

SAFETY DATA SHEET**504747 TUBERUSE**Revision Date: 04-04-2018
Version # 02Page 1 of 12
Print Date: 04-04-2018**1. IDENTIFICATION**

Product Description: TUBERUSE
CAS # MIXTURE

Other means of identification
Vigon Item # 504747

Recommended use Concentrated aromatic ingredient which may be used fragrance compounds according to legal and IFRA guidelines.

Recommended restrictions For Manufacturing Use Only

Company

Vigon International, Inc.
127 Airport Road
E. Stroudsburg, PA 18301
For information call: 570-476-6300
Web Site: www.vigon.com

24 Hour Emergency Response Information

INFOTRAC (ACCT# 78928);
1-800-535-5053 WITHIN THE U.S.A.
1-352-323-3500 OUTSIDE THE U.S.A.

Manufacturer/Importer/Supplier/Distributor information**Manufacturer**

Company name Vigon International, Inc.
Address 127 Airport Road
E. Stroudsburg, PA 18301
United States

Telephone For information call: 570-476-6300
Website www.vigon.com
E-mail Not available.

Emergency phone number INFOTRAC (ACCT# 78928);
1-800-535-5053 WITHIN THE U.S.A.
1-352-323-3500 OUTSIDE THE U.S.A.

2. HAZARD(S) IDENTIFICATION

Physical hazards Not classified.

Health hazards Sensitization, skin Category 1

Environmental hazards Hazardous to the aquatic environment, long-term hazard Category 3

Label elements

Signal word Warning

Hazard statement May cause an allergic skin reaction. Harmful to aquatic life with long lasting effects.

SAFETY DATA SHEET

504747 TUBERUSE

Revision Date: 04-04-2018

Page 2 of 12

Version # 02

Print Date: 04-04-2018

Precautionary statement

Prevention

Avoid breathing mist or vapor. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves.

Response

IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

Storage

Store away from incompatible materials.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

None known.

Supplemental information

11.75% of the mixture consists of component(s) of unknown acute dermal toxicity. 40.25% 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	%
BENZYL BENZOATE	benzyl benzene carboxylate phenyl methyl benzoate BENZYL PHENYL FORMATE	120-51-4	20 - < 30
METHYL ANTHRANILATE	Methyl 2-aminobenzoate O-CARBOMETHOXYANILINE 2-(METHOXYCARBONYL)ANILINE methyl ortho-aminobenzoate	134-20-3	5 - < 7.5
METHYL SALICYLATE	2-(METHOXYCARBONYL)PHENOL 2-HYDROXYBENZOIC ACID METHYL ESTER EXAGIEN Methyl 2-hydroxybenzoate Benzoic acid, 2-hydroxy-, methyl ester	119-36-8	5 - < 7.5
9,12,15-OCTADECATRIENOIC ACID, (Z,Z,Z)-	octadeca-9,12,15-trienoic acid linolenic acid	463-40-1	2.5 - < 5
EUCALYPTOL	4,7,7- trimethyl-8-oxabicyclo[2.2.2]octane 1,8-cineole 1,3,3-trimethyl oxabicyclo(2.2.2)octane 1,8-oxi-do-para-menthane	470-82-6	1 - < 2.5
METHYL FUROATE	methyl 2-furan carboxylate 2- furan carboxylic acid methyl ester METHYL 2-FUROATE	611-13-2	1 - < 2.5
METHYL PALMITATE		112-39-0	1 - < 2.5
TERPINEOL	2-(4-methyl-1-cyclohex-3-enyl)propan-2-ol I P-MENTHENOL (ISOMERENGEMISCH) TERPINEOL (ISOMERENGEMISCH)	8000-41-7	1 - < 2.5
FARNESOL	2,6,10-TRIMETHYL-2,6,10-DODECATRIEN-12-OL 2,6,10-Dodecatrien-1-ol, 3,7,11-trimethyl-	4602-84-0	0.5 < 1

SAFETY DATA SHEET

504747 TUBERUSE

Revision Date: 04-04-2018

Page 3 of 12

Version # 02

Print Date: 04-04-2018

Chemical name	Common name and synonyms	CAS number	%
NEROL	(2Z)-3,7- dimethylocta-2,6-dien-1-ol	106-25-2	0.5< 1
ISOEUGENOL	2- methoxy-4-prop-1-en-2-ylphenol 2-Methoxy-4-(1-propenyl)phenol; 4-Hydroxy-3-methoxy-1-propenylbenzene , Isoeugenol Phenol, 2-methoxy-4-(1-propen-1-yl)-	97-54-1	0< 0.1
Other components below reportable levels			50 - < 60

