

Safety Data Sheet ONT.ACE

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200 Date of issue: 05/21/2015 Version: 19.0

| : Acetone | |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| : Industrial Solvent. | |
| : Restricted to Professional Users. | |
| e safety data sheet | |
| RISES INC | |
| | Industrial Solvent. Restricted to Professional Users. the substance or mixture and uses advised against e safety data sheet |

1.4. Emergency telephone number

Emergency number

: 1-800-424-9300 (CHEMTREC)

SECTION 2: Hazards identification

2.1 GHS Classification Flammable Liquids: Category 2 Serious Eye Damage/Eye Irritation: Category 2A Specific Target Organ Toxicity - Single Exposure: Category 3 Aspiration Hazard: Category 2

2.2 GHS Label Element



Hazard Statements:

H225 Highly flammable liquid and vapor.

H319 Causes serious eye irritation.

- H336 May cause drowsiness or dizziness.
- H305 May be harmful if swallowed and enters airways.

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Precautionary Statements:

PREVENTION:

- P210 Keep away from heat/sparks/open flames/hot surfaces No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P264 Wash hands thoroughly after handling.
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
- P271 Use only outdoors or in a well-ventilated area.

RESPONSE:

| P301+P312 | IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. |
|------------------|-------------------------------------------------------------------------------------------------------------------------|
| P331 | Do NOT induce vomiting. |
| P303 + P361 + P3 | 53 IF ON SKIN (or hair): Remove/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. |
| P312 | Call a POISON CENTER or doctor/physician if you feel unwell. |
| P305 + P351 + P3 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue |
| | rinsing. |
| P337 + P313 | If eye irritation persists: Get medical advice/attention. |
| STORAGE: | |
| P403 + P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P235 | Keep cool. |
| P405 | Store locked up. |

DISPOSAL:

P501 Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.

2.3 Other Hazards Which Do Not Result In Classification

Exposure may enhance the toxicity of other materials. Repeated exposure may cause skin dryness or cracking. Slightly irritating to respiratory system. The classification of this material is based on OSHA HCS 2012 Criteria.

SECTION 3: Composition/Information on ingredients

Substance/Mixture: Substance

Synonyms: Dimethyl Ketone, propan-2-one, 2-Propanone

Chemical Nature: Solvent

HAZARDOUS COMPONENTS

| CHEMICAL NAME | SYNONYMS | CAS NO. | CONCENTRATION (%) |
|---------------|----------|---------|-------------------|
| Acetone | acetone | 67-64-1 | <= 100 |
| Benzene | benzene | 71-43-2 | <= 0.003 |

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SECTION 4: First aid measures

4.1 General Advice

Not expected to be a health hazard at ambient temperature.

4.2 If Inhaled

Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.

4.3 In Case of Skin Contact

Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.

4.4 In Case of Eye Contact

DO NOT DELAY.

Flush eye with copies quantities of water. Obtain medical treatment immediately.

4.5 If Swallowed

If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101 °F (38.3 °C), shortness of breath, chest congestion or continued coughing or wheezing.

4.6 Most Important Symptoms and Effects, both Acute and Delayed

Breathing of high vapor concentrations may cause central nervous system (CNS) depression resulting in dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness and death.

If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever. Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.

Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance. Skin irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blisters.

4.7 Immediate Medical Attention, Special Treatment

Potential for chemical pneumonitis. Call a doctor or poison control center for guidance.

SECTION 5: Firefighting measures

5.1 Suitable Extinguishing Media

Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

5.2 Unsuitable Extinguishing Media

None.

5.3 Specific Hazards During Fire-Fighting

The vapor is heavier than air, spreads along the ground and distant ignition is possible. Carbon monoxide may be evolved if incomplete combustion occurs.

5.4 Specific Extinguishing Methods

Standard procedure for chemical fires.

5.5 Further Information

Clear fire area of all non-emergency personnel. Keep adjacent containers cool by spraying with water.

5.6 Special Protective Equipment for Firefighters

Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).

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SECTION 6: Accidental release measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Observe the relevant local and international regulations

Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

Local authorities should be advised if significant spillages cannot be contained.

The vapor is heavier than air, spreads along the ground and distant ignition is possible.

Vapor may form an explosive mixture with air.

Avoid contact with skin, eyes and clothing.

Isolate hazard area and deny entry to unnecessary or unprotected personnel.

