



**TOROS TARIM**

## SAFETY DATA SHEET

### Calcium Nitrate Horticultural Grade

Commission Regulation (EU) No 2015/830 of 28 May 2015.

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

##### 1.1. Product identifier

**Product name** Calcium Nitrate Horticultural Grade

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

**Identified uses** Nitrogen-calcium fertilizer for a regenerative fertilization of winter crops and in particular for additional fertilization during the vegetation time.

**Uses advised against** No specific uses advised against are identified.

##### 1.3. Details of the supplier of the safety data sheet

**Supplier** Toros Tarım Sanayi ve Ticaret A.Ş.  
Head office: Tekfen Tower Büyükdere Cad. No: 209  
34394 4. Levent Şişli / İstanbul-Turkey  
Tel: +90 212 357 02 02  
Fax: +90 212 357 02 31  
www.toros.com.tr

##### 1.4. Emergency telephone number

**Emergency telephone** Toros Tarım/Mersin Production Facilities - Tel: +90 324 234 3100

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Classification (EC 1272/2008)

**Physical hazards** Not Classified

**Health hazards** Acute Tox. 4 - H302 Eye Dam. 1 - H318

**Environmental hazards** Not Classified

##### 2.2. Label elements

###### Pictogram



**Signal word** Danger

**Hazard statements** H302 Harmful if swallowed.  
H318 Causes serious eye damage.

**Precautionary statements** P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Contains** Calcium Nitrate

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### 2.3. Other hazards

Depending on concentration, the dust from the granulated fertilizer irritates the skin, air passages and eyes. The irritating effect is increased by the influence of humidity or due to sweating. The product has an adverse impact on the oxygen balance in waters.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

<b>Calcium Nitrate</b>	<b>70-80%</b>
CAS number: 10124-37-5	EC number: 233-332-1
<b>Classification</b>	
Ox. Sol. 3 - H272	
Acute Tox. 4 - H302	
Eye Dam. 1 - H318	
<b>ammonium nitrate</b>	<b>5-10%</b>
CAS number: 6484-52-2	EC number: 229-347-8
<b>Classification</b>	
Ox. Sol. 2 - H272	
Eye Irrit. 2 - H319	

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

**Ingredient notes**                      Specific Concentration limits - ammonium nitrate (CAS: 6484-52-2)  
 Eye Irrit. 2: 80 % < C ≤ 100 %

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>General information</b>	Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.
<b>Inhalation</b>	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Do not induce vomiting unless under the direction of medical personnel. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention.
<b>Skin contact</b>	Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if symptoms are severe or persist.
<b>Eye contact</b>	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse. Get medical attention.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

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

<b>General information</b>	See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure. Depending on concentration, the dust from the granulated fertilizer irritates the skin, air passages and eyes. The irritating effect is increased by the influence of humidity or due to sweating. The product has an adverse impact on the oxygen balance in waters.
<b>Inhalation</b>	No specific symptoms known.
<b>Ingestion</b>	May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.
<b>Skin contact</b>	Prolonged contact may cause dryness of the skin. May cause irritation.
<b>Eye contact</b>	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Redness.

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

<b>Notes for the doctor</b>	Treat symptomatically.
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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	Extinguishing powders. Do not use water jet as an extinguisher, as this will spread the fire.

### 5.2. Special hazards arising from the substance or mixture

<b>Specific hazards</b>	This product is toxic.
<b>Hazardous combustion products</b>	Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours.

### 5.3. Advice for firefighters

<b>Protective actions during firefighting</b>	Avoid breathing fire gases or vapours. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
<b>Special protective equipment for firefighters</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	No action shall be taken without appropriate training or involving any personal risk. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Avoid inhalation of dust. Provide adequate ventilation. Use suitable respiratory protection if ventilation is inadequate. Do not eat, drink or smoke when using this product.
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### 6.2. Environmental precautions

<b>Environmental precautions</b>	Clear up spills immediately and dispose of waste safely. Avoid discharge into drains or watercourses or onto the ground.
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### 6.3. Methods and material for containment and cleaning up

**Methods for cleaning up** Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Provide adequate ventilation. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Liquidation in a dry way, for the disposal, we recommend to utilize composting plants.

### 6.4. Reference to other sections

**Reference to other sections** For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Usage precautions** Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Container must be kept tightly closed when not in use. Do not handle broken packages without protective equipment. Do not reuse empty containers. Take care as floors and other surfaces may become slippery.

