

SAFETY DATA SHEET

1. Identification

Product identifier MATRIX SOCOLOR CULT DEMI-PERMANENT HAIR COLOR - GROUP 1

Other means of identification

SDS number 80-21-0000235

Recommended use Not available.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

US Address: L'Oreal USA Products, Inc
133 Terminal Avenue
Clark, NJ 07066
USA

Canadian Address: L'Oreal Canada
4895 rue Hickmore
Ville St-Laurent, H4T 1K5
Canada

Emergency Phone # : 1-800-535-5053 (International: 352-323-3500)
In Canada - 1-613-996-6666 (Canutec (*666 Cellular))

For further Information: 1-732-499-2741

Poison Control # : 412-390-3326

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Skin corrosion/irritation Category 1C
Serious eye damage/eye irritation Category 1
Sensitization, skin Category 1A
Specific target organ toxicity, single exposure Category 3 respiratory tract irritation

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. May cause respiratory irritation.

Precautionary statement

Prevention

Do not breathe mist/vapors. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.

Response	If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	1.2% of the mixture consists of component(s) of unknown acute oral toxicity. 3.7% of the mixture consists of component(s) of unknown acute dermal toxicity. 14.5% of the mixture consists of component(s) of unknown acute inhalation toxicity.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
DECETH-3		66455-15-0	9
LAURETH-12		68439-50-9	7
ETHANOLAMINE		141-43-5	< 6
LAURIC ACID		143-07-7	3
1-HYDROXYETHYL 4,5-DIAMINO PYRAZOLE SULFATE		155601-30-2	< 2
TOLUENE-2,5-DIAMINE		95-70-5	< 2
SILICA DIMETHYL SILYLATE		68611-44-9	1.2
RESORCINOL		108-46-3	< 2
1-NAPHTHOL		90-15-3	≤ 1
N,N-BIS(2-HYDROXYETHYL)-p-PH ENYLENEDIAMINE SULFATE		54381-16-7	≤ 1
M-AMINOPHENOL		591-27-5	< 0.3
4-AMINO-2-HYDROXYTOLUENE		2835-95-2	≤ 0.3
P-AMINOPHENOL		123-30-8	≤ 0.3

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
General information	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
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Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Do not breathe mist/vapors. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in tightly closed container. Keep out of the reach of children. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
ETHANOLAMINE (CAS 141-43-5)	PEL	6 mg/m ³
		3 ppm

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value
SILICA DIMETHYL SILYLATE (CAS 68611-44-9)	TWA	0.8 mg/m ³
		20 mppcf

US. ACGIH Threshold Limit Values

Components	Type	Value
ETHANOLAMINE (CAS 141-43-5)	STEL	6 ppm
	TWA	3 ppm
RESORCINOL (CAS 108-46-3)	STEL	20 ppm
	TWA	10 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
ETHANOLAMINE (CAS 141-43-5)	STEL	15 mg/m3
		6 ppm
	TWA	8 mg/m3
		3 ppm
RESORCINOL (CAS 108-46-3)	STEL	90 mg/m3
		20 ppm
	TWA	45 mg/m3
		10 ppm

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
TOLUENE-2,5-DIAMINE (CAS 95-70-5)	TWA	0.025 mg/m3
		0.005 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines**US WEEL Guides: Skin designation**

TOLUENE-2,5-DIAMINE (CAS 95-70-5)

Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Applicable for industrial settings only. Chemical respirator with organic vapor cartridge and full facepiece.

Skin protection**Hand protection**

Applicable for industrial settings only. Wear appropriate chemical resistant gloves.

Other

Applicable for industrial settings only. Wear appropriate chemical resistant clothing.

Respiratory protection

Applicable for industrial settings only. Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties**Appearance****Physical state**

Liquid.

Form

Cream.

Color

Not available.

Odor

Not available.

Odor threshold

Not available.

pH

Not available.

Melting point/freezing point

Not available.

