomiting and diarrhea are observed by ingestion as human

(1990)).

SODIUM LAURETH

SULFATE

acute toxic symptom (HSDB, 2002).

m-AMINOPHENOL 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-AMINOPHENOL Causes methemoglobinemia on humans (RATTY 4th, 1999).

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

Ref. No.: Ver. 1

Safety Data Sheet

Issue Date: Revised Date: 2017.3.31

Page 8 of 13

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).

Estimated data from main ingredient on digestive tract.

BEHENTRIMONIUM CHLORIDE

ISOPROPYL ALCOHOL

Vapor exposure of this substance on rat for 4 month showed decrease

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)).

MINERAL OIL 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-Diaminophenoxyetheanol and its salts" (2006/3/28)).

m-AMINOPHENOL

p-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.

Causes methemoglobinemia which develop toxicity on kidney on

humans (RATTY 4th, 1999).

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

Ref. No.: Ver. 1

Safety Data Sheet

Issue Date: Revised Date: 2017.3.31

Page 9 of 13

Ingestion

redness and irritation.

Specific test data for the substance or mixture is not available. Ingestion may cause irritation to mucous

membranes. Ingestion may cause gastrointestinal irritation,

Erythema (skin redness). May cause redness and tearing of

nausea, vomiting and diarrhea. May be harmful if

swallowed (based on components).

Symptoms related to the Physical,

Chemical and Toxicological

Characteristics

Delayed, Immediate, and Chronic Effects

from Short and Long Term Exposure

Carcinogenicity

and/or hives. May cause sensitization of susceptible persons. May cause

the eyes. May cause blindness. Burning, itching, rushes

sensitization by skin contact.

The table below indicates whether each agency has listed

any ingredient as carcinogen.

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

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

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,

SULFATE

EC50 (Daphnia magna, 48 hrs.) = 0.447 mg/Lm-AMINOPHENOL

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

ErC50 (Selenastrum, 72 hrs.) = 0.1 mg/Lp-AMINOPHENOL LC50 (Oryzias latipes, 96 hrs.) = 0.066 mg/Lp-PHENYLENEDIAMINE NOEC (Daphnia magna, 21 days) = 0.043 mg/L

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

RESORCINOL

Persistent (IUCLID, 2000) MINERAL OIL

Ref. No.: Ver. 1 Safety Data Sheet

Issue Date: 2017.3.31

Revised Date:

Page 10 of 13

SODIUM LAURETH Acute environmental toxicity was classified as category 2 and there are

SULFATE no rapid degradability reported.

m-AMINOPHENOL Persistent (BOD = 0 %)

p-AMINOPHENOL BOD = 6 % p-PHENYLENEDIAMINE BOD = 5 % Bioaccumulative Potential :

BEHENTRIMONIUM Low

CHLORIDE $\log \text{Koc} = 3 - 5.7$

Log Pow < 3

MINERAL OIL Log Pow > 6 (IUCLID, 2000)

p-AMINOPHENOL BCF = 46

Mobility in Soil : 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 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				
UN Proper Shipping Name	N-4 D1-4- 1	N - 4 D 1 - 4 - 4	N-4 D1-4- d	
Transport Hazard Classes	Not Regulated	Not Regulated	Not Regulated	
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 : No information available.

II of MARPOL 73/78 and IBC Code

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 Ref. No.: Ver. 1

Safety Data Sheet

Issue Date: Revised Date: 2017.3.31

Page 11 of 13

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).

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:

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

[&]quot;1" indicates that the statutory source is section 311(b)(2) of the Clean Water Act,

[&]quot;2" indicates that the source is section 307(a) of the Clean Water Act,

[&]quot;3" indicates that the source is section 112 of the Clean Air Act, and

[&]quot;4" indicates that the source is section 3001 of the Resource Conservation and Recovery Act (RCRA).

Ref. No.: Ver. 1

Safety Data Sheet

Issue Date: Revised Date:

2017.3.31 Page 12 of 13

Instability hazard 0
Special hazards COR
HMIS (Hazardous Materials : Health 3
Identification System) Flammability 0

Physical hazard 0 Personal protection X

Reference

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

Disclaimer: The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Ref. No.: Ver. 1 **Safety Data Sheet**

Issue Date: Revised Date: 2017.3.31

Page 13 of 13