

SAFETY DATA SHEET

ACETONE AR

According to UK REACH.

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

1.1. Product identifier

Product name	ACETONE AR
Product number	1196
REACH registration number	01-2119471330-49-XXXX
CAS number	67-64-1
EU index number	606-001-00-8
EC number	200-662-2

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

Identified uses	Solvent. Laboratory reagent.
Uses advised against	Use only for intended applications.

1.3. Details of the supplier of the safety data sheet

Supplier	Reagent Chemical Services 11b - 13 Aston Fields Road Whitehouse Industrial Estate Runcorn Cheshire WA7 3DL T: 01928 716903 (08.30 - 17.00) F: 01928 716425 E: info@reagent.co.uk
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1.4. Emergency telephone number

Emergency telephone	OHES Environmental Ltd 24-7 Tel. 0333 333 9939 (24 hour)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Flam. Liq. 2 - H225
Health hazards	Eye Irrit. 2 - H319 STOT SE 3 - H336
Environmental hazards	Not Classified

2.2. Label elements

EC number	200-662-2
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Hazard pictograms



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Signal word	Danger
Hazard statements	H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.
Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P243 Take action to prevent static discharges. P261 Avoid breathing vapour/ spray. P271 Use only outdoors or in a well-ventilated area. 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.
Supplementary precautionary statements	P240 Ground and bond container and receiving equipment. P241 Use explosion-proof electrical equipment. P242 Use non-sparking tools. P264 Wash contaminated skin thoroughly after handling. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTRE/doctor if you feel unwell. P337+P313 If eye irritation persists: Get medical advice/ attention. 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.

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

Product name	ACETONE AR
REACH registration number	01-2119471330-49-XXXX
EU index number	606-001-00-8
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EC number	200-662-2

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Remove affected person from source of contamination. Keep affected person away from heat, sparks and flames.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Get medical advice/attention if you feel unwell.
Ingestion	Never give anything by mouth to an unconscious person. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Rinse mouth thoroughly with water. Get medical attention.

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Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Care should be taken to avoid contact with contaminants when removing contaminated clothing. Get medical attention if irritation persists after washing.
Eye contact	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub eye. Get medical attention if irritation persists after washing.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue. If it is suspected that airborne contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus.

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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Vapours may cause headache, fatigue, dizziness and nausea. May cause respiratory irritation.
Ingestion	Nausea, vomiting. Dizziness. Ingestion of large amounts may cause unconsciousness.
Skin contact	Prolonged or repeated exposure may cause the following adverse effects: Skin irritation. Redness. Dry skin.
Eye contact	Causes serious eye irritation. Profuse watering of the eyes.

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

Notes for the doctor	Treat symptomatically.
Specific treatments	No specific chemical antidote is known to be required after exposure to this product.

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	The product is highly flammable. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. Containers can burst violently or explode when heated, due to excessive pressure build-up.
Hazardous combustion products	Carbon monoxide (CO). Carbon dioxide (CO ₂).

5.3. Advice for firefighters

Protective actions during firefighting	Fight fire from safe distance or protected location. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Control run-off water by containing and keeping it out of sewers and watercourses.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Wear chemical protective suit.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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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. Take precautionary measures against static discharges. Avoid inhalation of vapours and contact with skin and eyes. Treat the spilled material according to the instructions in the clean-up section. Wash thoroughly after dealing with a spillage.
For emergency responders	Wear protective clothing as described in Section 8 of this safety data sheet. Treat the spilled material according to the instructions in the clean-up section. Wash thoroughly after dealing with a spillage.

6.2. Environmental precautions

Environmental precautions	To prevent release, place container with damaged side up. Do not discharge into drains or watercourses or onto the ground. Use appropriate containment to avoid environmental contamination.
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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. Stop leak if safe to do so. No smoking, sparks, flames or other sources of ignition near spillage. Small Spillages: Absorb small quantities with paper towels and evaporate in a safe place. Large Spillages: To prevent release, place container with damaged side up. Contain and absorb spillage with sand, earth or other non-combustible material. Collect and place in suitable waste disposal containers and seal securely. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. For waste disposal, see Section 13. Wash thoroughly after dealing with a spillage.
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6.4. Reference to other sections

Reference to other sections	For personal protection, see Section 8. For waste disposal, see Section 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions	Do not handle until all safety precautions have been read and understood. Avoid inhalation of vapours and contact with skin and eyes. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Earth container and transfer equipment to eliminate sparks from static electricity. Use explosion-proof electrical, ventilating and lighting equipment.
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Advice on general occupational hygiene	Do not eat, drink or smoke when using this product. Good personal hygiene procedures should be implemented. Clean equipment and the work area every day. Take off immediately all contaminated clothing and wash it before reuse. Care should be taken to avoid contact with contaminants when removing contaminated clothing.
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7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep away from oxidising materials, heat and flames. Earth container and transfer equipment to eliminate sparks from static electricity. Store away from incompatible materials (see Section 10).
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Storage class	Flammable liquid storage.
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7.3. Specific end use(s)

Specific end use(s)	The identified uses for this product are detailed in Section 1.2.
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SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

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Long-term exposure limit (8-hour TWA): WEL 500 ppm 1210 mg/m³

Short-term exposure limit (15-minute): WEL 1500 ppm 3620 mg/m³

WEL = Workplace Exposure Limit.

