1. IDENTIFICATION
Odorless Mineral Spirits

CAS # 68551-19-9

2. HAZARDS IDENTIFICATION
Classification of the substance or mixture
This product has been classified in accordance with the hazard communication standard 29 CFR 1910.1200; the SDS and labels contain all the information as required by the standard.

Emergency Overview
Danger

Form: Liquid

Physical state: Liquid

Color: Colorless at room temperature

Odor: Mild, Hydrocarbon

OSHA Hazards : Combustible Liquid, Aspiration hazard

Classification
Flammable liquids , Category 4
Aspiration hazard , Category 1

Signal word: Danger

Hazard Statements:  Combustible liquid
May be fatal if swallowed and enters airways

Precautionary Statements:
Prevention:
Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Wear protective gloves/ eye protection/ face protection.

Response:
IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.
In case of a fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage: Store in a well-ventilated place, keep cool. Store locked up

Disposal: Dispose of contents/container to an approved waste disposal plant.

Carcinogenicity:

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

3. COMPOSITION
Synonyms:
- Isoalkanes
- Isoparaffins
- Aliphatic hydrocarbon

Molecular formula: UVCB

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS #</th>
<th>WEIGHT %</th>
</tr>
</thead>
<tbody>
<tr>
<td>C12-C14 Isoalkanes</td>
<td>68551-19-9</td>
<td>100%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES
GENERAL ADVICE:
Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Material may produce a serious, potentially fatal pneumonia if swallowed or vomited.

IF INHALED:
If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

IN CASE OF SKIN CONTACT:
If on skin, rinse well with water. If on clothes, remove clothes.

IN CASE OF EYE CONTACT:
Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

IF SWALLOWED:
Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

5. FIRE FIGHTING MEASURES
Flash point: 61˚ C (142 F)
Method Tag closed cup

Autoignition temperature: 230˚ C (446˚ F)
Suitable extinguishing media: Alcohol-resistant foam. Carbon Dioxide (CO2) Dry Chemical

Unsuitable extinguishing media: High volume water jet

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary

Further information: For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.

Fire and explosion protection: Do not spray on an open flame or any other incandescent material. Keep away from open flames, hot surfaces and sources of ignition.

Hazardous decomposition products: Carbon Dioxides

6. ACCIDENTAL RELEASE MEASURES
Personal precautions:
Use personal protective equipment. Ensure adequate ventilation.

Environmental precautions:
Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods for cleaning up:
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE
Handling
Advice on safe handling:
Avoid formation of aerosol. Do not breathe vapors/dust. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion:
Do not spray on an open flame or any other incandescent material. Keep away from open flames, hot surfaces and sources of ignition.

Storage
Requirements for storage areas and containers:
No smoking. Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION
Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Value</th>
<th>Control parameters</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>C12-C14 Isoalkanes</td>
<td>TWA</td>
<td>1,200 mg/m3</td>
<td>RCP</td>
</tr>
</tbody>
</table>

RCP = Reciprocal Calculation Procedure

Engineering measures:
Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this...
material (see Section 2), applicable exposure limits, job activities, and other substances in the workplace when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal protective equipment

Respiratory protection
Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as: Air-Purifying Respirator for Organic Vapors. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.

Hand Protection
The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye Protection
Eye wash bottle with pure water. Tightly fitting safety goggles.

Skin and body protection
Choose body protection according to the amount and concentration of the dangerous substance at the workplace. Wear as appropriate: Flame-resistant clothing. Footwear protecting against chemicals.

Hygiene measures
When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES
Information on basic physical and chemical properties

Appearance

<table>
<thead>
<tr>
<th>Form</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless at room temperature</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild, hydrocarbon</td>
</tr>
</tbody>
</table>

SAFETY DATA

Flash Point 61°C (142°F)
Method: Tag closed cup

Lower explosion limit 0.68% (V)
Upper explosion limit 5.4% (V)
Oxidizing properties no
Autoignition temperature: 230°C (446°F)

Thermal decomposition: no data available

Molecular formula: UVCB

Molecular weight: Not applicable

pH: 7

Pour point: no data available

Boiling/Point & range: 179 - 210°C (354 - 410°F)

Vapor pressure: 2.60 MMHG @ 38°C (100°F)

Relative density: 0.76, 15.6°C (60.1°F)

Water Solubility: negligible

Partition coefficient: n-octanol/water: No data available

Viscosity, kinematic: 1.5 cSt @ 38°C (100°F)

Relative vapor density: 3 (Air = 1.0)

Evaporation rate: 1

Percent volatile: >99%

10. STABILITY AND REACTIVITY

Chemical stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Possibility of hazardous reactions

Conditions to avoid: Heat, flames and sparks

Materials to avoid: may react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Thermal decomposition: No data available

Hazardous decomposition products: Carbon oxides

Other data: No decomposition if stored and applied as directed

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

C12-C14 Isoalkanes
LD50: > 5000 milligram per kilogram
Species: rat

SDS: ODORLESS MINERAL SPIRITS
Method: OECD Test Guideline 401
Information given is based on data obtained from similar substances.