Initial boiling point and boiling range

> 212 °F (> 100 °C)

Flash point

> 212.0 °F (> 100.0 °C) Closed Cup

Evaporation rate

Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Density $\geq 1.02 \text{ g/cm}^3$

Explosive properties Not explosive.

Oxidizing properties Not oxidizing.

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

Conditions to avoid Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials.

Incompatible materials Strong acids. Strong oxidizing agents.

Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation May cause irritation to the respiratory system. Prolonged inhalation may be harmful.

Skin contact Causes severe skin burns. May cause an allergic skin reaction.

Prolonged or repeated exposure may cause liver and kidney damage. These effects have not been observed in humans.

Eye contact Causes serious eye damage.

Ingestion Causes digestive tract burns.

Symptoms related to the physical, chemical and toxicological characteristics Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.

Information on toxicological effects

Acute toxicity Not known.

Product	Species	Test Results
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MATRIX SOCOLOR CULT DEMI-PERMANENT HAIR COLOR - GROUP 1		
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Acute

Dermal

ATEmix

21870 mg/kg

Product	Species	Test Results
Oral ATEmix		4137 mg/kg
Components	Species	Test Results
1-HYDROXYETHYL 4,5-DIAMINO PYRAZOLE SULFATE (CAS 155601-30-2)		
<u>Acute</u>		
Inhalation		
<i>Aerosol</i>		
LD50	Rat	> 5.24 mg/m3, 4 h OECD 403
Oral		
LD50	Rat	> 2000 mg/kg OECD 401
1-NAPHTHOL (CAS 90-15-3)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	>= 880 mg/kg
Inhalation		
<i>Aerosol</i>		
LD50	Rat	> 420 mg/m ³ , 1 Hours
Oral		
LD50	Rat	1000 - 2000 mg/kg
4-AMINO-2-HYDROXYTOLUENE (CAS 2835-95-2)		
<u>Acute</u>		
Oral		
LD50	Rat	3600 mg/kg
DECETH-3 (CAS 66455-15-0)		
<u>Acute</u>		
Dermal		
LD50	Rat	> 2000 mg/kg Based on test data for structurally similar materials.
Oral		
LD50	Rat	> 2000 mg/kg Based on test data for structurally similar materials.
ETHANOLAMINE (CAS 141-43-5)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	2504 mg/kg OECD 402
Inhalation		
<i>Vapor</i>		
LC50	Rat	> 1.3 mg/l, 6 h
Oral		
LD50	Rat	1515 mg/kg OECD 401
LAURETH-12 (CAS 68439-50-9)		
<u>Acute</u>		
Dermal		
LD50	Rat	> 2000 mg/kg OECD 402
Inhalation		
<i>Aerosol</i>		
LC50	Rat	> 1.6 mg/l, 4 h OECD 403
Oral		
LD50	Rat	> 2000 mg/kg OECD 401

Components	Species	Test Results
LAURIC ACID (CAS 143-07-7)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 2000 mg/kg OECD 434
Inhalation		
<i>Vapor</i>		
LC50	Rat	> 0.1621 mg/l, 4 h
Oral		
LD50	Rat	> 5000 mg/kg OECD 401
M-AMINOPHENOL (CAS 591-27-5)		
<u>Acute</u>		
Inhalation		
LC50	Rat	1162 mg/m3
Oral		
LD50	Rat	924 mg/kg
N,N-BIS(2-HYDROXYETHYL)-p-PHENYLENEDIAMINE SULFATE (CAS 54381-16-7)		
<u>Acute</u>		
Oral		
LD50	Rat	264 mg/kg
P-AMINOPHENOL (CAS 123-30-8)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 8000 mg/kg EPA OPTTS 870.1200
Inhalation		
<i>Dust</i>		
LC50	Rat	> 3.42 mg/l, 4 h OECD 403
Oral		
LD50	Rat	671 mg/kg EPA OPPTS 870.1100
RESORCINOL (CAS 108-46-3)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	2830 mg/kg FHSL Act
Inhalation		
<i>Aerosol</i>		
LC0	Rat	> 7800 mg/m ³ , 1 h FHSL Act
Oral		
LD50	Rat	510 mg/kg OECD 401
TOLUENE-2,5-DIAMINE (CAS 95-70-5)		
Oral		
LD50	Rat	102 mg/kg OECD 401
<u>Acute</u>		
Dermal		
LD50	Rabbit	3520 mg/kg
Inhalation		
<i>Dust</i>		
LC50	Rat	0.99 mg/l, 4 h
Skin corrosion/irritation	Causes severe skin burns and eye damage.	