4. FIRST-AID MEASURES

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. For breathing difficulties, oxygen may be necessary. Call a physician if symptoms develop or persist.
Skin contact	Take off immediately all contaminated clothing. Get medical attention if irritation develops and persists. Wash skin thoroughly with soap and water for several minutes.
Eye contact	Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists. Promptly wash eyes with plenty of water while lifting the eye lids.
Ingestion	Call a physician or poison control center immediately. If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs.
Most important symptoms/effects, acute and delayed	May cause an allergic skin reaction. Dermatitis. Rash.
Indication of immediate medical attention and special treatment needed	Not available.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Water spray, fog, CO2, dry chemical, or alcohol resistant foam.
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards arising from the chemical	Fire may produce irritating, corrosive and/or toxic gases.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection. Wear self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode when fighting fires.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage. Ventilate closed spaces before entering them. Keep run-off water out of sewers and water sources. Dike for water control.
Specific methods	Use water spray to cool unopened containers.
General fire hazards	Static charges generated by emptying package in or near flammable vapor may cause flash fire.



SAFETY DATA SHEET

504747 TUBERUSE

Revision Date: 04-04-2018

Page 4 of 12

Version # 02

Print Date: 04-04-2018

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Eliminate all sources of ignition. Avoid contact with skin or inhalation of spillage, dust or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb with inert absorbent such as dry clay, sand or diatomaceous earth, commercial sorbents, or recover using pumps.

The product is immiscible with water and will spread on the water surface.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Prevent product from entering drains. Absorb in vermiculite, dry sand or earth and place into containers.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use. This material and its container must be disposed of as hazardous waste. Collect and dispose of spillage as indicated in section 13 of the SDS.

Environmental precautions

Retain and dispose of contaminated wash water. Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water.

7. HANDLING AND STORAGE

Precautions for safe handling

Do not handle or store near an open flame, heat or other sources of ignition. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

This mixture has no ingredients that have PEL, TLV, or other recommended exposure limit.

Biological limit values

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

Appropriate engineering controls

Use explosion-proof ventilation equipment to stay below exposure limits. Adequate ventilation should be provided so that exposure limits are not exceeded.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles). Face shield is recommended.

Skin protection

Hand protection

Chemical resistant gloves.

Other

Use of an impervious apron is recommended.

SAFETY DATA SHEET

504747 TUBERUSE

Revision Date: 04-04-2018

Page 5 of 12

Version # 02

Print Date: 04-04-2018

Respiratory protection	Respiratory protection not required. If ventilation is insufficient, suitable respiratory protection must be provided.
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	Refer to Spec Sheet
Physical state	Liquid.
Form	Liquid.
Color	Refer to Spec Sheet
Odor	Characteristic.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	> 200.0 °F (> 93.3 °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	< 0.1 mm Hg at 20 °C
Vapor density	Not available.
Relative density	1.05 g/cm ³ at d 20/20
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.

SAFETY DATA SHEET

504747 TUBERUSE

Revision Date: 04-04-2018

Page 6 of 12

Version # 02

Print Date: 04-04-2018

Molecular formula	Not applicable
Oxidizing properties	Not oxidizing.
VOC	< 15 %

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	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Peroxides. Phenols.
Hazardous decomposition products	No hazardous decomposition products if stored and handled as indicated.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	May cause an allergic skin reaction.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity Not known.

Components	Species	Test Results
BENZYL BENZOATE (CAS 120-51-4)		
Acute		
<i>Dermal</i>		
LD50	Rat	4000 mg/kg
EUCALYPTOL (CAS 470-82-6)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg
<i>Oral</i>		
LD50	Rat	2480 mg/kg Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Coma.
FARNESOL (CAS 4602-84-0)		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg

SAFETY DATA SHEET

504747 TUBERUSE

Revision Date: 04-04-2018

Page 7 of 12

Version # 02

Print Date: 04-04-2018

Components	Species	Test Results
<i>Oral</i>		
LD50	Rat	6000 mg/kg
ISOEUGENOL (CAS 97-54-1)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	1900 mg/kg
<i>Oral</i>		
LD50	Rat	1560 mg/kg
METHYL ANTHRANILATE (CAS 134-20-3)		
Acute		
<i>Oral</i>		
LD50	Rat	2910 mg/kg
METHYL FUROATE (CAS 611-13-2)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 1250 mg/kg
<i>Oral</i>		
LD50	Rat	300 mg/kg
METHYL SALICYLATE (CAS 119-36-8)		
Acute		
<i>Oral</i>		
LD50	Rat	890 mg/kg 0.887 g/kg
NEROL (CAS 106-25-2)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg
<i>Oral</i>		
LD50	Rat	4500 mg/kg
TERPINEOL (CAS 8000-41-7)		
Acute		
<i>Dermal</i>		
LD50	Rat	> 2000 mg/kg OECD 402
<i>Oral</i>		
LD50	Mouse	5420 mg/kg
	Rat	> 2000 mg/kg OECD 401

Skin corrosion/irritation

Prolonged skin contact may cause temporary irritation.



SAFETY DATA SHEET

504747 TUBERUSE

Revision Date: 04-04-2018

Page 8 of 12

Version # 02

Print Date: 04-04-2018

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization May cause an allergic skin reaction.