Stay upwind and keep out of low areas.

6.2 Environmental Precautions

Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapor or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment.

Ventilate contaminated area thoroughly.

Monitor area with combustible gas indicator.

6.3 Methods and Materials for Containment and Cleaning Up

For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. For small liquid spills (< 1 drum), transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soap up with an appropriate absorbent material and dispose of safely Remove contaminated soil and dispose of safely Remove contaminated soil and dispose of safely.

6.4 Additional Advice

For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet.

For guidance on disposal of spilled material see Chapter 13 of this Safety Data Sheet.

U.S. regulations may require reporting releases of this material to the environment which exceed the reportable quantity (refer to Chapter 15) to the National Response Center at (800) 424-8802

SECTION 7: Handling and storage

7.1 Technical Measures

Avoid breathing of or direct contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet.

Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

Ensure that all local regulations regarding handling and storage facilities are followed.

7.2 Precautions for Safe Handling

Avoid contact with skin, eyes and clothing. Use local exhaust ventilation if there is risk of inhalation of vapors, mists or aerosols.

7.3 Avoidance of Contact

Strong oxidizing agents.

7.4 Advice on Protection Against Fire and Explosion

Bulk storage tanks should be diked (bunded). Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment to reduce the risk. The vapors in the head space of the storage vessel may lie in the flammable/explosive range and hence may be flammable. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Do NOT use compressed air for filling, discharging, or handling operations.

7.5 Product Transfer

Refer to guidance under Handling section.

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7.6 Storage

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

The vapor is heavier than air. Beware of accumulation in pits and confined spaces. Refer to section 15 for any additional specific legislation covering the packaging and storage of this product.

PACKAGING MATERIAL:

Suitable material: For containers, or container linings use mild steel, stainless steel. Unsuitable material: Natural, butyl, neoprene or nitrile rubbers.

CONTAINER ADVICE:

Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.

SPECIFIC USE(S):

Not applicable.

Ensure that all local regulations regarding handling and storage facilities are followed. See additional references that provide safe handling practices: American Petroleum Institute 2003 (Protection Against Ignition Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practices on Static Electricity.)

CENELEC CLC/TR 50404 (Electrostatics - Code of Practice for the avoidance of hazards due to static electricity).

| SECTION 8: Exposure controls/personal protection | | | | | | |
|--------------------------------------------------|---------|----------------------------------|---------------------------------------------------------|--------------------------------------------------------|--|--|
| 8.1 Components with Workplace Control Parameters | | | | | | |
| COMPONENTS | CAS NO. | VALUE TYPE (FORM OF EXPOSURE) | CONTROL PARAMETERS / PERMISSIBLE CONCENTRATION | BASIS | | |
| | | TWA | 500 ppm | ACGIH | | |
| Acetone | 67-64-1 | STEL | 750 ppm | ACGIH | | |
| | | TWA | 1,000 ppm 2,400 mg/m3 | OSHA Z-1 | | |
| Benzene | 71-43-2 | TWA | 0.5 ppm 1.6 mg/m3 | Shell Internal Standard (SIS) for 8-12 hour TWA. | | |
| | | STEL | 2.5 ppm 8 mg/m3 | Shell Internal Standard (SIS) for 15 min (STEL). | | |
| | | TWA | 0.5 ppm | ACGIH | | |
| | | STEL | 2.5 ppm | ACGIH | | |
| | | PEL | 1 ppm | OSHA CARC | | |
| | | STEL | 5 ppm | OSHA CARC | | |
| | | TWA | 10 ppm | OSHA Z-2 | | |
| | | CEIL | 25 ppm | OSHA Z-2 | | |
| | | Peak | 50 ppm | OSHA Z-2 | | |

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8.2 Biological Occupational Exposure Limits

| COMPONENT | CAS NO. | CONTROL PARAMETERS | BIOLOGICAL SPECIMEN | | PERMISSIBLE CONCENTRAT ION | BASIS |
|-----------|---------|-----------------------|------------------------|----------------------------------------------------------------------|----------------------------------|--------------|
| Acetone | 67-67-1 | Acetone | Urine | End of shift (as soon as possible after exposure ceases) | 50 mg/l | ACGIH BEI |

8.3 Monitorin Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/

Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/

Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany http://www.dguv.de/inhalt/index.jsp

L'Institut National de Recherche et de Securité, (INRS), France http://www.inrs.fr/accueil

8.4 Engineering Measures

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include:

Use sealed systems as far as possible.

