Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier
3M™ Scotch-Weld™ Industrial Adhesive EC-1870 Tan

Product Identification Numbers
ID Number | UPC
--- | ---
87-2500-0442-8 | 000480111986791

1.2. Recommended use and restrictions on use
Recommended use
Adhesive

1.3. Supplier’s details
MANUFACTURER: 3M
DIVISION: Aerospace and Commercial Transportation Division
ADDRESS: 3M Center, St. Paul, MN 55144-1000, USA
Telephone: 1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Flammable Liquid: Category 2.
Serious Eye Damage/Irritation: Category 2B.
Reproductive Toxicity: Category 2.
Specific Target Organ Toxicity (central nervous system): Category 3.
Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements
Signal word
Danger

Symbols
Flame | Exclamation mark | Health Hazard |

Pictograms
Hazard Statements

Highly flammable liquid and vapor.
Causes eye irritation.
May cause drowsiness or dizziness.
Suspected of damaging fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure:
nervous system |

Precautionary Statements

Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Ground/bond container and receiving equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Keep container tightly closed.
Use explosion-proof electrical/ventilating/lighting equipment.
Do not breathe dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Wear protective gloves and eye/face protection.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.

Response:
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF exposed or concerned: Get medical advice/attention.
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Storage:
Store in a well-ventilated place. Keep container tightly closed.
Keep cool.
Store locked up.

Disposal:
Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified
None.

SECTION 3: Composition/information on ingredients
### SECTION 4: First aid measures

4.1. Description of first aid measures

**Inhalation:**
Remove person to fresh air. If you feel unwell, get medical attention.

**Skin Contact:**
Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

**Eye Contact:**
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

**If Swallowed:**
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

### SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture
Closed containers exposed to heat from fire may build pressure and explode.

#### Hazardous Decomposition or By-Products

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aldehydes</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Hydrocarbons</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Carbon monoxide</td>
<td>During Combustion</td>
</tr>
</tbody>
</table>

---

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.*
5.3. Special protective actions for fire-fighters
Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up
Contain spill. Cover spill area with a fire-extinguishing foam. An appropriate aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

7.2. Conditions for safe storage including any incompatibilities

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>Agency</th>
<th>Limit type</th>
<th>Additional Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methylpentane</td>
<td>107-83-5</td>
<td>ACGIH</td>
<td>TWA:500 ppm; STEL:1000</td>
<td></td>
</tr>
</tbody>
</table>
### 8.2. Exposure controls

#### 8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment.

#### 8.2.2. Personal protective equipment (PPE)

**Eye/face protection**
Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Indirect Vented Goggles

**Skin/hand protection**
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.
Gloves made from the following material(s) are recommended: Fluoroelastomer
Nitrile Rubber

**Respiratory protection**
An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors

For questions about suitability for a specific application, consult with your respirator manufacturer.

### SECTION 9: Physical and chemical properties

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

<table>
<thead>
<tr>
<th>Hexane</th>
<th>110-54-3</th>
<th>ACGIH TWA:50 ppm</th>
<th>Skin Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Alcohol</td>
<td>64-17-5</td>
<td>ACGIH STEL:1000 ppm</td>
<td>A3: Confirmed animal carcin.</td>
</tr>
<tr>
<td>3-Methylpentane</td>
<td>96-14-0</td>
<td>ACGIH TWA:500 ppm, STEL:1000 ppm</td>
<td></td>
</tr>
</tbody>
</table>

ACGIH: American Conference of Governmental Industrial Hygienists
AIHA: American Industrial Hygiene Association
CMRG: Chemical Manufacturer's Recommended Guidelines
OSHA: United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

