SAFETY DATA SHEET
L219 Black Ink

1. Identification

Product Identifier

Product name: L219 Black Ink
Product number: 71002821
Container size: 6 x 1/2 Liter

Recommended use of the chemical and restrictions on use

Application: Printing ink.

Details of the supplier of the safety data sheet

Supplier: Matthews Marking Systems
6515 Penn Avenue
Pittsburgh, PA 15206
412.665.2500
412.828.4545
info@matw.com

Manufacturer: Matthews Marking Systems
101 Fairview Ave.
Pittsburgh, PA 15238

Emergency telephone number


2. Hazard(s) Identification

Classification of the substance or mixture

OSHA Regulatory Status: This Product is Hazardous under the OSHA Hazard Communication Standard.

Physical hazards: Flam. Liq. 2 - H225

Health hazards: Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 STOT SE 3 - H336

Environmental hazards: Not Classified

Label elements

Pictogram

Signal word: Danger

Hazard statements: H225 Highly flammable liquid and vapor.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Comments: Full list of Hazard Statements is found in Sec. 16
**Precautionary statements**

P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing vapor/spray.
P264 Wash contaminated skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 If on skin: Wash with plenty of water.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a poison center/doctor if you feel unwell.
P321 Specific treatment (see medical advice on this label).
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container in accordance with national regulations.

**Contains**

Methyl ethyl ketone - MEK, Isopropanol, propan-2-ol

### 3. Composition/Information on ingredients

#### Mixtures

<table>
<thead>
<tr>
<th>Methyl Ethyl Ketone</th>
<th>60-100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 78-93-3</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Classification</th>
<th>Flam. Liq. 2 - H225</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Eye Irrit. 2 - H319</td>
</tr>
<tr>
<td></td>
<td>STOT SE 3 - H336</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Proprietary - Black</th>
<th>5-10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 57206-81-2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Classification</th>
<th>Eye Irrit. 2B - H320</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Isopropanol</th>
<th>1-5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 67-63-0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Classification</th>
<th>Flam. Liq. 2 - H225</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Eye Irrit. 2 - H319</td>
</tr>
<tr>
<td></td>
<td>STOT SE 3 - H336</td>
</tr>
</tbody>
</table>
# L219 Black Ink

<table>
<thead>
<tr>
<th>propan-2-ol</th>
<th>1-5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 67-63-0</td>
<td></td>
</tr>
</tbody>
</table>

### Classification
- Flam. Liq. 2 - H225
- Eye Irrit. 2A - H319
- STOT SE 3 - H336

The Full Text for all Hazard Statements are Displayed in Section 16.

## 4. First-aid measures

### Description of first aid measures

#### General information
Consult a physician for specific advice. Show this Safety Data Sheet to the medical personnel.

#### Inhalation
Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention immediately.

#### Ingestion
Get medical attention immediately. Do not induce vomiting. Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

#### Skin Contact
Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention promptly if symptoms occur after washing. Wash clothing and clean shoes thoroughly before reuse.

#### Eye contact
Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention.

#### Protection of first aiders
First aid personnel should wear appropriate protective equipment during any rescue.

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

#### General Information
See Section 11 for additional information on health hazards.

#### Inhalation
May cause respiratory system irritation. Overexposure may depress the central nervous system, causing dizziness and intoxication.

#### Ingestion
May cause stomach pain or vomiting. May cause nausea, headache, dizziness and intoxication.

#### Skin contact
Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.

#### Eye contact
This product is strongly irritating. Symptoms following overexposure may include the following: Severe irritation, burning, tearing and blurred vision. Prolonged contact causes serious eye and tissue damage.

### Indication of immediate medical attention and special treatment needed

#### Notes for the doctor
Treat symptomatically.

## 5. Fire-fighting measures

### Extinguishing media
- Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

### Unsuitable extinguishing media
- Water spray.

### Special hazards arising from the substance or mixture
**L219 Black Ink**

**Flammability Class**
7.1 Flammable Liquid IIB.

**Specific hazards**
Flammable liquid and vapour. Vapors are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back.

**Hazardous combustion products**
Thermal decomposition or combustion products may include the following substances: Carbon dioxide (CO2). Carbon monoxide (CO). Nitrous gases (NOx).

**Advice for firefighters**
Evacuate area. Stop leak if safe to do so. Use water to keep fire exposed containers cool and disperse vapors. Use water spray to reduce vapors.

**Special protective equipment for firefighters**
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6. **Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions**
No smoking, sparks, flames or other sources of ignition near spillage. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapors. Wash thoroughly after dealing with a spillage.

