

1. Identification

Product identifier L'ORÉAL PROFESSIONNEL INOA PERMANENT HAIR COLOURS - GROUP 1

Other means of identification

SDS number 80-21-0000188

Recommended use Personal care product used for cosmetic effect.

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	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
MINERAL OIL		8042-47-5	60
ETHANOLAMINE		141-43-5	< 6
GLYCERIN		56-81-5	5
OLETH-20		9004-98-2	4
DECETH-5		66455-15-0	1.08
OLETH-10		9004-98-2	1
4-AMINO-2-HYDROXYTOLUENE		2835-95-2	< 0.4
TOLUENE-2,5-DIAMINE		95-70-5	< 0.4
RESORCINOL		108-46-3	< 0.4
P-PHENYLENEDIAMINE		106-50-3	< 0.3
P-AMINOPHENOL		123-30-8	< 0.2
M-AMINOPHENOL		591-27-5	< 0.2

*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	Foam. Dry chemicals. Carbon dioxide (CO ₂).
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	Cool containers exposed to heat with water spray and remove container, if no risk is involved.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Will burn if involved in a fire. 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. Avoid discharge into drains, water courses or onto the ground.

Environmental precautions

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 or repeated contact with skin. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store locked up. Keep away from heat and sources of ignition. 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	Form
ETHANOLAMINE (CAS 141-43-5)	PEL	6 mg/m ³	
		3 ppm	
GLYCERIN (CAS 56-81-5)	PEL	5 mg/m ³	Respirable fraction.
		15 mg/m ³	Total dust.
MINERAL OIL (CAS 8042-47-5)	PEL	5 mg/m ³	Mist.
P-PHENYLENEDIAMINE (CAS 106-50-3)	PEL	0.1 mg/m ³	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
ETHANOLAMINE (CAS 141-43-5)	STEL	6 ppm	
	TWA	3 ppm	
MINERAL OIL (CAS 8042-47-5)	TWA	5 mg/m ³	Inhalable fraction.
P-PHENYLENEDIAMINE (CAS 106-50-3)	TWA	0.1 mg/m ³	
RESORCINOL (CAS 108-46-3)	STEL	20 ppm	
	TWA	10 ppm	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
ETHANOLAMINE (CAS 141-43-5)	STEL	15 mg/m3	
		6 ppm	
	TWA	8 mg/m3 3 ppm	
MINERAL OIL (CAS 8042-47-5)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
P-PHENYLENEDIAMINE (CAS 106-50-3)	TWA	0.1 mg/m3	
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 - California OELs: Skin designation**

P-PHENYLENEDIAMINE (CAS 106-50-3) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

P-PHENYLENEDIAMINE (CAS 106-50-3) Skin designation applies.

US - Tennessee OELs: Skin designation

P-PHENYLENEDIAMINE (CAS 106-50-3) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

P-PHENYLENEDIAMINE (CAS 106-50-3) Can be absorbed through the skin.

US WEEL Guides: Skin designation

TOLUENE-2,5-DIAMINE (CAS 95-70-5) Can be absorbed through the skin.

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

P-PHENYLENEDIAMINE (CAS 106-50-3) 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.
Color	Shaded
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 0.89 g/cm³

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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L'ORÉAL PROFESSIONNEL INOA PERMANENT HAIR COLOURS - GROUP 1

Acute

Dermal

ATEmix

28590 mg/kg

Oral

ATEmix

15440 mg/kg

Components	Species	Test Results
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4-AMINO-2-HYDROXYTOLUENE (CAS 2835-95-2)

Acute

Oral

LD50

Rat

3600 mg/kg

DECETH-5 (CAS 66455-15-0)

Acute

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)

Acute

Dermal

LD50

Rabbit

2504 mg/kg OECD 402

Inhalation

Vapor

LC50

Rat

> 1.3 mg/l, 6 h

Oral

LD50

Rat

1515 mg/kg OECD 401

GLYCERIN (CAS 56-81-5)

Acute

Dermal

LD50

Rabbit

> 18700 mg/kg bw

Inhalation

LC50

Rat

> 570 mg/L air, 1 h

Oral

LD50

Rat

27200 mg/kg bw

M-AMINOPHENOL (CAS 591-27-5)