Adequate explosion-proof ventilation to control airborne concentrations

below the exposure guidelines/limits.

Local exhaust ventilation is recommended.

Eye washes and showers for emergency use.

Firewater monitors and deluge systems are recommended.

Where material is heated, sprayed or mist formed, there is

greater potential for airborne concentrations to be generated.

General Information:

Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

Define procedures for safe handling and maintenance of controls.

Educate and train workers in the hazards and control measures relevant to normal activities associated with this product. Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation.

Drain down system prior to equipment break-in or maintenance. Retain drain downs in sealed storage pending disposal or subsequent recycle.

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8.5 Personal Protective Equipment RESPIRATORY PROTECTION:

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. If air-filtering respirators are suitable for conditions of use: Select a filter suitable for organic gases and vapours [Type AX boiling point ≤65°C (149°F)]. Respirator selection, use and maintenance should be in accordance with the requirements of the OSHA Respiratory

Protection Standard, 29 CFR 1910.134.

HAND PROTECTION REMARKS:

Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. Longer term protection: Nitrile rubber gloves. Incidental contact/Splash protection: PVC or neoprene rubber gloves For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same, but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

EYE PROTECTION:

Wear goggles for use against liquids and gas. Wear full face shield if splashes are likely to occur.

SKIN AND BODY PROTECTION:

Wear chemical resistant gloves/gauntlets and boots. Where risk of splashing, also wear an apron.

PROTECTIVE MEASURES:

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

HYGIENE MEASURES:

Wash hands before eating, drinking, smoking and using the toilet. Launder contaminated clothing before re-use.

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8.6 Environmental Exposure Controls

GENERAL ADVICE:

Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapor.

Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

Information on accidental release measures are to be found in section 6.

Safety Data Sheet ONT.ACE SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties 9.1.

On Track Refinish Acetone (ONT.ACE) Safety Data Sheet ONT.ACE

| Appearance | : | Liquid. |
|----------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Color | : | Clear |
| Odor | : | Characteristic |
| Odor threshold | : | No data available |
| рН | : | Not Applicable |
| Melting/Freezing Point | : | Not Applicable |
| Boiling Point | : | 56 °C / 133 °F |
| Flash Point | : | -18 °C / -0.40 °F Method: IP 170 |
| Evaporation Rate | : | 5.6 Method: ASTM D 3539, nBuAc=1 |
| | | 2 Method: DIN 53170, di-ethyl ether=1 |
| Flammability (solid, gas) | : | In certain circumstances product can ignite due to static electricity. |
| Upper Explosion Limit | : | ca. 13%(V) |
| Lower Explosion Limit | : | ca. 2.1%(V) |
| Vapor Pressure | : | 24.7 kPa (20 °C / 68 °F) |
| Relative Vapor Density | : | 2 (20 °C / 68 °F) |
| Relative Density | : | 0.792 |
| Density | : | 790 - 792 kg/m3 (20 °C / 68 °F) Method: ASTM D4052 |
| Solubility(ies) | | |
| Water Solubility | : | Completely miscible, completely miscible (20 °C / 68 °F) |
| Solubility in Other Solvents | : | No data available |
| Partition Coefficient: n-octanol/water | : | log Pow: 0.2 |
| Auto-Ignition Temperature | : | 540 °C / 1004 °F Method: ASTM D-2155 |
| Decomposition Temperature | : | No data available |
| Viscosity, Dynamic | : | 0.33 mPa.s (20 °C / 68 °F) |
| Viscosity, Kinematic | : | No data available |
| Explosive properties | : | Not Applicable |
| Oxidizing Properties | : | No data available |
| Surface tension | : | 22.8 mN/m |
| Conductivity | : | Electrical conductivity: > 10 000 pS/m, A number of factors, for example liquid temperature, presence of contaminants, and anti-static additives can great influence the conductivity of a liquid, This material is not expected to be a static accumulator. |
| Molecular weight | : | 58.08 g/mol |
| | | |

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SECTION 10: Stability and reactivity

10.1 Reactivity

The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.

10.2 Chemical Stability

No hazardous reaction is expected when handled and stored according to provisions.

10.3 Possibility of Hazardous Reactions

Reacts with strong oxidizing agents.

10.4 Conditions to Avoid

Avoid heat, sparks, open flames and other ignition sources. Prevent vapor accumulation. In certain circumstances product can ignite due to static electricity.