**Environmental precautions**
Avoid release to the environment.

**Methods and material for containment and cleaning up**

**Methods for cleaning up**
Spilled nitrocellulose must be thoroughly wetted with water. Eliminate all sources of ignition. Stop leak if safe to do so. Contain and absorb spillage with sand, earth or other non-combustible material. Dilute contained spill with water. Collect and place in suitable waste disposal containers and seal securely.

**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.

7. **Handling and storage**

**Precautions for safe handling**

**Usage precautions**
Tools used with nitrocellulose should be of non-ferrous materials such as copper, brass, or wood. Wear protective clothing as described in Section 8 of this safety data sheet.

**Advice on general occupational hygiene**
Do not eat, drink or smoke when using this product. Provide eyewash station and safety shower. Good personal hygiene procedures should be implemented. Wash skin thoroughly after handling.

**Conditions for safe storage, including any incompatibilities**

**Storage precautions**
Keep only in the original container in a cool, well-ventilated place.

**Storage class**
Flammable liquid storage.

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

8. **Exposure Controls/personal protection**

**Control parameters**

**Occupational exposure limits**

**Methyl Ethyl Ketone**
L219 Black Ink

Long-term exposure limit (8-hour TWA): OSHA 200 ppm  590 mg/m³
Long-term exposure limit (8-hour TWA): ACGIH 200 ppm  590 mg/m³
Short-term exposure limit (15-minute): ACGIH 300 ppm  885 mg/m³

Proprietary - Black

as CrO₃
Long-term exposure limit (8-hour TWA): OSHA 0.5 mg/m³  > 6.0 %  as dust

Isopropanol

Long-term exposure limit (8-hour TWA): OSHA 400 ppm  980 mg/m³
Long-term exposure limit (8-hour TWA): ACGIH 200 ppm  492 mg/m³
Short-term exposure limit (15-minute): ACGIH 400 ppm  984 mg/m³

propan-2-ol

Long-term exposure limit (8-hour TWA): OSHA 400 ppm  980 mg/m³
Long-term exposure limit (8-hour TWA): ACGIH 200 ppm  492 mg/m³
Short-term exposure limit (15-minute): ACGIH 400 ppm  984 mg/m³

OSHA = Occupational Safety and Health Administration.
ACGIH = American Conference of Governmental Industrial Hygienists.
A4 = Not Classifiable as a Human Carcinogen.

Ingredient comments

Data based on literature. Product not tested.

Methyl Ethyl Ketone (CAS: 78-93-3)

Immediate danger to life and health  3000 ppm

Isopropanol (CAS: 67-63-0)

Immediate danger to life and health  2000 ppm

propan-2-ol (CAS: 67-63-0)

Immediate danger to life and health  2000 ppm

Exposure controls

Protective equipment

Appropriate engineering controls

As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapor or mist. Use explosion-proof ventilating equipment.

Eye/face protection

Wear tight-fitting, chemical splash goggles or face shield.

Hand protection

It is recommended that chemical-resistant, impervious gloves are worn.
L219 Black Ink

Other skin and body protection
Wear appropriate clothing to prevent repeated or prolonged skin contact.

Hygiene measures
Provide eyewash station and safety shower.

Respiratory protection
If ventilation is inadequate, suitable respiratory protection must be worn. Organic vapor filter.

Thermal hazards
If there is a risk of contact with hot product, all protective equipment worn should be suitable for use with high temperatures.

Environmental exposure controls
Keep container tightly sealed when not in use. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Colored liquid.</td>
</tr>
<tr>
<td>Color</td>
<td>Black.</td>
</tr>
<tr>
<td>Odor</td>
<td>Ketonic.</td>
</tr>
<tr>
<td>Melting point</td>
<td>-86°C/-123°F</td>
</tr>
<tr>
<td>Initial boiling point and range</td>
<td>79°C/147°F @ 760 mm Hg</td>
</tr>
<tr>
<td>Flash point</td>
<td>-9°C/16°F CC (Closed cup).</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>3.7 (butyl acetate = 1)</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Upper flammable/explosive limit: 12.7 % vol Lower flammable/explosive limit: 1.8 % vol</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>71.25 mm Hg @ 20°C/68°F</td>
</tr>
<tr>
<td>Vapour density</td>
<td>2.4</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.872 872 g/l 7.26 lbs/gal</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Soluble in the following materials: Ketones. Slightly soluble in water.</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>log Pow: 0.26</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>404°C/759°F</td>
</tr>
<tr>
<td>Comments</td>
<td>Information given is applicable to the product as supplied.</td>
</tr>
<tr>
<td>Volatile organic compound</td>
<td>This product contains a maximum VOC content of 745 g/l. This product contains a maximum VOC content of 6.21 lbs/gal.</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

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

Stability
Stable at normal ambient temperatures and when used as recommended.

Possibility of hazardous reactions
The following materials may react with the product: Acids. Alkalis. Strong oxidizing agents.