Acute

Inhalation

LC50

Rat

1162 mg/m³

Oral

LD50

Rat

924 mg/kg

Components	Species	Test Results
MINERAL OIL (CAS 8042-47-5)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg OECD 402
Inhalation		
<i>Aerosol</i>		
LC50	Rat	> 5 mg/L air, 4 h OECD 403
Oral		
LD50	Rat	> 5000 mg/kg OECD 401
P-AMINOPHENOL (CAS 123-30-8)		
Acute		
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
P-PHENYLENEDIAMINE (CAS 106-50-3)		
Acute		
Dermal		
LD50	Rabbit	> 7940 mg/kg
Inhalation		
<i>Vapor or aerosol</i>		
LC50	Rat	0.92 mg/l, 4 Hours
Oral		
LD50	Rat	80 - 100 mg/kg bw
RESORCINOL (CAS 108-46-3)		
Acute		
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
Acute		
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	

Irritation Corrosion - Skin

ETHANOLAMINE	OECD 404 Result: Corrosive Species: Rabbit
M-AMINOPHENOL	OECD 404 Result: Not Irritating Species: Rabbit
MINERAL OIL	OECD 404 Result: Not Irritating Species: Rabbit
RESORCINOL	OECD 404, (2.5%) Result: Not Irritating Species: Rabbit
DECETH-5	OECD 404, Based on test data for structurally similar materials. Result: Slightly Irritating Species: Rabbit
TOLUENE-2,5-DIAMINE	OECD 439 Result: Not Irritating Species: In vitro
4-AMINO-2-HYDROXYTOLUENE	OECD 439 Result: Not Irritating Species: RhE
P-PHENYLENEDIAMINE	Result: Not Irritating Species: Guinea pig
GLYCERIN	Result: Not Irritating Species: Rabbit
OLETH-20	Result: Not 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
ETHANOLAMINE	OECD 405 Result: Corrosive Species: Rabbit
TOLUENE-2,5-DIAMINE	OECD 405 Result: Corrosive Species: Rabbit
P-PHENYLENEDIAMINE	OECD 405 Result: Irritating Species: Rabbit
M-AMINOPHENOL	OECD 405 Result: Not Irritating Species: Rabbit
MINERAL OIL	OECD 405 Result: Not Irritating Species: Rabbit
RESORCINOL	OECD 405, (2.5%) Result: Not Irritating Species: Rabbit
4-AMINO-2-HYDROXYTOLUENE	OECD 492 Result: Not Irritating Species: RhCE
DECETH-5	Result: Corrosive Species: Rabbit
OLETH-20	Result: Irritating Species: Rabbit
GLYCERIN	Result: Not Irritating Species: Rabbit

Respiratory or skin sensitization

Respiratory sensitization Due to partial or complete lack of data the classification is not possible.

Skin sensitization May cause an allergic skin reaction.

Skin sensitization

GLYCERIN	167 mg/m3 air OECD 413, Inhalation Result: NOAEL Species: Rat Test Duration: 90 d
MINERAL OIL	OECD 406 Result: Not Sensitizing Species: Guinea pig
P-AMINOPHENOL	OECD 406 Result: Sensitizing Species: Guinea pig
DECETH-5	OECD 406, Based on test data for structurally similar materials. Result: Not Sensitizing Species: Guinea pig
4-AMINO-2-HYDROXYTOLUENE	OECD 429 Result: Sensitizing Species: Mouse
M-AMINOPHENOL	OECD 429 Result: Sensitizing Species: Mouse
P-PHENYLENEDIAMINE	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
GLYCERIN	Result: Not Sensitizing Species: Guinea pig
OLETH-20	Result: Not Sensitizing Species: Guinea pig

Germ cell mutagenicity Due to partial or complete lack of data the classification is not possible.