Irritation Corrosion - Skin

RESORCINOL	FHLS Act, (100%) Result: Irritating Species: Rabbit
ETHANOLAMINE	OECD 404 Result: Corrosive Species: Rabbit
LAURETH-12	OECD 404 Result: Not Irritating Species: Rabbit
M-AMINOPHENOL	OECD 404 Result: Not Irritating Species: Rabbit
1-HYDROXYETHYL 4,5-DIAMINO PYRAZOLE SULFATE	OECD 404 Result: Slightly Irritating Species: Rabbit
LAURIC ACID	OECD 404 Result: Slightly Irritating Species: Rabbit
RESORCINOL	OECD 404, (2.5%) Result: Not Irritating Species: Rabbit
DECETH-3	OECD 404, Based on test data for structurally similar materials. Result: Slightly Irritating Species: Rabbit
N,N-BIS(2-HYDROXYETHYL)-p-PHENYLENEDIAMI NE SULFATE	OECD 439 Result: Not Irritating Species: In vitro
TOLUENE-2,5-DIAMINE	OECD 439 Result: Not Irritating Species: In vitro
4-AMINO-2-HYDROXYTOLUENE	OECD 439 Result: Not Irritating Species: RhE
1-NAPHTHOL	Result: Irritating Species: Rabbit
P-AMINOPHENOL	Result: Slightly Irritating Species: Rabbit

Serious eye damage/eye irritation Causes serious eye damage.

Irritation Corrosion - Eye

P-AMINOPHENOL	EPA OPPTS 870.2400 Result: Slightly Irritating Species: Rabbit
RESORCINOL	FHLS Act, (100%) Result: Corrosive Species: Rabbit
1-HYDROXYETHYL 4,5-DIAMINO PYRAZOLE SULFATE	OECD 405 Result: Corrosive Species: Rabbit
ETHANOLAMINE	OECD 405 Result: Corrosive Species: Rabbit
LAURETH-12	OECD 405 Result: Corrosive Species: Rabbit
LAURIC ACID	OECD 405 Result: Corrosive Species: Rabbit
TOLUENE-2,5-DIAMINE	OECD 405 Result: Corrosive Species: Rabbit
M-AMINOPHENOL	OECD 405 Result: Not Irritating Species: Rabbit

Irritation Corrosion - Eye

RESORCINOL

OECD 405, (2.5%)
Result: Not Irritating
Species: Rabbit

1-NAPHTHOL

OECD 438
Result: Corrosive
Species: In vitro

N,N-BIS(2-HYDROXYETHYL)-p-PHENYLENEDIAMINE SULFATE

OECD 438
Result: Irritating
Species: In vitro

4-AMINO-2-HYDROXYTOLUENE

OECD 492
Result: Not Irritating
Species: RhCE

DECETH-3

Result: Corrosive
Species: Rabbit**Respiratory or skin sensitization****Respiratory sensitization** Not a respiratory sensitizer.**Skin sensitization** May cause an allergic skin reaction.**Skin sensitization**