10.5 Incompatible Materials

Strong oxidizing agents.

10.6 Hazardous Decomposition Products

Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, sulphur oxides and unidentified organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

SECTION 11: Toxicological information

11.1 Basis for Assessment

Information given is based on product testing.

11.2 Information on Likely Routes of Exposure

ACUTE TOXICITY

| | PRODUCT | | | |
|------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| | Acute Oral Toxicity | LD 50 (rat): > 5,000 mg/kg Remarks: Low Toxicity | | |
| | Acute Inhalation Toxicity | LC 50 (rat): > 20 mg/l Exposure Time: 4 h Remarks: Low Toxicity: High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death. | | |
| | Acute Dermal Toxicity | LD 50 (Rabbit): > 5,000 mg/kg Remarks: Low Toxicity: | | |
| 11.3 | Skin Corrosion/Irritation | | | |

PRODUCT:

Remarks: Not irritating to skin., Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.

11.4 Serious Eye Damage/Eye Irritation

PRODUCT:

Remarks: Causes serious eye irritation.

11.5 Respiratory or Skin Sensitization

PRODUCT:

Remarks: Not expected to be a sensitizer.

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11.6 Germ Cell Mutagenicity

PRODUCT: Test Type: Reproductive and Developmental Toxicity Remarks: Nor mutagenic

GERM CELL MUTAGENICITY ASSESSMENT:

This product does not meet the criteria for classification in categories 1A/1B.

11.7 Carcinogenicity

PRODUCT:

Remarks: Not expected to be carcinogenic.

CARCINOGENICITY ASSESSMENT:

This product does not meet the criteria for classification in categories 1A/1B.

| IARC | No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ACGIH | Not classifiable as a human carcinogen. ACETONE - 67-64-1 No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. |
| OSHA | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. |
| NTP | No component of this product present at levels greater that or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. |

11.8 Reproductive Toxicity

PRODUCT:

Remarks: Causes slight foetotoxicity. Effects were seen at high doses only.

REPRODUCTIVE TOXICITY ASSESSMENT:

This product does not meet the criteria for classification in categories 1A/1B.

11.9 STOT - Single Exposure

PRODUCT:

Remarks: May cause drowsiness or dizziness.

11.10 STOT - Repeated Exposure

PRODUCT:

Remarks: Not expected to be a hazard.

11.11 Aspiration Toxicity

PRODUCT:

Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

11.12 Further Information

PRODUCT:

Remarks: Exposure may enhance the toxicity of other materials., May potentiate the peripheral neurotoxicity of n-hexane, and the liver and kidney toxicity of some chlorinated hydrocarbons such as Tetra chloro hydrocarbon., Classifications by other authorities under varying regulatory frameworks may exist.

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SECTION 12: Ecological information

12.1 Basis for Assessment

Ecotoxicological data are based on product testing. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

12.2 Ecotoxicity

| PRODUCT | | |
|------------------------------------------------------------------------|-------------------------------------------------------|--|
| Toxicity to Fish (Acute Toxicity) | Remarks: Practically non toxic: LL/EL/IL50 > 100 mg/l | |
| Toxicity to Daphnia and Other Aquatic Invertebrates (Acute Toxicity) | Remarks: Practically non toxic: LL/EL/IL50 > 100 mg/l | |
| Toxicity to Algae (Acute Toxicity) | Remarks: Practically non toxic: LL/EL/IL50 > 100 mg/I | |
| Toxicity to Fish (Chronic Toxicity) | Remarks: Data not available. | |
| Toxicity to Daphnia and Other Aquatic Invertebrates (Chronic Toxicity) | Remarks: NOEC/NOEL > 10 - <= 100 mg/l | |
| Toxicity to Bacteria (Acute Toxicity) | Remarks: Practically non toxic: LL/EL/IL50 > 100 mg/l | |

12.3 Persistence and Degradability

PRODUCT:

Biodegradability: Remarks: Readily biodegradable.

12.4 Bioaccumulative Potential PRODUCT:

Bioaccumulation: Remarks: Not expected to bioaccumulate significantly.

12.5 Mobility in Soil

PRODUCT:

Mobility: Remarks: If product enters soil, it will be highly mobile and may contaminate groundwater. Dissolves in water.