Mutagenicity

GLYCERIN	Result: In vitro and in vivo tests did not show mutagenic effects.
ETHANOLAMINE	Result: In vitro and in vivo tests did show mutagenic effects
DECETH-5	Result: In vitro tests did not show mutagenic effects
MINERAL OIL	Result: In vitro tests did not show mutagenic effects
OLETH-20	Result: In vitro tests did not show mutagenic effects
M-AMINOPHENOL	Result: In vitro tests showed mutagenic effects which were not observed with in vivo test.
P-PHENYLENEDIAMINE	Result: In vitro tests showed mutagenic effects which were not observed with in vivo test.
RESORCINOL	Result: In vitro tests showed mutagenic effects which were not observed with in vivo test.
TOLUENE-2,5-DIAMINE	Result: In vitro tests showed mutagenic effects which were not observed with in vivo test.
4-AMINO-2-HYDROXYTOLUENE	Result: In vitro tests showed mutagenic effects which were not observed with in vivo tests.
P-AMINOPHENOL	Result: In vivo tests showed mutagenic effects

Carcinogenicity Not classifiable as to carcinogenicity to humans. Due to partial or complete lack of data the classification is not possible.

IARC Monographs. Overall Evaluation of Carcinogenicity

MINERAL OIL (CAS 8042-47-5)	3 Not classifiable as to carcinogenicity to humans.
P-PHENYLENEDIAMINE (CAS 106-50-3)	3 Not classifiable as to carcinogenicity to humans.
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 Due to partial or complete lack of data the classification is not possible.

Developmental effects

MINERAL OIL	> 5000 mg/kg bw/d OECD 414, No effects on development Result: NOAEL Species: Rat
ETHANOLAMINE	>= 450 mg/kg bw/d OECD 414 Result: NOAEL Species: Rat
P-PHENYLENEDIAMINE	10 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
GLYCERIN	1310 mg/kg bw/d, No effects on development Result: NOAEL Species: Rat
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
TOLUENE-2,5-DIAMINE	50 mg/kg bw/d OECD 414, Based on test data for structurally similar materials. Result: NOAEL Species: Rat

Reproductivity

MINERAL OIL	>= 2000 mg/kg bw/d OECD 415, No effects on fertility 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
P-AMINOPHENOL	100 mg/kg bw/d OECD 421 Result: NOAEL Species: Rat
4-AMINO-2-HYDROXYTOLUENE	200 mg/kg bw/d OECD 415 Result: NOAEL Species: Rat
GLYCERIN	2000 mg/kg bw/d, No effects on fertility Result: NOAEL Species: Rat
RESORCINOL	245 mg/kg bw/d OECD 416 Result: NOAEL Species: Rat
ETHANOLAMINE	300 mg/kg bw/d OECD 416 Result: NOAEL Species: Rat

Specific target organ toxicity - single exposure May cause respiratory irritation.

Specific target organ toxicity - repeated exposure Due to partial or complete lack of data the classification is not possible.

MINERAL OIL	> 2000 mg/kg bw/d OECD 411, Dermal Result: NOAEL Species: Rat Test Duration: 90 d
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Specific target organ toxicity - repeated exposure

MINERAL OIL

> 50 mg/m³ air OECD 412, Inhalation
Result: NOAEC
Species: Rat
Test Duration: 28 d
>= 1200 mg/kg bw/d OECD 453, Oral
Result: NOAEL
Species: Rat
Test Duration: 2 years

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: NOEAL
Species: Rat

DECETH-5

Test Duration: 90 d
100 mg/kg bw/d OECD 407, Based on test data for structurally similar materials.
Result: NOAEL
Species: Rat
Test Duration: 28 d

ETHANOLAMINE

150 mg/m³ air OECD 412, Inhalation
Result: NOAEC
Species: Rat

P-PHENYLENEDIAMINE

Test Duration: 28 d
16 mg/kg bw/d OECD 408
Result: NOAEL
Species: Rat

4-AMINO-2-HYDROXYTOLUENE

Test Duration: 90 d
180 mg/kg bw/d OECD 408, Oral
Result: NOAEL
Species: Rat

M-AMINOPHENOL

Test Duration: 90 d
20 mg/kg bw/d OECD 408
Result: NOAEL
Species: Rat

ETHANOLAMINE

Test Duration: 90 d
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

GLYCERIN

Test Duration: 90 d
8000 mg/kg bw/d, Oral
Result: NOAEL
Species: Rat

RESORCINOL

Test Duration: 2 yr
991 mg/m³
Result: NOAEC
Species: Rat
Test Duration: 14 d

Aspiration hazard

Due to partial or complete lack of data the classification is not possible.