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

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not available.

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

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Further information This mixture has not been subjected to full toxicological testing. According to available data on the constituents the health classification criteria are met.

12. ECOLOGICAL INFORMATION

Ecotoxicity Harmful to aquatic life with long lasting effects. This mixture has not been subjected to ecotoxicological testing as an entity. According to available data on the constituents the environmental classification criteria are met.

Components	Species	Test Results
EUCALYPTOL (CAS 470-82-6)		
Aquatic		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) > 95.4 - < 109 mg/l, 96 hours
FARNESOL (CAS 4602-84-0)		
Aquatic		
<i>Acute</i>		
Crustacea	EC50	Water flea (<i>Daphnia magna</i>) 2.2 mg/l, 48 hours
Fish	LC50	Rainbow trout, donaldson trout (<i>Oncorhynchus mykiss</i>) 1.8 mg/l, 96 hours

SAFETY DATA SHEET

504747 TUBERUSE

Revision Date: 04-04-2018

Page 9 of 12

Version # 02

Print Date: 04-04-2018

Components			Species	Test Results
METHYL ANTHRANILATE (CAS 134-20-3)				
Aquatic				
Crustacea	EC50		Daphnia magna	18.2 mg/l, 48 hours
Fish	LC50		Bluegill (Lepomis macrochirus)	> 7.98 - < 10.51 mg/l, 96 hours
	NOEC		Rainbow trout,donaldson trout (Oncorhynchus mykiss)	5 mg/l, 96 hours
METHYL SALICYLATE (CAS 119-36-8)				
Aquatic				
Fish	LC50		Fish	42 mg/l, 96 hours
NEROL (CAS 106-25-2)				
<i>Acute</i>				
Algae	EC50		Green alga (Pseudokirchneriella subcapitata)	9.54 mg/l, 72 hours
				2.16 mg/l, 72 hours
Aquatic				
<i>Acute</i>				
Crustacea	EC50		Daphnia magna	32.4 mg/l, 48 hours
Fish	LC50		Danio rerio	20.3 mg/l, 96 hours
TERPINEOL (CAS 8000-41-7)				
Aquatic				
Crustacea	EC50		Daphnia	> 62 - < 80 mg/l, 96 h OECD 203
Fish	LC50		Fish	73 mg/l, 48 h OECD 202

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

BENZYL BENZOATE	3.97
EUCALYPTOL	2.74
METHYL PALMITATE	7.38
METHYL SALICYLATE	2.55

Mobility in soil No data available.

Other adverse effects The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. DISPOSAL CONSIDERATIONS

Disposal instructions Do not discharge into drains, water courses or onto the ground. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.



SAFETY DATA SHEET

504747 TUBERUSE

Revision Date: 04-04-2018

Page 10 of 12

Version # 02

Print Date: 04-04-2018

Hazardous waste code	Not established.
Waste from residues / unused products	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

ADN

Not regulated as dangerous goods.

ADR

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

DOT

BULK

Not regulated as dangerous goods.

DOT

NON-BULK

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. REGULATORY INFORMATION

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

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not available.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

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

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes



SAFETY DATA SHEET

504747 TUBERUSE

Revision Date: 04-04-2018

Page 11 of 12

Version # 02

Print Date: 04-04-2018

Classified hazard categories Respiratory or skin sensitization

SARA 313 (TRI reporting)
Not regulated.

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.

US state regulations

California Proposition 65
California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance
Not listed.

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Issue date	01-20-2016
Revision date	04-04-2018
Version #	02
HMIS® ratings	Health: 2 Flammability: 1 Physical hazard: 0



SAFETY DATA SHEET

504747 TUBERUSE

Revision Date: 04-04-2018

Page 12 of 12

Version # 02

Print Date: 04-04-2018

Disclaimer

Vigon International, Inc. 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. The above information relates only to this product and not to its use in combination with any other material or any particular process and is designed only as guidance for the safe handling, use, processing, storage, transportation, and disposal and should not be considered as a guarantee or quality specification. This product has not been evaluated for safe use in e-cigarettes or any vaping application where the product(s) is/are intentionally vaporized and inhaled. Vigon International, Inc. has performed no testing on these products in e-cig/vaping applications. It is the sole responsibility of the individual(s) purchasing this product to assess its' safety in the final application. The above information relates only to this product and not to its use in combination with any other material or any particular process and is designed only as guidance for the safe handling, use, processing, storage, transportation, disposal, and should not be considered as a guarantee or quality specification. The above information is based on data provided by and collected from recognized sources such as distributors, manufacturers, and technical groups and is considered to be accurate to the best of Vigon's knowledge as of the date of this document. It is the responsibility of the user to review all safety information about this product and determine its safety and suitability in their own processes and operations. Appropriate warnings and safe handling procedures should be provided to all handlers and users, taking into account the intended use and the specific conditions and factors relating to such use in accordance with all applicable laws and regulations.

Revision information

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