1-HYDROXYETHYL 4,5-DIAMINO PYRAZOLE SULFATE

EU Method B.6 - Cat 1
Result: Sensitizing
Species: Guinea pig

LAURETH-12

OECD 406
Result: Not Sensitizing
Species: Guinea pig

LAURIC ACID

OECD 406
Result: Not Sensitizing
Species: Guinea pig

P-AMINOPHENOL

OECD 406
Result: Sensitizing
Species: Guinea pig

DECETH-3

OECD 406, Based on test data for structurally similar materials.
Result: Not Sensitizing
Species: Guinea pig

1-NAPHTHOL

OECD 429
Result: Sensitizing
Species: Mouse

4-AMINO-2-HYDROXYTOLUENE

OECD 429
Result: Sensitizing
Species: Mouse

M-AMINOPHENOL

OECD 429
Result: Sensitizing
Species: Mouse

N,N-BIS(2-HYDROXYETHYL)-p-PHENYLENEDIAMINE SULFATE

OECD 429
Result: Sensitizing
Species: Mouse

RESORCINOL

OECD 429
Result: Sensitizing
Species: Mouse

TOLUENE-2,5-DIAMINE

OECD 429
Result: Sensitizing
Species: Mouse

ETHANOLAMINE

Result: Not Sensitizing
Species: Guinea pig**Germ cell mutagenicity**

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Mutagenicity

LAURETH-12

Result: In vitro and in vivo tests did not show mutagenic effects.

N,N-BIS(2-HYDROXYETHYL)-p-PHENYLENEDIAMINE SULFATE

Result: In vitro and in vivo tests did not show mutagenic effects.

ETHANOLAMINE

Result: In vitro and in vivo tests did show mutagenic effects

1-HYDROXYETHYL 4,5-DIAMINO PYRAZOLE SULFATE

Result: In vitro tests did not show mutagenic effects

Mutagenicity

DECETH-3
LAURIC ACID
M-AMINOPHENOL

RESORCINOL

TOLUENE-2,5-DIAMINE

4-AMINO-2-HYDROXYTOLUENE

1-NAPHTHOL

P-AMINOPHENOL

Result: In vitro tests did not show mutagenic effects
Result: In vitro tests did not show mutagenic effects
Result: In vitro tests showed mutagenic effects which were not observed with in vivo test.
Result: In vitro tests showed mutagenic effects which were not observed with in vivo test.
Result: In vitro tests showed mutagenic effects which were not observed with in vivo test.
Result: In vitro tests showed mutagenic effects which were not observed with in vivo tests.
Result: In vitro tests showed varied results. In vivo tests showed negative results.
Result: In vivo tests showed mutagenic effects

Carcinogenicity

Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

RESORCINOL (CAS 108-46-3)

3 Not classifiable as to carcinogenicity to humans.

TOLUENE-2,5-DIAMINE (CAS 95-70-5)

3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

Developmental effects

LAURETH-12

>= 250 mg/kg bw/d OECD 416
Result: NOAEL
Species: Rat

ETHANOLAMINE

>= 450 mg/kg bw/d OECD 414
Result: NOAEL
Species: Rat

N,N-BIS(2-HYDROXYETHYL)-p-PHENYLENEDIAMINE SULFATE

>= 50 mg/kg bw/d OECD 414
Result: NOAEL
Species: Rat

M-AMINOPHENOL

100 mg/kg bw/d OECD 414
Result: NOAEL
Species: Rat

P-AMINOPHENOL

100 mg/kg bw/d OECD 421
Result: NOAEL
Species: Rat

LAURIC ACID

1000 mg/kg bw/d OECD 422
Result: NOAEL
Species: Rabbit

4-AMINO-2-HYDROXYTOLUENE

180 mg/kg bw/d OECD 414
Result: NOAEL
Species: Rat

RESORCINOL

250 mg/kg bw/d OECD 414
Result: NOAEL
Species: Rat

1-NAPHTHOL

400 mg/kg bw/d OECD 414
Result: NOAEL
Species: Rat

TOLUENE-2,5-DIAMINE

50 mg/kg bw/d OECD 414, Based on test data for structurally similar materials.
Result: NOAEL
Species: Rat