- **Odor, Color, Grade:** amber, solvent odor
- **Odor threshold:** No Data Available
- **pH:** Not Applicable
Melting point Not Applicable
Boiling Point >=69 ºC [Details: Hexane]
Flash Point -7 °F [Test Method: Closed Cup] [Details: Hexane]
Evaporation rate 1.9 [Ref Std: ETHER=1]
Flammability (solid, gas) Not Applicable
Flammable Limits(LEL) 1.1 % volume
Flammable Limits(UEL) 7.7 % volume
Vapor Pressure <=124 mmHg [@ 68 °F]
Vapor Density 3 [Ref Std: AIR=1]
Density 0.76 g/ml
Specific Gravity 0.76 [Ref Std: WATER=1]
Solubility in Water Slight (less than 10%)
Solubility- non-water No Data Available
Partition coefficient: n-octanol/ water No Data Available
Autoignition temperature No Data Available
Decomposition temperature No Data Available
Viscosity 450 - 1,250 centipoise [@ 73.4 ºF]
Hazardous Air Pollutants <=49.5 % weight [Test Method: Calculated]
Volatile Organic Compounds <=584 g/l [Test Method: calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents <=596 g/l [Test Method: calculated SCAQMD rule 443.1]
Solids Content >=14.2 %

SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Heat
Sparks and/or flames

10.5. Incompatible materials
Strong oxidizing agents

10.6. Hazardous decomposition products

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>None known.</td>
<td></td>
</tr>
</tbody>
</table>

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.
11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

**Inhalation:**
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

**Skin Contact:**
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

**Eye Contact:**
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Ingestion:**
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

**Additional Health Effects:**

**Single exposure may cause target organ effects:**
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

**Prolonged or repeated exposure may cause target organ effects:**
Peripheral Neuropathy: Signs/symptoms may include tingling or numbness of the extremities, incoordination, weakness of the hands and feet, tremors and muscle atrophy.

**Reproductive/Developmental Toxicity:**
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

**Toxicological Data**
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

### Acute Toxicity

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall product</td>
<td>Ingestion</td>
<td>No data available; calculated ATE &gt; 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Hexane</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td>Hexane</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 28,700 mg/kg</td>
</tr>
<tr>
<td>Hexane</td>
<td>Inhalation-Vapor (4 hours)</td>
<td>Rat</td>
<td>LC50 170 mg/l</td>
</tr>
<tr>
<td>3-Methylpentane</td>
<td>Dermal</td>
<td>Rat</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>3-Methylpentane</td>
<td>Inhalation-Vapor</td>
<td>LC50 estimated to be &gt; 50 mg/l</td>
<td></td>
</tr>
<tr>
<td>3-Methylpentane</td>
<td>Ingestion</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Styrene-Butadiene Polymer</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td>Styrene-Butadiene Polymer</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>2-Methylpentane</td>
<td>Dermal</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>2-Methylpentane</td>
<td>Inhalation-Vapor</td>
<td>LC50 estimated to be &gt; 50 mg/l</td>
<td></td>
</tr>
</tbody>
</table>
2-Methylpentane Ingestion LD50 estimated to be > 5,000 mg/kg
Methylcyclopentane Ingestion Rat LD50 > 5,000 mg/kg
Glycerol Ester of Hydrogenated Rosin Dermal Rat LD50 > 2,000 mg/kg
Glycerol Ester of Hydrogenated Rosin Ingestion Rat LD50 > 2,000 mg/kg
Ethyl Alcohol Dermal Rabbit LD50 > 15,800 mg/kg
Ethyl Alcohol Inhalation- Vapor (4 hours) Rat LC50 124.7 mg/l
Ethyl Alcohol Ingestion Rat LD50 17,800 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>Human and animal</td>
<td>Mild irritant</td>
</tr>
<tr>
<td>3-Methylpentane</td>
<td>Professio nal judgeme nt</td>
<td>Mild irritant</td>
</tr>
<tr>
<td>Styrene-Butadiene Polymer</td>
<td>Professio nal judgeme nt</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>2-Methylpentane</td>
<td>Professio nal judgeme nt</td>
<td>Mild irritant</td>
</tr>
<tr>
<td>Methylcyclopentane</td>
<td>similar compoun ds</td>
<td>Minimal irritation</td>
</tr>
<tr>
<td>Glycerol Ester of Hydrogenated Rosin</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>Ethyl Alcohol</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
</tbody>
</table>