Acute inhalation toxicity

C12-C14 Isoalkanes
LC50: > 5.3 milligram per liter Exposure time: 4 h
Species: rat
Test atmosphere: vapor
Method: OECD Test Guideline 403
Information given is based on data obtained from similar substances.

Skin irritation

C12-C14 Isoalkanes
No skin irritation
Information given is based on data obtained from similar substances.

Eye irritation

C12-C14 Isoalkanes
No eye irritation
Information given is based on data obtained from similar substances.

Sensitization

C12-C14 Isoalkanes
Classification: Did not cause sensitization on laboratory animals.
Information given is based on data obtained from similar substances.

Repeated dose toxicity

C12-C14 Isoalkanes
Species: Monkey
Application Route: Inhalation
Dose: 0, 654 ppm
Exposure time: 4 wk
Number of exposures: 6 h/d, 3 d/wk NOEL: > 654 ppm
Method: OECD Test Guideline 412
Species: rat, male and female Sex: male and female Application Route: oral gavage Dose: 0, 25, 150, 1000 mg/kg/d Exposure time: 4 wk
Number of exposures: daily
NOEL: >= 1000 mg/kg/d
Method: OECD Guideline 422
Information given is based on data obtained from similar substances.

Reproductive toxicity

C12-C14 Isoalkanes
Species: rat
Sex: male
Application Route: oral gavage
Dose: 0, 750, 1500, 3000 mg/kg/bw/d
Number of exposures: daily
Test period: 90 d
Method: OECD Test Guideline 415
NOAEL Parent: >= 3000 mg/kg/bw/d
Information given is based on data obtained from similar substances.
Species: rat
Sex: female
Application Route: oral gavage
Dose: 0, 750, 1500 mg/kg/bw/d
Number of exposures: daily
Test period: 90 d
Method: OECD Test Guideline 415
NOAEL Parent: >= 1500 mg/kg/bw/d

SDS: ODORLESS MINERAL SPIRITS
NOAEL F1: 750 mg/kg/bw/d  
Information given is based on data obtained from similar substances.  
Species: rat  
Sex: male and female  
Application Route: inhalation (vapor)  
Dose: 100, 300 ppm  
Number of exposures: 6 h/d/5d/wk  
Test period: 8 wk  
Method: OECD Guideline 421  
NOAEL Parent: \( \geq 300 \) ppm  
NOAEL F1: \( \geq 300 \) ppm  
Information given is based on data obtained from similar substances.  

Developmental Toxicity  
C12-C14 Isoalkanes  
Species: rat  
Application Route: Inhalation  
Dose: 100, 300 ppm  
Exposure time: GD 6-15  
Number of exposures: 6 h/d  
NOAEL Teratogenicity: \( \geq 300 \) ppm  
Information given is based on data obtained from similar substances.  
Species: rat  
Application Route: Inhalation  
Dose: 300, 900 ppm  
Exposure time: GD 6-15  
Number of exposures: 6 h/d  
Method: OECD Guideline 414  
NOAEL Teratogenicity: \( \geq 900 \) ppm  
NOAEL Maternal: \( \geq 900 \) ppm  
Information given is based on data obtained from similar substances.  
Species: rat  
Application Route: oral gavage  
Dose: 0, 500, 1000, 1500 mg/kg/d  
Exposure time: GD 6-15  
Number of exposures: Daily  
Method: OECD Guideline 414  
NOAEL Teratogenicity: 1,000 mg/kg  
NOAEL Maternal: 500 mg/kg  
Information given is based on data obtained from similar substances.  

Aspiration toxicity  
C12-C14 Isoalkanes  
May be fatal if swallowed and enters airways.  

CMR effects  
C12-C14 Isoalkanes  
Carcinogenicity: Limited evidence of carcinogenicity in animal studies  
Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects., In vivo tests did not show mutagenic effects  
Teratogenicity: Animal testing did not show any effects on fetal development.  
Reproductive toxicity: No adverse effects expected  

Isoparaffin Solvent my degrease the skin
12. ECOLOGICAL INFORMATION

TOXICITY TO FISH

C12-C14 Isoalkanes
LL50: > 1,000 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout) semi-static test Method: OECD Test Guideline 203 Information given is based on data obtained from similar substances.

TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES

C12-C14 Isoalkanes
EL50: > 1,000 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea) static test Method: OECD Test Guideline 202 Information given is based on data obtained from similar substances.

Toxicity to algae
C12-C14 Isoalkanes
EL50: > 1,000 mg/l
Exposure time: 72 h
Species: Pseudokirchneriella subcapitata (green algae) Growth inhibition Method: OECD Test Guideline 201 Information given is based on data obtained from similar substances.

Toxicity to fish (Chronic toxicity)
C12-C14 Isoalkanes
NOELR: 0.316 mg/l Exposure time: 28 d
Species: Oncorhynchus mykiss (rainbow trout) Method: QSAR modeled data

Biodegradability
C12-C14 Isoalkanes
aerobic 31 %
Testing period: 28 d
Method: OECD Test Guideline 301F
Information given is based on data obtained from similar substances.
Expected to be inherently biodegradable.