DNEL

Workers - Inhalation; Short term systemic effects: 1210 mg/m³

Workers - Inhalation; Long term local effects: 2420 mg/m³

Workers - Dermal; Long term systemic effects: 186 mg/kg/day

General population - Inhalation; Long term systemic effects: 200 mg/m³

General population - Dermal; Long term systemic effects: 62 mg/kg/day

General population - Oral; Long term systemic effects: 62 mg/kg/day

PNEC

- Fresh water; 10.6 mg/l

- marine water; 1.06 mg/l

- STP; 100 mg/l

- Sediment (Freshwater); 30.4 mg/kg

- Sediment (Marinewater); 3.04 mg/kg

- Soil; 29.5 mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Use explosion-proof general and local exhaust ventilation.

Eye/face protection

Wear tight-fitting, chemical splash goggles or face shield. Personal protective equipment for eye and face protection should comply with European Standard EN166. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection

Wear protective gloves. Frequent changes are recommended. To protect hands from chemicals, gloves should comply with European Standard EN374. For exposure up to 8 hours, wear gloves made of the following material: Butyl rubber. The breakthrough time for any glove material may be different for different glove manufacturers. Glove thickness is not necessarily a good measure of glove resistance as the permeation rate will depend on the exact glove composition. 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.

Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible. For the greatest protection, clothing should include anti-static overalls, boots and gloves.

Hygiene measures

Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

Respiratory protection

Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Respirator selection must be based on exposure levels, the hazards of the product and the safe working limits of the selected respirator. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. 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. Check that the respirator fits tightly and the filter is changed regularly. Wear a respirator fitted with the following cartridge: Organic vapour filter. Gas filter, type AX.

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Environmental exposure controls Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Sweetish.
Odour threshold	13 ppm
pH	Not determined.
Melting point	-94.7°C
Initial boiling point and range	56.05°C
Flash point	-17°C Closed cup.
Evaporation rate	Not determined.
Flammability (solid, gas)	Scientifically unjustified.
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 2.5 % Volume Upper flammable/explosive limit: 13 % Volume
Vapour pressure	240 hPa @ 20°C
Vapour density	2.1
Relative density	0.79 @ °C
Solubility(ies)	Miscible with water.
Partition coefficient	log Kow: -0.24
Auto-ignition temperature	465°C
Decomposition Temperature	No specific test data are available.
Viscosity	0.32 (Dynamic) mPa s @ 20°C
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Molecular weight 58.09

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity The following materials may react with the product: Strong acids. Strong alkalis. Strong oxidising agents.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions May generate heat. In use may form flammable/explosive vapour-air mixture. The following materials may react violently with the product: Peroxides. Strong oxidising agents.

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10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition. Static electricity and formation of sparks must be prevented.

10.5. Incompatible materials

Materials to avoid Avoid contact with acids. Avoid contact with alkalis. Avoid contact with strong oxidising agents. Some plastics, rubber and coatings.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,800.0

Species Rat

Notes (oral LD₅₀) REACH dossier information.

ATE oral (mg/kg) 5,800.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 7,426.0

Species Rabbit

Notes (dermal LD₅₀) REACH dossier information.

ATE dermal (mg/kg) 7,426.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 132.0

Species Rat

ATE inhalation (vapours mg/l) 132.0

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 eye irritation.

Respiratory sensitisation

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

Skin sensitisation

Skin sensitisation Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Bacterial reverse mutation test: Negative., With and without metabolic activation.

Genotoxicity - in vivo Chromosome aberration: Negative.

Carcinogenicity

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

Reproductive toxicity

Reproductive toxicity - fertility - LOAEL 10000 mg/l, Oral, Rat P

Reproductive toxicity - development Maternal toxicity: - LOAEC: 11000 mg/l, Inhalation, Rat

Specific target organ toxicity - single exposure

STOT - single exposure Vapours may cause drowsiness and dizziness.

Target organs Eyes Respiratory system, lungs Brain

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEL 900 mg/kg, Oral, Rat

Target organs Kidneys Respiratory and haematopoietic systems Reproductive organs

General information Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.

Inhalation Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Headache. Fatigue. Nausea, vomiting. Vapours may cause drowsiness and dizziness.