Reproductivity

LAURETH-12

>= 250 mg/kg bw/d OECD 416
Result: NOAEL
Species: Rat

TOLUENE-2,5-DIAMINE

>= 45 mg/kg bw/d OECD 416, Based on test data for structurally similar materials.
Result: NOAEL
Species: Rat

Reproductivity

P-AMINOPHENOL

100 mg/kg bw/d OECD 421

Result: NOAEL

Species: Rat

LAURIC ACID

1000 mg/kg bw/d OECD 422

Result: NOAEL

N,N-BIS(2-HYDROXYETHYL)-p-PHENYLENEDIAMINE SULFATE

20 mg/kg bw/d OECD 408

Result: NOAEL

Species: Rat

Test Duration: 90 d

4-AMINO-2-HYDROXYTOLUENE

200 mg/kg bw/d OECD 415

Result: NOAEL

Species: Rat

RESORCINOL

245 mg/kg bw/d OECD 416

Result: NOAEL

Species: Rat

1-HYDROXYETHYL 4,5-DIAMINO PYRAZOLE SULFATE

300 mg/kg bw/d OECD 415

Species: Rat

ETHANOLAMINE

300 mg/kg bw/d OECD 416

Result: NOAEL

Species: Rat

1-NAPHTHOL

Result: No Data

Specific target organ toxicity - single exposure

May cause respiratory irritation.

1-NAPHTHOL

Result: Irritating

Specific target organ toxicity - repeated exposure

Not classified.

LAURETH-12

>= 500 mg/kg bw/d OECD 408

Result: NOAEL

Species: Rat

Test Duration: 90 d

P-AMINOPHENOL

10 mg/kg bw/d OECD 408

Result: NOAEL

Species: Rat

Test Duration: 90 d

TOLUENE-2,5-DIAMINE

10 mg/kg bw/d OECD 408, Oral

Result: NOAEL

Species: Rat

Test Duration: 90 d

DECETH-3

100 mg/kg bw/d OECD 407, Based on test data for structurally similar materials.

Result: NOAEL

Species: Rat

Test Duration: 28 d

LAURIC ACID

1000 mg/kg bw/d OECD 422

Result: NOAEL

Species: Rat

1-NAPHTHOL

130 mg/kg bw/d OECD 408

Result: NOAEL

Species: Rat

Test Duration: 90 d

ETHANOLAMINE

150 mg/m3 air OECD 412, Inhalation

Result: NOAEC

Species: Rat

Test Duration: 28 d

4-AMINO-2-HYDROXYTOLUENE

180 mg/kg bw/d OECD 408, Oral

Result: NOAEL

Species: Rat

Test Duration: 90 d

M-AMINOPHENOL

20 mg/kg bw/d OECD 408

Result: NOAEL

Species: Rat

Test Duration: 90 d

N,N-BIS(2-HYDROXYETHYL)-p-PHENYLENEDIAMINE SULFATE

20 mg/kg bw/d OECD 408

Result: NOAEL

Species: Rat

Test Duration: 90 d

Specific target organ toxicity - repeated exposure

1-HYDROXYETHYL 4,5-DIAMINO PYRAZOLE SULFATE	250 mg/kg bw/d OECD 408, Oral Result: NOAEL Species: Rat Test Duration: 90 d
ETHANOLAMINE	300 mg/kg bw/d OECD 416, Oral Result: NOAEL Species: Rat
RESORCINOL	80 mg/kg bw/d OECD 408, Oral Result: NOAEL Species: Rat Test Duration: 90 d 991 mg/m ³ Result: NOAEC Species: Rat Test Duration: 14 d

Aspiration hazard

Not an aspiration hazard.

Chronic effects

Prolonged inhalation may be harmful. May be harmful if absorbed through skin.

Prolonged or repeated exposure may cause liver and kidney damage. These effects have not been observed in humans.