Results of PBT assessment
C12-C14 Isoalkanes
Non-classified PBT substance, Non-classified vPvB substance

Additional ecological information
C12-C14 Isoalkanes
This material is not expected to be harmful to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

The information in this SDS pertains only to the product as shipped. Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Product
Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a
Contaminated packaging:
Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

14. TRANSPORT INFORMATION
The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

Testing (ASTM D4206) has shown product does not sustain combustion.

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

15. REGULATORY INFORMATION
National legislation

| SARA 311/312 Hazards | Fire Hazard |
| SARA 302 Reportable Quantity | This material does not contain any components with a SARA 302 RQ |
| SARA 302 Threshold Planning Quantity | SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302 |
| SARA 3024 Reportable | This material does not contain any components with a section #) EHS RQ |
SARA 313 Ingredients

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313

Clean Air Act

Ozone-Depletion Potential

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC’s (40 CFR 60.489).

US State Regulations

Pennsylvania Right To Know
No components are subject to the Pennsylvania Right to Know Act.

New Jersey Right to Know
No components are subject to the New Jersey Right to Know Act

California Prop 65 Ingredients
This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

Notification status

Europe REACH On the inventory, or in compliance with the inventory
United States of America TSCA On the inventory, or in compliance with the inventory
Canada DSL On the inventory, or in compliance with the inventory
Australia AICS On the inventory, or in compliance with the inventory
NewZealand NZIoC Not in compliance with the inventory
Japan ENCS On the inventory, or in compliance with the inventory
Korea KECI On the inventory, or in compliance with the inventory
Philippines PICCS On the inventory, or in compliance with the inventory
China IECSC On the inventory, or in compliance with the inventory

16. OTHER INFORMATION

NFPA Classification

Health Hazard: 1 Fire Hazard: 1 Reactivity Hazard: 0

Further information
Legacy SDS Number 29020

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage,
transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

**KEY OR LEGEND TO ABBREVIATIONS USED IN THE SDS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Government Industrial Hygienists</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal dose 50%</td>
</tr>
<tr>
<td>AICS</td>
<td>Australia, Inventory of Chemical Substances</td>
</tr>
<tr>
<td>LOAEL</td>
<td>Lowest observed adverse effect level</td>
</tr>
<tr>
<td>DSL</td>
<td>Canada, Domestic Substances List Agency</td>
</tr>
<tr>
<td>NFPA</td>
<td>National Fire Protection Association</td>
</tr>
<tr>
<td>NDSL</td>
<td>Canada, Non-Domestic Substances List Occupational</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Safety &amp; Health</td>
</tr>
<tr>
<td>CNS</td>
<td>Central Nervous System</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstract Service</td>
</tr>
<tr>
<td>NZIoC</td>
<td>New Zealand Inventory of Chemicals</td>
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<td>EC50</td>
<td>Effective concentration</td>
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<td>No observable adverse effect level</td>
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<tr>
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<td>Effective concentration 50%</td>
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<tr>
<td>NOEC</td>
<td>No observed effect concentration</td>
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<tr>
<td>EGEST</td>
<td>EOSCA Generic Exposure Scenario Tool</td>
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<tr>
<td>OSHA</td>
<td>Occupational Safety &amp; Health Administration</td>
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<tr>
<td>EOSCA</td>
<td>European Oilfield Specialty Chemicals Assoc</td>
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<tr>
<td>PEL</td>
<td>Permissible exposure limit</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Chemical Substances</td>
</tr>
<tr>
<td>PICCS</td>
<td>Philippines Inventory of Commercial Chemical Substances</td>
</tr>
<tr>
<td>MAK</td>
<td>Germany Maximum Concentration Values</td>
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<tr>
<td>PRNT</td>
<td>Presumed not toxic</td>
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<td>GHS ACT</td>
<td>Globally Harmonized System</td>
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<td>RCRA</td>
<td>Resource Conservation Recovery</td>
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<td>&gt;=</td>
<td>Greater than or equal to</td>
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<td>STEL</td>
<td>Short-term exposure limit</td>
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<td>IC50</td>
<td>Inhibition concentration 50%</td>
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<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act</td>
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<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
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<td>TLV</td>
<td>Threshold limit value</td>
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<td>Inventory of Existing Chemical Substances in China</td>
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<td>TWA</td>
<td>Time weighted average</td>
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<td>ENCS</td>
<td>Japan, Inventory of Existing and New Chemicals Substances</td>
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<tr>
<td>TSCA</td>
<td>Toxic Substance Control Act</td>
</tr>
<tr>
<td>KECI</td>
<td>Korea, Existing Chemical Inventory</td>
</tr>
<tr>
<td>UVCB</td>
<td>Unknown or variable composition complex reaction products and biological materials</td>
</tr>
</tbody>
</table>
LESS THAN OR EQUAL TO

WHMIS WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM

LC50  LETHAN CONCENTRATION 50%

Date Created: 4/28/2015
Date Updated: 2/5/2016