



SAFETY DATA SHEET CLOVE LEAF MADAGASCAR RECT

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

1.1. Product identifier

Product name	CLOVE LEAF MADAGASCAR RECT
Product number	55657
REACH registration notes	If REACH registration numbers do not appear the substance is either exempt from registration, does not meet the minimum volume threshold for registration (1mT/year)
CAS number	8000-34-8
EC number	284-638-7
FEMA	2325

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

Identified uses	Cosmetics Flavouring Fragrance
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1.3. Details of the supplier of the safety data sheet

Supplier	Univar Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com
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1.4. Emergency telephone number

Emergency telephone	SGS - +32 (0)3 575 55 55 (24h)
Sds No.	55657

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Eye Irrit. 2 - H319 Skin Sens. 1 - H317
Environmental hazards	Not Classified

2.2. Label elements

EC number	284-638-7
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Hazard pictograms



CLOVE LEAF MADAGASCAR RECT

Signal word	Warning
Hazard statements	H319 Causes serious eye irritation. H317 May cause an allergic skin reaction.
Precautionary statements	P264 Wash contaminated skin thoroughly after handling. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P501 Dispose of contents/ container in accordance with national regulations.
Contains	EUGENOL, CARYOPHYLLENE

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

3.1. Substances

EUGENOL			60-100%
CAS number: 97-53-0	EC number: 202-589-1		
Acute Toxicity Estimate (oral): LD ₅₀ 2300 mg/kg, Oral, Rat Acute Toxicity Estimate (inhalation): LD ₅₀ 2580 mg/l, , Dust/Mist Rat			
Classification Eye Irrit. 2 - H319 Skin Sens. 1 - H317			
CARYOPHYLLENE			10-30%
CAS number: 87-44-5	EC number: 201-746-1	REACH registration number: 01-2120745237-53-XXXX	
Classification Skin Sens. 1 - H317 Asp. Tox. 1 - H304 Aquatic Chronic 4 - H413			
4 ALLYL 2 METHOXYPHENYL ACETATE			1-5%
CAS number: 93-28-7	EC number: 202-235-6		
Classification Acute Tox. 4 - H302			
4-ALLYLVERATROLE			<1%
CAS number: 93-15-2	EC number: 202-223-0		
Classification Acute Tox. 4 - H302 Muta. 2 - H341 Carc. 2 - H351			

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The full text for all hazard statements is displayed in Section 16.

Product name	CLOVE LEAF MADAGASCAR RECT
REACH registration notes	If REACH registration numbers do not appear the substance is either exempt from registration, does not meet the minimum volume threshold for registration (1mT/year)
CAS number	8000-34-8
EC number	284-638-7
Composition comments	The data shown are in accordance with the latest EC Directives.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
Ingestion	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention if any discomfort continues.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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

Skin contact	May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.

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

Notes for the doctor	No specific recommendations. If in doubt, get medical attention promptly.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	Oxides of the following substances: Carbon.
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5.3. Advice for firefighters

Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet. No smoking, sparks, flames or other sources of ignition near spillage.
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6.2. Environmental precautions

Environmental precautions	Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up No smoking, sparks, flames or other sources of ignition near spillage. Absorb spillage with inert, damp, non-combustible material. Flush contaminated area with plenty of water. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid contact with skin and eyes. Provide adequate ventilation.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep container tightly closed, in a cool, well ventilated place.

Storage class Chemical storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Ingredient comments No exposure limits known for ingredient(s).

EUGENOL (CAS: 97-53-0)

DNEL	Workers - Inhalation; Long term systemic effects: 21.2 mg/m ³
	Workers - Dermal; Long term systemic effects: 6 mg/kg/day
	Consumer - Inhalation; Long term systemic effects: 5.22 mg/m ³
	Consumer - Dermal; Long term systemic effects: 3 mg/kg/day
	Consumer - Oral; Long term systemic effects: 3 mg/kg/day
PNEC	Fresh water; 1.13 µg/l
	marine water; 0.113 µg/l
	Sediment (Freshwater); 0.081 mg/kg
	Sediment (Marinewater); 0.008 mg/kg
	Soil; 0.015 mg/kg

4-ALLYLVERATROLE (CAS: 93-15-2)

Ingredient comments No exposure limits known for ingredient(s).