Ingestion Gastrointestinal symptoms, including upset stomach. May cause stomach pain or vomiting. May cause nausea, headache, dizziness and intoxication.

Skin contact Prolonged or repeated exposure may cause the following adverse effects: Irritating to skin. Dry skin.

Eye contact Irritating to eyes. Symptoms following overexposure may include the following:

Route of exposure Inhalation Oral Skin and/or eye contact

Target organs Eyes Respiratory system, lungs

SECTION 12: Ecological information

Ecotoxicity The product is not expected to be hazardous to the environment. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 5540 mg/l, Oncorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 12600 mg/l, Daphnia magna

Acute toxicity - aquatic plants NOEC, 192 hours: 530 mg/l, Freshwater algae

Acute toxicity - microorganisms EC₁₂, 30 minutes: 1000 mg/l, Activated sludge

Acute toxicity - terrestrial LC₅₀, 48 hours: 0.1 - 1.0 mg/cm², Eisenia Fetida (Earthworm)

Chronic aquatic toxicity

Chronic toxicity - fish early life stage Not relevant.

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Short term toxicity - embryo and sac fry stages	Not available.
Chronic toxicity - aquatic invertebrates	NOEC, 28 days: 2212 mg/l, Daphnia magna
Toxicity to soil	Scientifically unjustified.
Toxicity to terrestrial plants	Scientifically unjustified.

12.2. Persistence and degradability

Persistence and degradability	The product is more than 80% biodegradable.
Phototransformation	Air - Degradation (%) 100: 18.6 - 114.4 days
Stability (hydrolysis)	Scientifically unjustified.
Biodegradation	The substance is readily biodegradable. Water - Degradation (%) 90.2: 28 days

12.3. Bioaccumulative potential

Bioaccumulative potential	The product is not bioaccumulating. BCF: 3,
Partition coefficient	log Kow: -0.24

12.4. Mobility in soil

Mobility	The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.
Adsorption/desorption coefficient	No specific test data are available.
Henry's law constant	~ 2.93 Pa m ³ /mol @ @ 25°C
Surface tension	~ 23.3 mN/m @ 20°C

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.
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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	When handling waste, the safety precautions applying to handling of the product should be considered. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor.
Disposal methods	Reuse or recycle products wherever possible. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General	For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.
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14.1. UN number

UN No. (ADR/RID)	1090
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ACETONE AR

UN No. (IMDG)	1090
UN No. (ICAO)	1090
UN No. (ADN)	1090

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	ACETONE
Proper shipping name (IMDG)	ACETONE
Proper shipping name (ICAO)	ACETONE
Proper shipping name (ADN)	ACETONE

14.3. Transport hazard class(es)

ADR/RID class	3
ADR/RID classification code	F1
ADR/RID label	3
IMDG class	3
ICAO class/division	3
ADN class	3

Transport labels



14.4. Packing group

ADR/RID packing group	II
IMDG packing group	II
ICAO packing group	II
ADN packing group	II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

EmS	F-E, S-D
ADR transport category	2
Emergency Action Code	•2YE
Hazard Identification Number (ADR/RID)	33
Tunnel restriction code	(D/E)

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

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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).
Control of Substances Hazardous to Health Regulations 2002 (as amended).
Dangerous Substances and Explosive Atmospheres Regulations 2002.
EH40/2005 Workplace exposure limits.
GB Mandatory Classification and Labelling List (GB MCL)
UK REACH and UK CLP Regulations.

Guidance Workplace Exposure Limits EH40.

Authorisations (Annex XIV Regulation 1907/2006) No specific authorisations are known for this product.

Restrictions (Annex XVII Regulation 1907/2006) No specific restrictions on use are known for this product.

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet DNEL: Derived No Effect Level.
DMEL: Derived Minimal Effect Level.
PNEC: Predicted No Effect Concentration.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.

Classification abbreviations and acronyms Acute Tox. = Acute toxicity
Eye Irrit. = Eye irritation
Flam. Liq. = Flammable liquid
STOT SE = Specific target organ toxicity-single exposure

General information This datasheet is not intended to be a replacement for a full risk assessment, these should always be carried out by competent persons.

Key literature references and sources for data GB Mandatory Classification and Labelling List (GB MCL) Source: European Chemicals Agency, <http://echa.europa.eu/> REACH dossier information.

Classification procedures according to Regulation (EC) 1272/2008 Eye Irrit. 2 - H319, Flam. Liq. 2 - H225, STOT SE 3 - H335: On basis of test data.

Training advice Only trained personnel should use this material.

Revision date 19/12/2023

ACETONE AR

Revision	3
Supersedes date	28/04/2016
SDS number	21048
SDS status	Approved.
Hazard statements in full	H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.

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.