**Advice on general occupational hygiene** Wash promptly if skin becomes contaminated. Take off contaminated clothing. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage precautions** Store away from incompatible materials (see Section 10). Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. The fertilizer is to be stored in bulk, in piles up to 6m height, distant from each other minimum 2m, or in departments (boxes). The piles and the departments must be signed with the fertilizer name. The storage area floor should be leak-tight, jointless and not absorbent. A packed fertilizer is to be stored in bags, piled one upon the other up to a height of maximum 1,5m or upon pallets up to a height of maximum 3,5m. It must be protected from a direct solar radiation and a radiant heat, otherwise a destruction of pellets and a hardening of the fertilizer occurs. Protect from moisture. It is recommended to cover the stored fertilizer with PE tarpaulin.

**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).

### 8.2. Exposure controls

#### Protective equipment



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<b>Appropriate engineering controls</b>	Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimise exposure.
<b>Eye/face protection</b>	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
<b>Hand protection</b>	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. 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. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.
<b>Other skin and body protection</b>	Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.
<b>Hygiene measures</b>	Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.
<b>Respiratory protection</b>	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.
<b>Environmental exposure controls</b>	Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Solid.
<b>Colour</b>	white to ochre hygroscopic granules of size between 2 and 5 mm
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	No information available.
<b>pH</b>	pH (diluted solution): 5-7 (10% solution)
<b>Melting point</b>	No information available.
<b>Initial boiling point and range</b>	No information available.

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<b>Flash point</b>	No information available.
<b>Flammability (solid, gas)</b>	No information available.
<b>Upper/lower flammability or explosive limits</b>	No information available.
<b>Vapour pressure</b>	No information available.
<b>Relative density</b>	No information available.
<b>Solubility(ies)</b>	Soluble in water.
<b>Auto-ignition temperature</b>	No information available.
<b>Viscosity</b>	No information available.
<b>Explosive properties</b>	Not considered to be explosive.
<b>Oxidising properties</b>	No information available.

### 9.2. Other information

<b>Other information</b>	The fertilizer is strongly hygroscopic.
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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

<b>Reactivity</b>	Stable at normal ambient temperatures and when used as recommended.
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### 10.2. Chemical stability

<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
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### 10.3. Possibility of hazardous reactions

<b>Possibility of hazardous reactions</b>	Reacts with strong alkali and form ammonia.
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### 10.4. Conditions to avoid

<b>Conditions to avoid</b>	Do not pressurise, cut, weld, drill, grind or otherwise expose containers to heat or sources of ignition.
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### 10.5. Incompatible materials

<b>Materials to avoid</b>	Avoid contact with flammable/combustible materials.
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### 10.6. Hazardous decomposition products

<b>Hazardous decomposition products</b>	Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours. Nitrogen Oxides (NOx) Ammonia.
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## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity - oral

<b>Notes (oral LD<sub>50</sub>)</b>	Acute Tox. 4 - H302 Harmful if swallowed.
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<b>ATE oral (mg/kg)</b>	649.35
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#### Acute toxicity - dermal

<b>Notes (dermal LD<sub>50</sub>)</b>	Based on available data the classification criteria are not met.
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### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** Based on available data the classification criteria are not met.

### Skin corrosion/irritation

**Skin corrosion/irritation** Based on available data the classification criteria are not met.

### Serious eye damage/irritation

**Serious eye damage/irritation** Causes serious eye damage.

### Respiratory sensitisation

**Respiratory sensitisation** Based on available data the classification criteria are not met.

### Skin sensitisation

**Skin sensitisation** Based on available data the classification criteria are not met.

### Germ cell mutagenicity

**Genotoxicity - in vitro** Based on available data the classification criteria are not met.

### Carcinogenicity

**Carcinogenicity** Based on available data the classification criteria are not met.

### IARC carcinogenicity

None of the ingredients are listed or exempt.

### Reproductive toxicity

**Reproductive toxicity - fertility** Based on available data the classification criteria are not met.

### **Reproductive toxicity - development**

Based on available data the classification criteria are not met.

### Specific target organ toxicity - single exposure

**STOT - single exposure** Not classified as a specific target organ toxicant after a single exposure.

### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** Not classified as a specific target organ toxicant after repeated exposure.

### Aspiration hazard

**Aspiration hazard** Not relevant. Solid.

### **General information**

The severity of the symptoms described will vary dependent on the concentration and the length of exposure. Depending on concentration, the dust from the granulated fertilizer irritates the skin, air passages and eyes.

The irritating effect is increased by the influence of humidity or due to sweating.

