

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Substance
Trade name	: Tonalid
CAS No	: 1506-02-1
Product code	: T3000
Formula	: C18H26O
Synonyms	: 1-(5,6,7,8-tetrahydro-3,5,5,6,8,8-hexamethyl-2-naphthalenyl)-ethanone / 1-(5,6,7,8-tetrahydro-3,5,5,6,8,8-hexamethyl-2-naphthalenyl)ethanone / 1-(5,6,7,8-tetrahydro-3,5,5,6,8,8-hexamethyl-2-naphthyl)ethan-1-one / 2'-acetanaphthone, 5',6',7',8'-tetrahydro-3,5',5',6',8',8'-hexamethyl- / 2'-acetanaphthone, 5',6',7',8'-tetrahydro-3',5',5',6',8',8'-hexamethyl- / 6-acetyl-1,1,2,4,4,7-hexamethyltetraline / 6-acetyl-1,2,3,4-tetrahydro-1,1,2,4,4,7-hexamethylnaphthalene / 7-acetyl-1,1,3,4,4,6-hexamethyl-1,2,3,4-tetrahydronaphthalene / 7-acetyl-1,1,3,4,4,6-hexamethyltetralin / 7-acetyl-1,2,3,4-tetrahydro-1,1,3,4,4,6-hexamethylnaphthalene / AHMT / AHMT (perfume) / AHTN / Environmentally hazardous substance, solid, n.o.s. / ethanone, 1-(5,6,7,8-tetrahydro-3,5,5,6,8,8-hexamethyl-2-naphthalenyl)- / EXTRALIDE / fixolide / musk tonalid / tentarome / TETRALIDE / tonalid / TONALID 2 aromatic chemical / tonalide

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	: No data available
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1.3. Details of the supplier of the safety data sheet

CHEMTEX USA
 27-29 Dwight Place
 Fairfield, 07004 - USA
 T 862-702-8900 - F 862-702-8180
contact@chemtexusa.com - www.chemtexusa.com

1.4. Emergency telephone number

Emergency number	: CHEMTEL:(800)255-3924
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

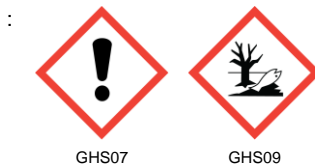
Acute Tox. 4 (Oral) H302
 Aquatic Acute 1 H400
 Aquatic Chronic 1 H410

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Warning

Hazard statements (GHS-US)

: H302 - Harmful if swallowed
 H400 - Very toxic to aquatic life
 H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US)

: P264 - Wash clothing, face, hands, hands, forearms and face thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product
 P273 - Avoid release to the environment
 P301+P312 - If swallowed: Call a doctor, a POISON CENTER if you feel unwell
 P330 - Rinse mouth
 P391 - Collect spillage
 P501 - Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous

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waste

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Name	Product identifier	%	Classification (GHS-US)
Tonalid (Main constituent)	(CAS No) 1506-02-1	100	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service. Assure fresh air breathing. Allow the victim to rest.
- First-aid measures after skin contact : Rinse with water. Soap may be used. Take victim to a doctor if irritation persists. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse with water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists. Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth with water. Do not induce vomiting. Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Call Poison Information Centre (www.big.be/antigif.htm). Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER or doctor/physician if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after skin contact : Photoallergy.
- Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Polyvalent foam. ABC powder. Carbon dioxide. Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : No unsuitable extinguishing media known. Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : DIRECT FIRE HAZARD. Combustible. In finely divided state: increased fire hazard. INDIRECT FIRE HAZARD. Temperature above flashpoint: higher fire/explosion hazard.
- Explosion hazard : DIRECT EXPLOSION HAZARD. Fine dust is explosive with air. INDIRECT EXPLOSION HAZARD. Dust cloud can be ignited by a spark.
- Reactivity : Upon combustion: CO and CO₂ are formed.

5.3. Advice for firefighters

- Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows.