8.2. Exposure controls

Protective equipment



Eye/face protection

The following protection should be worn: Chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.

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Hand protection	The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, gloves should comply with European Standard EN374.
Other skin and body protection	Wear rubber apron. Wear rubber footwear.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn. EN 136/140/141/145/143/149

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Light. Yellow. or Light. Orange.
Odour	Characteristic.
Odour threshold	No information available.
pH	No information available.
Melting point	No information available.
Initial boiling point and range	No information available.
Flash point	100°C
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	No information available.
Other flammability	No information available.
Vapour pressure	No information available.
Vapour density	No information available.
Relative density	1.047 @ 20°C
Bulk density	No information available.
Solubility(ies)	No information available.
Partition coefficient	No information available.
Auto-ignition temperature	No information available.
Decomposition Temperature	No information available.
Viscosity	No information available.
Explosive properties	No information available.
Explosive under the influence of a flame	No information available.
Oxidising properties	No information available.

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9.2. Other information

Refractive index	No information available.
Particle size	No information available.
Molecular weight	No information available.
Volatility	No information available.
Saturation concentration	No information available.
Critical temperature	No information available.
Volatile organic compound	No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Will not polymerise.
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10.4. Conditions to avoid

Conditions to avoid	Avoid excessive heat for prolonged periods of time.
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10.5. Incompatible materials

Materials to avoid	Strong oxidising agents. Strong alkalis. Strong acids.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Oxides of the following substances: Carbon.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Acute toxicity oral (LD ₅₀ mg/kg)	2,650.0
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Species	Rat
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ATE oral (mg/kg)	151,818.18
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Skin corrosion/irritation

Skin corrosion/irritation	No information available.
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Serious eye damage/irritation

Serious eye damage/irritation	Causes serious eye irritation.
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Respiratory sensitisation

Respiratory sensitisation	No information available.
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Skin sensitisation

Skin sensitisation	May cause an allergic skin reaction.
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Germ cell mutagenicity

Genotoxicity - in vitro No information available.

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility No information available.

Specific target organ toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard No information available.

Inhalation May cause respiratory system irritation.

Ingestion Gastrointestinal symptoms, including upset stomach.

Skin contact May cause an allergic skin reaction.

Eye contact Causes serious eye irritation.

Toxicological information on ingredients.

EUGENOL

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 2,300.0

Species Rat

Notes (oral LD₅₀) LD₅₀ 2300 mg/kg, Oral, Rat

ATE oral (mg/kg) 2,300.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ dust/mist mg/l) 2,580.0

Species Rat

Notes (inhalation LC₅₀) LC₅₀ 2580 mg/l, Dust/Mist, Inhalation, Rat

ATE inhalation (dusts/mists mg/l) 2,580.0

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Skin sensitisation

Skin sensitisation May cause an allergic skin reaction.
Guinea pig maximization test (GPMT) - Guinea pig: Sensitising.

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Toxicokinetics	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
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CARYOPHYLLENE

Skin sensitisation

Skin sensitisation	May cause an allergic skin reaction.
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Germ cell mutagenicity

Genotoxicity - in vitro	Bacterial reverse mutation test: Negative.
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Aspiration hazard

Aspiration hazard	May be fatal if swallowed and enters airways.
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Toxicokinetics	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
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4 ALLYL 2 METHOXYPHENYL ACETATE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg)	1,670.0
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Species	Rat
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ATE oral (mg/kg)	1,670.0
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4-ALLYLVERATROLE

Acute toxicity - oral

ATE oral (mg/kg)	500.0
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Inhalation	Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing.
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Ingestion	May cause discomfort if swallowed.
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Skin contact	Liquid may irritate skin.
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Eye contact	May cause temporary eye irritation.
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SECTION 12: Ecological information

Ecotoxicity	The product components are 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.
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Ecological information on ingredients.

CARYOPHYLLENE

Ecotoxicity	May cause long lasting harmful effects to aquatic life.
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4-ALLYLVERATROLE

Ecotoxicity The product components are 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.