### **Inhalation**

No specific symptoms known.

### **Ingestion**

May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.

### **Skin contact**

Prolonged contact may cause dryness of the skin.

### **Eye contact**

Causes serious eye damage. Symptoms following overexposure may include the following:  
Pain. Redness.

### **Route of exposure**

Ingestion Inhalation Skin and/or eye contact

### **Target organs**

No specific target organs known.

### Toxicological information on ingredients.

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<u>Calcium Nitrate</u>	
<u>Acute toxicity - oral</u>	
ATE oral (mg/kg)	500.0
<u>ammonium nitrate</u>	
<u>Acute toxicity - oral</u>	
Notes (oral LD <sub>50</sub> )	LD <sub>50</sub> 2950 mg/kg, Oral, Rat (OECD Test Guideline 401)
<u>Acute toxicity - dermal</u>	
Notes (dermal LD <sub>50</sub> )	LD <sub>50</sub> >5000 mg/kg, Dermal, Rat (OECD Test Guideline 402)
<u>Carcinogenicity</u>	
IARC carcinogenicity	IARC Group 2A Probably carcinogenic to humans.

### SECTION 12: Ecological information

**Ecotoxicity** Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

#### 12.1. Toxicity

**Toxicity** Based on available data the classification criteria are not met.

#### Ecological information on ingredients.

##### ammonium nitrate

#### Acute aquatic toxicity

**Acute toxicity - fish** LC<sub>50</sub>, 96 hour: 447 mg/l, Cyprinus carpio (Common carp)

#### 12.2. Persistence and degradability

**Persistence and degradability** The degradability of the product is not known.

#### 12.3. Bioaccumulative potential

**Bioaccumulative potential** No data available on bioaccumulation. Low potential.

#### Ecological information on ingredients.

##### ammonium nitrate

**Partition coefficient** No information available.

#### 12.4. Mobility in soil

**Mobility** No data available.

#### 12.5. Results of PBT and vPvB assessment

**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** None known.



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### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### General information

The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

##### Disposal methods

Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

### 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

Not applicable.

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

### SECTION 15: Regulatory information

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

##### National regulations

Health and Safety at Work etc. Act 1974 (as amended).  
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].  
EH40/2005 Workplace exposure limits.

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**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).  
Commission Regulation (EU) No 2015/830 of 28 May 2015.  
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).

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

### SECTION 16: Other information

**Abbreviations and acronyms used in the safety data sheet**

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.  
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.  
IATA: International Air Transport Association.  
ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.  
IMDG: International Maritime Dangerous Goods.  
CAS: Chemical Abstracts Service.  
ATE: Acute Toxicity Estimate.  
LC<sub>50</sub>: Lethal Concentration to 50 % of a test population.  
LD<sub>50</sub>: Lethal Dose to 50% of a test population (Median Lethal Dose).  
EC<sub>50</sub>: 50% of maximal Effective Concentration.  
PBT: Persistent, Bioaccumulative and Toxic substance.  
vPvB: Very Persistent and Very Bioaccumulative.

**Classification abbreviations and acronyms**

Acute Tox. = Acute toxicity  
Eye Dam. = Serious eye damage

**Key literature references and sources for data**

This SDS is prepared based on the information received from the product owner.  
Source: European Chemicals Agency, <http://echa.europa.eu/>

**Classification procedures according to Regulation (EC) 1272/2008**

Acute Tox. 4 - H302: Eye Dam. 1 - H318: : Calculation method.

**Training advice**

Read and follow manufacturer's recommendations. Only trained personnel should use this material.

**Revision comments**

This is the first issue.

**Issued by**

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**Note to organizer**

The certificate information is used exclusively for this SDS. No changes can be made to this SDS without the knowledge and approval of the certificate holder or the certificate information can not be used for another SDS. Otherwise, the certificate will assume no responsibility for the owner SDS.  
This SDS is prepared based on the information and documents received from product owner. CRAD or/and SDS author shall not be responsible for incorrect prepared of SDS and pecuniary loss or intangible damages because of deficient or wrong information and documents which comes from product owner.

**Revision date**

19/12/2018

## Calcium Nitrate Horticultural Grade

<b>Revision</b>	1.0
<b>Supersedes date</b>	19/12/2018
<b>SDS number</b>	8690
<b>Hazard statements in full</b>	H272 May intensify fire; oxidiser. H302 Harmful if swallowed. H318 Causes serious eye damage. H319 Causes serious eye irritation.

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.