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- Firefighting instructions : No specific fire-fighting instructions required. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
- Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment : Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus.
- Emergency procedures : Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes. Evacuate unnecessary personnel.
- Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows. Dust production: stop engines and no smoking. In case of dust production: no naked flames or sparks. Dust: spark-/explosionproof appliances/lighting equipment.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Powdered form: no compressed air for pumping over spills.
- Methods for cleaning up : Cover spill with inert material, e.g.: sand/earth. Scoop solid spill into closing containers. Powdered: do not use compressed air for pumping over spills. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling. On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Do not discharge the waste into the drain. Powdered form: no compressed air for pumping over. Avoid raising dust. Keep away from naked flames/heat. Finely divided: spark- and explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Avoid prolonged and repeated contact with skin. Keep container tightly closed. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor.
- Hygiene measures : Do not eat, drink or smoke when using this product. Wash ... thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.
- Incompatible products : Strong bases. strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight.
- Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
- Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents.
- Storage area : Store in a dry area. Keep out of direct sunlight. Keep container in a well-ventilated place. Meet the legal requirements.
- Special rules on packaging : SPECIAL REQUIREMENTS: closing. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- Packaging materials : SUITABLE MATERIAL: No data available. MATERIAL TO AVOID: No data available.

7.3. Specific end use(s)

No additional information available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Tonalid (1506-02-1)	
ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

Personal protective equipment	: Avoid all unnecessary exposure.
Materials for protective clothing	: GIVE EXCELLENT RESISTANCE: No data available. GIVE GOOD RESISTANCE: No data available. GIVE LESS RESISTANCE: No data available. GIVE POOR RESISTANCE: No data available.
Hand protection	: Gloves. Wear protective gloves.
Eye protection	: Safety glasses. In case of dust production: protective goggles. Chemical goggles or safety glasses.
Skin and body protection	: Protective clothing.
Respiratory protection	: Dust production: dust mask with filter type P2. Wear approved mask.
Other information	: When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Solid.
Color	: Off-white
Odor	: Characteristic odour
Odor threshold	: No data available
pH	: No data available
Melting point	: > 52 °C
Freezing point	: No data available
Boiling point	: 180 °C (15 hPa)
Flash point	: > 100 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: No data available
Relative density	: 0.6
Relative vapor density at 20 °C	: No data available
Molecular mass	: 258.40 g/mol
Solubility	: Insoluble in water. Substance floats in water.
Log Pow	: No data available
Log Kow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

VOC content	: 0 %
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SECTION 10: Stability and reactivity

10.1. Reactivity

Upon combustion: CO and CO₂ are formed.

10.2. Chemical stability

Stable under normal conditions. Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

Tonalid (1506-02-1)	
LD50 oral rat	964 mg/kg (Rat)
LD50 dermal rat	7930 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
ATE US (oral)	964.000 mg/kg body weight
ATE US (dermal)	7930.000 mg/kg body weight

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Harmful if swallowed.
Symptoms/injuries after skin contact	: Photoallergy.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Dangerous for the environment.
Ecology - air	: Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: Water pollutant (surface water). Highly toxic to fishes. Highly toxic to algae. Very toxic to aquatic life with long lasting effects.

Tonalid (1506-02-1)	
LC50 fish 1	0.314 mg/l (Pisces)
EC50 Daphnia 1	0.244 mg/l (504 h; Daphnia sp.)
Threshold limit other aquatic organisms 1	0.196 mg/l (504 h; Daphnia sp.)

12.2. Persistence and degradability

Tonalid (1506-02-1)	
Persistence and degradability	Not readily biodegradable in water. Not established.

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12.3. Bioaccumulative potential

Tonalid (1506-02-1)

Bioaccumulative potential	No bioaccumulation data available. Not established.
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into drains or the environment. Dispose of at authorized waste collection point. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

Additional information : Hazardous waste according to Directive 2008/98/EC.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN3077 Environmentally hazardous substances, solid, n.o.s., 9, III

UN-No.(DOT) : UN3077

Proper Shipping Name (DOT) : Environmentally hazardous substances, solid, n.o.s.