12. Ecological information

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
1-HYDROXYETHYL 4,5-DIAMINO PYRAZOLE SULFATE (CAS 155601-30-2)		
Aquatic		
<i>Acute</i>		
Algae	Pseudokirchneriella subcapitata	5.33 mg/l, 72 h EU C.3
Crustacea	EC50 Daphnia magna	11.12 mg/l, 48 h TG 202
Fish	LC50 Danio rerio	86.2 mg/l, 96 h EU C.1
1-NAPHTHOL (CAS 90-15-3)		
Aquatic		
<i>Acute</i>		
Algae	EC50 Pseudokirchneriella subcapitata	> 2.18 mg/l, 72 h OECD 201
Crustacea	EC50 Daphnia magna	2.51 mg/l, 48 h
Fish	LC50 Pimephales promelas	4.24 mg/l, 96 h
<i>Chronic</i>		
Crustacea	NOEC Daphnia magna	0.25 mg/l, 21 d OECD 211
4-AMINO-2-HYDROXYTOLUENE (CAS 2835-95-2)		
Aquatic		
<i>Acute</i>		
Algae	EC50 Pseudokirchneriella subcapitata	41 mg/l, 72 h OECD 201
Crustacea	EC50 Daphnia magna	2.3 mg/l, 48 h OECD 202
Fish	LC50 Danio rerio	25 mg/l, 96 h OECD 236
Other	EC50 Activated sludge of a predominantly domestic sewage	> 150 mg/l, 3 h OECD 209
<i>Chronic</i>		
Crustacea	NOEC Daphnia magna	0.24 mg/l, 21 d OECD 211
DECETH-3 (CAS 66455-15-0)		
Aquatic		
<i>Acute</i>		
Algae	EC50 Desmodesmus subspicatus	1.8 mg/l, 72 h 92/69/EWG
Crustacea	EC50 Daphnia magna	0.39 mg/l, 48 h 92/69/EWG

Components		Species	Test Results
Fish	LC50	Cyprinus carpio	1.2 mg/l, 96 h EU C.1
Other	EC0	Activated sludge of a predominantly domestic sewage	140 mg/l, 3 h 88/302/EG
<i>Chronic</i>			
Crustacea	NOEC	Daphnia magna	<= 1 mg/l, 21 d
Fish	NOEC	Lepomis macrochirus	0.16 mg/l, 10 d
ETHANOLAMINE (CAS 141-43-5)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Pseudokirchneriella subcapitata	2.8 mg/l, 72 h OECD 201
Crustacea	EC50	Daphnia magna	65 mg/l, 48 h EU C.2
Fish	LC50	Cyprinus carpio	349 mg/l, 96 h EU C.1
Other	EC10	Activated sludge of a predominantly domestic sewage	> 1000 mg/l, 30 min OECD 209
<i>Chronic</i>			
Crustacea	NOEC	Daphnia magna	0.85 mg/l, 21 d OECD 211
Fish	NOEC	Oryzias latipes	1.24 mg/l, 41 d OECD 210
LAURETH-12 (CAS 68439-50-9)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Pseudokirchneriella subcapitata	0.29 mg/l, 72 h OECD 201
Crustacea	EC50	Daphnia magna	0.53 mg/l, 48 h
Fish	LC50	Danio rerio	1.2 mg/l, 96 h EU C.1
Other	EC50	Pseudomonas putida	> 10000 mg/l, 16.9 h DIN 38412, 8
<i>Chronic</i>			
Crustacea	NOEC	Daphnia magna	0.77 mg/l, 21 d
LAURIC ACID (CAS 143-07-7)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Pseudokirchneriella subcapitata	> 7.6 mg/l, 72 h OECD 201
Crustacea	EC50	Daphnia magna	3.6 mg/l, 48 h OECD 202
Fish	LC50	Oryzias latipes	5 mg/l, 96 h OECD 203
Other	EC10	Pseudomonas putida	> 1000 mg/l, 30 min OECD 209
M-AMINOPHENOL (CAS 591-27-5)			
<i>Acute</i>			
Other	IC50	Tetrahymena pyriformis	361 mg/l, 40 h
Aquatic			
<i>Acute</i>			
Algae	EC50	Pseudokirchneriella subcapitata	62 mg/l, 72 h OECD 201
Crustacea	EC50	Daphnia magna	1.1 mg/l, 48 h DIN 38412, Pt. 11
Fish	LC50	Danio rerio	82.64 mg/l, 96 h OECD 203
<i>Chronic</i>			
Crustacea	NOEC	Daphnia magna	0.05 mg/l, 21 d OECD 211
Fish	NOEC	Oryzias latipes	25 mg/l, 25 d OECD 204
N,N-BIS(2-HYDROXYETHYL)-p-PHENYLENEDIAMINE SULFATE (CAS 54381-16-7)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Pseudokirchneriella subcapitata	0.338 mg/l, 72 h OECD 201
Crustacea	EC50	Daphnia magna	0.381 mg/l, 48 h OECD 202