Conditions to avoid
Avoid the following conditions: Heat, sparks, flames.

Materials to avoid
Avoid contact with the following materials: Acids. Alkalis. Strong oxidizing agents.
L219 Black Ink

Hazardous decomposition products

Heating may generate the following products: Carbon dioxide (CO2). Carbon monoxide (CO). Nitrous gases (NOx).

11. Toxicological information

Information on toxicological effects

Toxicological effects

Data based on literature. Product not tested.

Specific target organ toxicity - single exposure

Target organs

Central nervous system  Eyes  Gastro-intestinal tract  Respiratory system, lungs  Skin

Specific target organ toxicity - repeated exposure

Target organs

Blood  Central nervous system  Gastro-intestinal tract  Kidneys  Liver  Skin

Aspiration hazard

Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

Toxicological information on ingredients.

Methyl Ethyl Ketone

<table>
<thead>
<tr>
<th>Acute toxicity - oral</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity oral (LD₅₀ mg/kg)</td>
<td>2,600.0</td>
</tr>
<tr>
<td>Species</td>
<td>Rat</td>
</tr>
<tr>
<td>ATE oral (mg/kg)</td>
<td>2,600.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Acute toxicity - dermal</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity dermal (LD₅₀ mg/kg)</td>
<td>6,400.0</td>
</tr>
<tr>
<td>Species</td>
<td>Rabbit</td>
</tr>
<tr>
<td>ATE dermal (mg/kg)</td>
<td>6,400.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Acute toxicity - inhalation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity inhalation (LC₅₀ vapours mg/l)</td>
<td>32,000.0</td>
</tr>
<tr>
<td>Species</td>
<td>Mouse</td>
</tr>
<tr>
<td>ATE inhalation (vapours mg/l)</td>
<td>32,000.0</td>
</tr>
</tbody>
</table>

Proprietary - Black

<table>
<thead>
<tr>
<th>Acute toxicity - oral</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity oral (LD₅₀ mg/kg)</td>
<td>2,000.1</td>
</tr>
<tr>
<td>Species</td>
<td>Rat</td>
</tr>
<tr>
<td>ATE oral (mg/kg)</td>
<td>2,000.1</td>
</tr>
</tbody>
</table>
L219 Black Ink

Acute toxicity dermal (LD₅₀ mg/kg) 2,000.1
Species Rat
ATE dermal (mg/kg) 2,000.1
Carcinogenicity
IARC carcinogenicity Not listed

Isopropanol

Acute toxicity - oral
Acute toxicity oral (LD₅₀ mg/kg) 5,045.0
Species Rat
ATE oral (mg/kg) 5,045.0
Acute toxicity - dermal
Acute toxicity dermal (LD₅₀ mg/kg) 12,800.0
Species Rabbit
ATE dermal (mg/kg) 12,800.0
Carcinogenicity
IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.

propan-2-ol

Carcinogenicity
IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.

12. Ecological Information

Ecotoxicity Data based on literature. Product not tested.
Toxicity
Ecological information on ingredients.

Methyl Ethyl Ketone

Acute toxicity - fish LC₅₀, : 1690 mg/l, Lepomis macrochirus (Bluegill)
LC₅₀, : 3220 mg/l, Pimephales promelas (Fat-head Minnow)

Proprietary - Black

Acute toxicity - fish LC₅₀, : 2.0 mg/l, Fish
Acute toxicity - aquatic invertebrates EC₈₀, : 1000 mg/l, Daphnia magna

Isopropanol
L219 Black Ink

Acute toxicity - fish  
LC₅₀, 96 hours: 9640 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates  
EC₅₀, 24 hours: 5102 mg/l, Daphnia magna

Acute toxicity - aquatic plants  
EC₅₀, 72 hours: > 2000 mg/l, Desmodesmus subspicatus
EC₅₀, 24 hours: > 1000 mg/l, Algae

Bioaccumulative potential
Partition coefficient  
log Pow: 0.26

13. Disposal considerations

Waste treatment methods
General information  
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.

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

14. Transport information

UN Number
UN No. (DOT)  
1210
UN No. (IMDG)  
1210
UN No. (ICAO)  
1210

UN proper shipping name
Proper shipping name (DOT)  
PRINTING INK
Proper shipping name (IMDG)  
PRINTING INK
Proper shipping name (ICAO)  
PRINTING INK

Transport hazard class(es)
IMDG Class  
3
ICAO class/division  
3

Transport labels

Packing group
DOT pack group  
II
IMDG packing group  
II
ICAO packing group  
II

Environmental hazards
Environmentally Hazardous Substance
No.
L219 Black Ink

Special precautions for user
EmS F-E, S-D

15. Regulatory information

Regulatory Status Hazardous Chemical

US Federal Regulations
SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
  Proprietary - Black
  No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
  Methyl Ethyl Ketone
  Final CERCLA RQ: 5000(2270) pounds (Kilograms)

SARA 313 Emission Reporting
  Methyl Ethyl Ketone
  All the ingredients are listed or exempt.
  Proprietary - Black
  0.1 %
  Isopropanol
  This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.