12.1. Toxicity

Toxicity Not considered toxic to fish.

Ecological information on ingredients.

EUGENOL

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hour: 13 mg/l, Fish OECD 203
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hour: 1.3 mg/l, Daphnia magna OECD 202
Acute toxicity - aquatic plants	IC ₅₀ , 72 hours: 24 mg/l, Algae NOEC, 72 hours: 23 mg/l, Algae

CARYOPHYLLENE

Toxicity May cause long lasting harmful effects to aquatic life.

4-ALLYLVERATROLE

Toxicity Not considered toxic to fish.

12.2. Persistence and degradability

Persistence and degradability There are no data on the degradability of this product.

Ecological information on ingredients.

EUGENOL

Persistence and degradability The product is readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient No information available.

Ecological information on ingredients.

CARYOPHYLLENE

Bioaccumulative potential Potentially bioaccumulating.

Partition coefficient log Pow: 6.23

12.4. Mobility in soil

Mobility Not determined.

12.5. Results of PBT and vPvB assessment

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Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects Not determined.

Ecological information on ingredients.

EUGENOL

Other adverse effects The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

CARYOPHYLLENE

Other adverse effects The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

4-ALLYLVERATROLE

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information When handling waste, the safety precautions applying to handling of the product should be considered. Do not puncture or incinerate, even when empty.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

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Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78
and the IBC Code

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Commission Regulation (EU) No 2015/830 of 28 May 2015.

Restrictions (Annex XVII Regulation 1907/2006)

This product is/contains a substance that is included in REGULATION (EC) No 1907/2006 (REACH) ANNEX XVII - RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES. Entry number: 3

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

Canada - DSL/NDSL

All the ingredients are listed or exempt.

US - TSCA

All the ingredients are listed or exempt.

Australia - AICS

All the ingredients are listed or exempt.

Korea - KECI

Not listed.

China - IECSC

All the ingredients are listed or exempt.

Philippines – PICCS

All the ingredients are listed or exempt.

SECTION 16: Other information

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Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
 CAS: Chemical Abstracts Service.
 DNEL: Derived No Effect Level.
 IATA: International Air Transport Association.
 IMDG: International Maritime Dangerous Goods.
 Kow: Octanol-water partition coefficient.
 LC₅₀: Lethal Concentration to 50 % of a test population.
 LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
 PBT: Persistent, Bioaccumulative and Toxic substance.
 PNEC: Predicted No Effect Concentration.
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
 vPvB: Very Persistent and Very Bioaccumulative.
 IARC: International Agency for Research on Cancer.
 MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
 cATpE: Converted Acute Toxicity Point Estimate.
 BCF: Bioconcentration Factor.
 BOD: Biochemical Oxygen Demand.
 EC₅₀: 50% of maximal Effective Concentration.
 LOAEC: Lowest Observed Adverse Effect Concentration.
 LOAEL: Lowest Observed Adverse Effect Level.
 NOAEC: No Observed Adverse Effect Concentration.
 NOAEL: No Observed Adverse Effect Level.
 NOEC: No Observed Effect Concentration.
 LOEC: Lowest Observed Effect Concentration.
 DMEL: Derived Minimal Effect Level.
 EL50: Exposure Limit 50
 hPa: Hectopascal
 LL50: Lethal Loading fifty
 OECD: Organisation for Economic Co-operation and Development
 POW: Octanol-water partition coefficient
 SCBA: self-contained breathing apparatus
 STP: Sewage Treatment Plant
 VOC: Volatile Organic Compounds

Classification abbreviations and acronyms

Acute Tox. = Acute toxicity
 Aquatic Acute = Hazardous to the aquatic environment (acute)
 Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Key literature references and sources for data

Supplier's information.

Revision comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date

16/02/2023

Version number

1.001

Supersedes date

05/09/2018

SDS number

55657

CLOVE LEAF MADAGASCAR RECT

SDS status	Approved.
Hazard statements in full	H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H341 Suspected of causing genetic defects. H351 Suspected of causing cancer. H413 May cause long lasting harmful effects to aquatic life.
Signature	Jitendra Panchal
Material Group	313576, 313577

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.