12.6 Other Adverse Effects

No data available

PRODUCT:

Additional Ecological Information: None known.

| SECTION 13: Disposal considerations | |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13.1 Disposal Methods | |
| Waste from Residues | Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses. Waste product should not be allowed to contaminate soil or water. |
| Contaminated Packaging | Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not, puncture, cut, or weld uncleaned drums. Send drum recoverer or metal reclaimer. |
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Local Legislation Remarks

Local regulations may be more stringent than regional or national requirements and must be complied with. Disposal should be in accordance with applicable regional, national, and local laws and regulations. Comply with any local recovery or waste disposal regulations.

SECTION 14: Transport information

 14.1
 National Regulaitons

 US DEPARTMENT OF TRANSPORTATION CLASSIFICATION (49 CFR Parts 171-180)

 UN/ID/NA Number: UN 1090

 Proper Shipping Name: ACETONE

 Class: 3

 Packing Group: II

 Labels: 3

 Reportable Quantity: ACETONE (5,000 lb)

 ERG Code: 127

 Marine Pollutant: no

 Departs Defacts Chapter 7, Headling & Chapter 7, Headling & Chapter 6, Chapter 7, Headling & Chapte

Remarks: Refer to Chapter 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

| 14.2 | International Régulation | |
|------|--------------------------|---------|
| | IAT | A-DGR |
| | UN/ID No. | UN 1090 |
| | Proper Shipping Name | ACETONE |
| | | |

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| IATA-DGR | | | | |
|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| Class | 3 | | | |
| Packing Group | II | | | |
| Labels | 3 | | | |
| IMDG | -Code | | | |
| UN Number | UN 1090 | | | |
| Proper Shipping Name | ACETONE | | | |
| Class | 3 | | | |
| Packing Group | II | | | |
| Labels | 3 | | | |
| Marine Pollutant | no | | | |
| Transport in Bulk according to Annex II of MARPOL 73/78 and the IBC Code | | | | |
| Pollution Category | Z | | | |
| Ship Type | 2 | | | |
| Product Name | Acetone | | | |
| Special Precautions | Refer to Chapter 7, Handling and Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport. | | | |
| 14.3 Special Precautions for User | | | | |

REMARKS:

Refer to Chapter 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

ADDITIONAL INFORMATION:

This product may be transported under nitrogen blanketing. Nitrogen is an odorless and invisible gas. Exposure to nitrogen-enriched atmospheres displaces available oxygen which may cause asphyxiation or death. Personnel must observe strict safety precautions when involved with a confined space entry.

SECTION 15: Regulatory information

15.1 OSHA Hazards

Vapors may cause drowsiness and dizziness., Harmful: may cause lung damage if swallowed., Irritating to eyes., Extremely flammable. Flammable Liquid.

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| CERCLA Reportable Quantity | | | | |
|----------------------------|---------|--------------------|--------------------------------|--|
| COMPONENTS | CAS-NO. | COMPONENT RQ (lbs) | CALCULATED PRODUCT RQ (lbs) | |
| Acetone | 67-64-1 | 5000 | 5000 | |
| Benzene | 71-43-2 | 10 | * | |

* : Calculated RQ exceeds reasonably attainable upper limit.

CERCLA REPORTABLE QUANTITY

Calculated RQ exceeds reasonably attainable upper limit.

15.3 SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

| SARA 311/312 Hazards | Fire Hazards Immediate (Acute) Heath Hazard |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SARA 302 | No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302. |
| SARA 313 | This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minims) reporting levels established by SARA Title III, Section 313. |

15.4 Clean Water Act

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

| | benzene | 71-43-2 | 0.003% |
|------|----------------------------|---------|---------|
| 15.5 | Pennsylvania Right To Know | | |
| _ | | | |
| | Acetone | | 67-64-1 |
| 15.6 | New Jersey Right To Know | | |
| | Acetone | | 67-64-1 |
| 15 7 | California Bron 65 | | |

15.7 California Prop 65

WARNING! This product contains a chemical known to the State of California to cause cancer.