Components		Species	Test Results
Fish	LC50	Danio rerio	> 235 mg/l, 96 h
Other	EC50	Activated sludge of a predominantly domestic sewage	228 mg/l, 3 h OECD 209
<i>Chronic</i>			
Crustacea	NOEC	Daphnia magna	0.674 mg/l, 21 d OECD 211
P-AMINOPHENOL (CAS 123-30-8)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Pseudokirchneriella subcapitata	> 0.253 mg/l, 72 h OECD 201
Crustacea	EC50	Daphnia magna	0.182 mg/l, 48 h OECD 202
Fish	LC50	Oryzias latipes	0.82 mg/l, 96 h OECD 203
Other	EC50	Activated sludge of a predominantly domestic sewage	29.9 mg/l, 3 h OECD 209
RESORCINOL (CAS 108-46-3)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Pseudokirchneriella subcapitata	> 97 mg/l, 97 h OECD 201
Crustacea	LC50	Daphnia magna	1 mg/l, 48 h OECD 202
Fish	LC50	Pimephales promelas	26.8 mg/l, 96 h EPA-660/3/75-009
Other		Activated sludge of a predominantly domestic sewage	79 mg/l, 3 h OECD 209
<i>Chronic</i>			
Crustacea	NOEC	Daphnia magna	>= 0.172 mg/l, 21 d
Fish	LOEC	Oncorhynchus mykiss	320 mg/l, 60 d
TOLUENE-2,5-DIAMINE (CAS 95-70-5)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Pseudokirchneriella subcapitata	1.02 mg/l, 72 h OECD 201
Crustacea	EC50	Daphnia magna	0.491 mg/l, 48 h OECD 202
Fish	LC50	Oryzias latipes	0.05 mg/l, 96 h OECD 203
Other	EC50	Activated sludge of a predominantly domestic sewage	3.75 mg/l, 3 h OECD 209
<i>Chronic</i>			
Algae	NOEC	Pseudokirchneriella subcapitata	0.11 mg/l, 72 h OECD 201

Persistence and degradability

Biodegradability

Percent degradation (Aerobic biodegradation)

1-HYDROXYETHYL 4,5-DIAMINO PYRAZOLE SULFATE	33.3 % EU C.4-E Result: Not readily biodegradable
1-NAPHTHOL	> 77.8 % OECD 301 B Result: Readily Biodegradable Test Duration: 28 d
4-AMINO-2-HYDROXYTOLUENE	0 % OECD 301 B Result: Not Readily Biodegradable Test Duration: 28 d
DECETH-3	78 % OECD 301 B Result: Readily Biodegradable Test Duration: 28 d
ETHANOLAMINE	> 90 % OECD 301 A Result: Readily Biodegradable Test Duration: 21 d
LAURETH-12	95 % OECD 301 F Result: Readily Biodegradable Test Duration: 28 d