Chronic effects

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.

Further information

May cause allergic respiratory and skin reactions. The reference to any animal testing for individual constituents mentioned in this document is based on public, third-party data.

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
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-5 (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
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
GLYCERIN (CAS 56-81-5)			
Aquatic			
<i>Acute</i>			
Algae	EC0	Scenedesmus quadricauda	> 10000 mg/l, 192 h
Crustacea	EC50	Daphnia magna	1955 mg/l, 48 h
Fish	LC50	Oncorhynchus mykiss	54000 mg/l, 96 h
Other	NOEC	Pseudomonas putida	> 10000 mg/l, 16 h
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

Components		Species	Test Results
<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
MINERAL OIL (CAS 8042-47-5)			
Aquatic			
<i>Acute</i>			
Algae	NOEL	Pseudokirchneriella subcapitata	> 100 mg/l, 72 h OECD 201
Crustacea	EL50	Daphnia magna	> 100 mg/l, 48 h OECD 202
Fish	LL50	Oncorhynchus mykiss	> 100 mg/l, 96 h OECD 203
<i>Chronic</i>			
Crustacea	NOEC	Daphnia magna	10 mg/l, 21 d OECD 211
OLETH-20 (CAS 9004-98-2)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Oncorhynchus mykiss	4.7 mg/l, 96 h
Other	IC50	Pseudomonas aeruginosa	> 10000 mg/l, 6 h
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
P-PHENYLENEDIAMINE (CAS 106-50-3)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Pseudokirchneriella subcapitata	0.27 mg/l, 72 h OECD 201
Crustacea	EC50	Daphnia magna	0.33 mg/l, 48 h OECD 202
Fish	LC50	Oncorhynchus mykiss	3.9 mg/l, 96 h OECD 203
Other	EC50	Activated sludge of a predominantly domestic sewage	13.4 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

Components		Species	Test Results
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)

4-AMINO-2-HYDROXYTOLUENE	0 % OECD 301 B Result: Not Readily Biodegradable Test Duration: 28 d
DECETH-5	78 % OECD 301 B Result: Readily Biodegradable Test Duration: 28 d
ETHANOLAMINE	> 90 % OECD 301 A Result: Readily Biodegradable Test Duration: 21 d
GLYCERIN	OECD 301 Result: Readily Biodegradable
MINERAL OIL	31 % OECD 301 F Result: Not Readily Biodegradable
P-PHENYLENEDIAMINE	28 - 30 % OECD 301 D 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)

4-AMINO-2-HYDROXYTOLUENE	-0.53 EU A.8 0.53 OECD 117
ETHANOLAMINE	-2.3 OECD 107
GLYCERIN	-1.76
M-AMINOPHENOL	0.21
P-AMINOPHENOL	0.25
P-PHENYLENEDIAMINE	-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

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), Limited Quantity
Class 8
Packing group III
Transport hazard class(es)
Label(s) Limited Quantity
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

IATA

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) Class 8, Limited Quantity
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

IMDG

FINISHED GOODS

UN number UN1760
UN proper shipping name CORROSIVE LIQUID, N.O.S. (ETHANOLAMINE), Limited Quantity
Class 8
Packing group III
Environmental Hazards
Marine pollutant No.
Transport hazard class(es)
Label(s) Limited Quantity
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

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)

P-PHENYLENEDIAMINE (CAS 106-50-3)	Listed.
RESORCINOL (CAS 108-46-3)	Listed.
TOLUENE-2,5-DIAMINE (CAS 95-70-5)	Listed.

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	< 0.4

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

P-PHENYLENEDIAMINE (CAS 106-50-3)

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

GLYCERIN (CAS 56-81-5)	Other Flavoring Substances with OSHA PEL's
RESORCINOL (CAS 108-46-3)	Low priority

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

Issue date	04-16-2020
Version #	01
NFPA ratings	Health: 3 Flammability: 1 Instability: 0

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 a 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.