SARA (311/312) Hazard Categories
  Methyl Ethyl Ketone
  Fire
  Health: Acute
  Chronic
  Proprietary - Black
  Acute
  Isopropanol
  Fire
  Health: Acute
  Chronic

OSHA Highly Hazardous Chemicals
  Proprietary - Resin
  Threshold Quantity: 2500 lbs

Hazardous Air Pollutants (HAPS) - Clean Air Art
  MEK

US State Regulations
California Air Toxics "Hot Spots" (A-I)
  Methyl Ethyl Ketone
  Present
L219 Black Ink

Isopropanol
Present
propan-2-ol
Present

California Directors List of Hazardous Substances
The following ingredients are listed or exempt:

Methyl Ethyl Ketone
Present
Isopropanol
Present
propan-2-ol
Present

Massachusetts "Right To Know" List
The following ingredients are listed or exempt:

Methyl Ethyl Ketone
Present
Isopropanol
Present
propan-2-ol
Present
Proprietary - Resin
Present

Rhode Island "Right To Know" List
The following ingredients are listed or exempt:

Methyl Ethyl Ketone
Present
Isopropanol
Present
propan-2-ol
Present
Proprietary - Resin
Present

Minnesota "Right To Know" List
The following ingredients are listed or exempt:

Methyl Ethyl Ketone
Present
Proprietary - Black
Isopropanol
Present
propan-2-ol
Present
Proprietary - Resin

New Jersey "Right To Know" List
L219 Black Ink

The following ingredients are listed or exempt:

Methyl Ethyl Ketone
   Present
Isopropanol
   Present
propan-2-ol
   Present
Proprietary - Resin
   Present

Pennsylvania "Right To Know" List
The following ingredients are listed or exempt:

Methyl Ethyl Ketone
   Present
Isopropanol
   Present
propan-2-ol
   Present
Proprietary - Resin
   Present

Inventories
EU - EINECS/ELINCS
The following ingredients are listed or exempt:

Methyl Ethyl Ketone
   ELINCS

Canada - DSL/NDSL
All the ingredients are listed or exempt.

Methyl Ethyl Ketone
   DSL
Proprietary - Black
   DSL
Isopropanol
   DSL
propan-2-ol
   DSL
Proprietary - Resin
   DSL

US - TSCA
All the ingredients are listed or exempt.

Methyl Ethyl Ketone
   Present
Proprietary - Black
   Present
L219 Black Ink

**Isopropanol**
Present

**propan-2-ol**
Present

**Proprietary - Resin**
Present

**Australia - AICS**
The following ingredients are listed or exempt:

**Methyl Ethyl Ketone**
Present

**Japan - MITI**
The following ingredients are listed or exempt:

**Methyl Ethyl Ketone**
Present

**Korea - KECI**
The following ingredients are listed or exempt:

**Methyl Ethyl Ketone**
Present

**China - IECSC**
The following ingredients are listed or exempt:

**Philippines – PICCS**
The following ingredients are listed or exempt:

**Methyl Ethyl Ketone**
Present

**New Zealand - NZIOC**
The following ingredients are listed or exempt:

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### 16. Other Information

**General information**
Containers of this material may be hazardous when emptied, all hazard precautions given in the data sheet must be observed.

**Issued by**
Matthews Marking Systems - Chemical Services Department

**Revision date**
6/1/2015

**Revision**
1

**SDS No.**
5004

**SDS status**
Approved.

**Hazard statements in full**
H225 Highly flammable liquid and vapor.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H320 Causes eye irritation.
H336 May cause drowsiness or dizziness.

**NFPA - flammability hazard**
Ignites easily. (3)

**NFPA - health hazard**
Irritation, minor residual injury. (1)
L219 Black Ink

<table>
<thead>
<tr>
<th>NFPA - instability hazard</th>
<th>Normally stable. (0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACA HMIS Health rating.</td>
<td>Slight hazard. (1) Chronic hazard.</td>
</tr>
<tr>
<td>ACA HMIS Physical hazard rating.</td>
<td>Normally stable. (0)</td>
</tr>
<tr>
<td>ACA HMIS Personal protection rating.</td>
<td>B</td>
</tr>
<tr>
<td>ACA HMIS Flammability rating.</td>
<td>Ignites easily. (3)</td>
</tr>
</tbody>
</table>

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.