Transport hazard class(es) (DOT) : 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140

Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials)



Packing group (DOT) : III - Minor Danger

Dangerous for the environment : Yes

Marine pollutant : Yes



DOT Packaging Non Bulk (49 CFR 173.xxx) : 213

DOT Packaging Bulk (49 CFR 173.xxx) : 240

DOT Symbols : G - Identifies PSN requiring a technical name

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- DOT Special Provisions (49 CFR 172.102) : 8 - A hazardous substance that is not a hazardous waste may be shipped under the shipping description "Other regulated substances, liquid or solid, n.o.s.", as appropriate. In addition, for solid materials, special provision B54 applies.
146 - This description may be used for a material that poses a hazard to the environment but does not meet the definition for a hazardous waste or a hazardous substance, as defined in 171.8 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination.
335 - Mixtures of solids that are not subject to this subchapter and environmentally hazardous liquids or solids may be classified as "Environmentally hazardous substances, solid, n.o.s.," UN3077 and may be transported under this entry, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Each transport unit must be leak-proof when used as bulk packaging.
A112 - Notwithstanding the quantity limits shown in Column (9A) and (9B) for this entry, the following IBCs are authorized for transportation aboard passenger and cargo-only aircraft. Each IBC may not exceed a maximum net quantity of 1,000 kg:
a. Metal: 11A, 11B, 11N, 21A, 21B and 21N
b. Rigid plastics: 11H1, 11H2, 21H1 and 21H2
c. Composite with plastic inner receptacle: 11HZ1, 11HZ2, 21HZ1 and 21HZ2
d. Fiberboard: 11G
e. Wooden: 11C, 11D and 11F (with inner liners)
f. Flexible: 13H2, 13H3, 13H4, 13H5, 13L2, 13L3, 13L4, 13M1 and 13M2 (flexible IBCs must be sift-proof and water resistant or must be fitted with a sift-proof and water resistant liner).
B54 - Open-top, sift-proof rail cars are also authorized.
IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).
IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner.
N20 - A 5M1 multi-wall paper bag is authorized if transported in a closed transport vehicle.
T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2)
TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.
- DOT Packaging Exceptions (49 CFR 173.xxx) : 155
- DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : No limit
- DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : No limit
- DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

Additional information

Other information : No supplementary information available.

ADR

- Transport document description : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III, (E)
- Packing group (ADR) : III
- Class (ADR) : 9 - Miscellaneous dangerous substances and articles
- Hazard identification number (Kemler No.) : 90
- Classification code (ADR) : M7
- Hazard labels (ADR) : 9 - Miscellaneous dangerous compounds



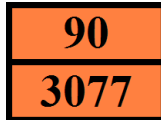
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Orange plates

:



Tunnel restriction code (ADR)

: E

Limited quantities (ADR)

: 5kg

Excepted quantities (ADR)

: E1

Transport by sea

UN-No. (IMDG)

: 3077

Class (IMDG)

: 9 - Miscellaneous dangerous compounds

EmS-No. (1)

: F-A

MFAG-No

: 171

EmS-No. (2)

: S-F

Air transport

UN-No. (IATA)

: 3077

Class (IATA)

: 9 - Miscellaneous Dangerous Goods

Packing group (IATA)

: III - Minor Danger

Civil Aeronautics Law

: Miscellaneous dangerous substances & articles

SECTION 15: Regulatory information

15.1. US Federal regulations

Tonalid (1506-02-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute Tox. 4 (Oral) H302

Aquatic Acute 1 H400

Aquatic Chronic 1 H410

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xn; R22

N; R50/53

Full text of R-phrases: see section 16

National regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

Other information

: None.

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Full text of H-phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
H302	Harmful if swallowed
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

SDS US (GHS HazCom 2012)

Disclaimer:

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