Biodegradability

Percent degradation (Aerobic biodegradation)

N,N-BIS(2-HYDROXYETHYL)-p-PHENYLENEDIAMINE SULFATE	14.3 % OECD 301B Result: Not Readily Biodegradable Test Duration: 28 d
RESORCINOL	66.7 % OECD 301 C Result: Readily Biodegradable Test Duration: 14 d
TOLUENE-2,5-DIAMINE	17 % OECD 301 D Result: Not Readily Biodegradable Test Duration: 28 d

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

1-NAPHTHOL	2.836 OECD 107
4-AMINO-2-HYDROXYTOLUENE	-0.53 EU A.8 0.53 OECD 117
ETHANOLAMINE	-2.3 OECD 107
LAURETH-12	6.1 OECD 117
LAURIC ACID	4.2
M-AMINOPHENOL	0.21
N,N-BIS(2-HYDROXYETHYL)-p-PHENYLENEDIAMINE SULFATE	-2.8 -2.8 OECD 107
P-AMINOPHENOL	0.25
RESORCINOL	0.8
TOLUENE-2,5-DIAMINE	-0.321 OECD 107

Bioconcentration factor (BCF)

P-AMINOPHENOL	10 - 46 OECD 305 C
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Bioaccumulation

1-NAPHTHOL	Result: Bioaccumulation is unlikely
ETHANOLAMINE	Result: Bioaccumulation is unlikely.
P-AMINOPHENOL	Result: Bioaccumulation is unlikely.
TOLUENE-2,5-DIAMINE	Result: Bioaccumulation is unlikely.

Mobility in soil

No data available.

Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations

Dispose in accordance with all applicable regulations.

Waste from residues / unused products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

FINISHED GOODS

UN number	UN1760
UN proper shipping name	CORROSIVE LIQUID, N.O.S. (ETHANOLAMINE)
Class	8
Packing group	III
Transport hazard class(es)	
Label(s)	8
Packaging exceptions	154

BULK

UN number	UN1760
UN proper shipping name	CORROSIVE LIQUID, N.O.S. (ETHANOLAMINE)

Class	8
Packing group	III
Transport hazard class(es)	
Label(s)	8
Special provisions	IB3, T7, TP1, TP28
Packaging non bulk	203

Read safety instructions, SDS and emergency procedures before handling.

IATA

FINISHED GOODS

UN number	UN1760
UN proper shipping name	CORROSIVE LIQUID, N.O.S. (ETHANOLAMINE)
Class	8
Packing group	III
ERG Number	8L

BULK

UN number	UN1760
UN proper shipping name	CORROSIVE LIQUID, N.O.S. (ETHANOLAMINE)
Class	8
Packing group	III
ERG Number	8L

Read safety instructions, SDS and emergency procedures before handling.

IMDG

FINISHED GOODS

UN number	UN1760
UN proper shipping name	CORROSIVE LIQUID, N.O.S. (ETHANOLAMINE)
Class	8
Packing group	III
Environmental Hazards	
Marine pollutant	No.
EmS	F-A, S-B
LTD QTY Net Inner Capacity	5.00 L

BULK

UN number	UN1760
UN proper shipping name	CORROSIVE LIQUID, N.O.S. (ETHANOLAMINE)
Class	8
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B

Read safety instructions, SDS and emergency procedures before handling.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

RESORCINOL (CAS 108-46-3)	Listed.
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TOLUENE-2,5-DIAMINE (CAS 95-70-5)	Listed.
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SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No (Exempt)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
TOLUENE-2,5-DIAMINE	95-70-5	< 2

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

RESORCINOL (CAS 108-46-3)

Low priority

16. Other information, including date of preparation or last revision

Issue date 09-26-2019

Version # 01

NFPA ratings Health: 3
Flammability: 1
Instability: 0

Disclaimer Matrix cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Revision information This document has undergone significant changes and should be reviewed in its entirety.