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

| 15.8 The components of this product are reported in the following inventories: | | | | |
|--------------------------------------------------------------------------------|--|--|--|--|
| AICS: LISTED | | | | |
| DSL: LISTED | | | | |
| CH INV: LISTED | | | | |
| IECSC: LISTED | | | | |
| ENCS: LISTED | | | | |
| KECI: LISTED | | | | |
| NZIOC: LISTED | | | | |
| PICCS: LISTED | | | | |
| EINECS: LISTED | | | | |
| TSCA: LISTED | | | | |

Other Regulations: The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Safety Data Sheet ONT.ACE

SECTION 16: Other information

16.1 Further Information

NFPA Rating (Health, Fire, Reactivity) : 1,3,0

A vertical bar (I) in the left margin indicates an amendment from the previous version. Due to the conversion of this product to GHS classification and labelling, there has been a significant change to the nature of the information presented in chapter 2.

Abbreviations an Acronyms:

The standard abbreviations and acronyms used in this document can be looked up in reference literature (e.g. scientific dictionaries) and/or websites.

ACGIH - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS ADR - EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD AICS - AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES ASTM - AMERICAN SOCIETY FOR TESTING AND MATERIALS **BEL - BIOLOGICAL EXPOSURE LIMITS** BTEX - BENZENE, TOLUENE, ETHYLBENZENE, XYLENES **CAS - CHEMICAL ABSTRACTS SERVICE** CEFIC - EUROPEAN CHEMICAL INDUSTRY COUNCIL **CLP - CLASSIFICATION PACKAGING AND LABELLING** COC - CLEVELAND OPEN-CUP **DIN - DEUTCHES INSTITUT FUR NORMUNG** DMEL - DERIVED MINIMAL EFFECT LEVEL DNEL - DERIVED NO EFFECT LEVEL **DSL - CANADA DOMESTIC SUBSTANCE LIST EC - EUROPEAN COMMISSION** EC50 - EFFECTIVE CONCENTRATION FIFTY ECETOC - EUROPEAN CENTER ON ECOTOXICOLOGY AND TOXICOLOGY OF CHEMICALS ECHA - EUROPEAN CHEMICALS AGENCY EINECS - THE EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES EL50 - EFFECTIVE LOADING FIFTY ENCS - JAPANESE EXISTING AN NEW CHEMICAL SUBSTANCES INVENTORY **EWC - EUROPEAN WASTE CODE** GHS - GLOBALLY HARMONISED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS IARC - INTERNATIONAL AGENCY FOR RESEARCH ON CANCER IATA - INTERNATIONAL AIR TRANSPORT ASSOCIATION **IC50 - INHIBITORY CONCENTRATION FIFTY** IL50 - INHIBITORY LEVEL FIFTY IMDG - INTERNATIONAL MARITIME DANGEROUS GOODS **INV - CHINESE CHEMICALS INVENTORY** IP346 - INSTITUTE OF PETROLEUM TEST METHOD N° 346 FOR THE DETERMINATION OF POLYCYCLIC AROMATICS DMSO-EXTRACTABLES **KECI - KOREA EXISTING CHEMICALS INVENTORY** LC50 - LETHAL CONCENTRATION FIFTY LD50 - LETHAL DOSE FIFTY PER CENT. LL/EL/IL - LETHAL LOADING/EFFECTIVE LOADING/INHIBITORY LOADING LL50 - LETHAL LOADING FIFTY MARPOL - INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS NOEC/NOEL - NO OBSERVED EFFECT CONCENTRATION/NO OBSERVED EFFECT LEVEL OE HPV - OCCUPATIONAL EXPOSURE - HIGH PRODUCTION VOLUME PBT - PERSISTENT, BIOACCUMULATIVE AND TOXIC PICCS - PHILIPPINE INVENTORY OF CHEMICALS AND CHEMICAL SUBSTANCES PNEC - PREDICTED NO EFFECT CONCENTRATION REACH - REGISTRATION EVALUATION AND AUTHORIZATION OF CHEMICALS RID - REGULATIONS RELATING TO INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY RAIL SKIN_DES - SKIN DESIGNATION STEL - SHORT TERM EXPOSURE LIMIT TRA - TARGETED RISK ASSESSMENT TSCA - US TOXIC SUBSTANCES CONTROL ACT

Safety Data Sheet ONT.ACE TWA - TIME-WEIGHTED AVERAGE

vPvB - VERY PERSISTENT AND VERY BIOACCUMULATIVE

Sources of Key Data Used to Compile the Safety Data Sheet:

The quoted data are from, but not limited to, one or more sources of information (e.g. toxicological data from Shell Health Services, material suppliers' data, CONCAWE, EU IUCLID date base, EC 1272 regulation, etc).

Revision Date: 05/21/2015

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.