Serious Eye Damage/Irritation

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>Rabbit</td>
<td>Mild irritant</td>
</tr>
<tr>
<td>3-Methylpentane</td>
<td>Professio nal judgeme nt</td>
<td>Moderate irritant</td>
</tr>
<tr>
<td>2-Methylpentane</td>
<td>Professio nal judgeme nt</td>
<td>Moderate irritant</td>
</tr>
<tr>
<td>Methylcyclopentane</td>
<td>similar compoun ds</td>
<td>Mild irritant</td>
</tr>
<tr>
<td>Glycerol Ester of Hydrogenated Rosin</td>
<td>Rabbit</td>
<td>Mild irritant</td>
</tr>
<tr>
<td>Ethyl Alcohol</td>
<td>Rabbit</td>
<td>Moderate irritant</td>
</tr>
</tbody>
</table>

Skin Sensitization

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>Human</td>
<td>Not sensitizing</td>
</tr>
<tr>
<td>Glycerol Ester of Hydrogenated Rosin</td>
<td>Human and animal</td>
<td>Not sensitizing</td>
</tr>
<tr>
<td>Ethyl Alcohol</td>
<td>Human</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
</tbody>
</table>

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.
### Germ Cell Mutagenicity

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>In Vitro</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>Hexane</td>
<td>In vivo</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>Ethyl Alcohol</td>
<td>In Vitro</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
<tr>
<td>Ethyl Alcohol</td>
<td>In vivo</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
</tbody>
</table>

### Carcinogenicity

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>Inhalation</td>
<td>Mouse</td>
<td>Not carcinogenic</td>
</tr>
<tr>
<td>Ethyl Alcohol</td>
<td>Ingestion</td>
<td>Multiple animal species</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
</tbody>
</table>

### Reproductive Toxicity

#### Reproductive and/or Developmental Effects

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>Ingestion</td>
<td>Mouse</td>
<td>Not toxic to development</td>
<td>Mouse</td>
<td>NOAEL 2,200 mg/kg/day</td>
<td>during organogenesis</td>
</tr>
<tr>
<td>Hexane</td>
<td>Inhalation</td>
<td>Rat</td>
<td>Some positive developmental data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>NOAEL 0.7 mg/l</td>
<td>during gestation</td>
</tr>
<tr>
<td>Hexane</td>
<td>Ingestion</td>
<td>Rat</td>
<td>Toxic to male reproduction</td>
<td>Rat</td>
<td>NOAEL 1.140 mg/kg/day</td>
<td>90 days</td>
</tr>
<tr>
<td>Hexane</td>
<td>Inhalation</td>
<td>Rat</td>
<td>Toxic to male reproduction</td>
<td>Rat</td>
<td>LOAEL 3.52 mg/l</td>
<td>28 days</td>
</tr>
<tr>
<td>Ethyl Alcohol</td>
<td>Inhalation</td>
<td>Rat</td>
<td>Not toxic to development</td>
<td>Rat</td>
<td>NOAEL 38 mg/l</td>
<td>during gestation</td>
</tr>
<tr>
<td>Ethyl Alcohol</td>
<td>Ingestion</td>
<td>Rat</td>
<td>Some positive developmental data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>NOAEL 5,200 mg/kg/day</td>
<td>premating &amp; during gestation</td>
</tr>
</tbody>
</table>

### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Target Organ(s)</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>Inhalation</td>
<td>central nervous system depression</td>
<td>May cause drowsiness or dizziness</td>
<td>Human</td>
<td>NOAEL, Not available</td>
<td>not available</td>
</tr>
<tr>
<td>Hexane</td>
<td>Inhalation</td>
<td>respiratory irritation</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rabbit</td>
<td>NOAEL, Not available</td>
<td>8 hours</td>
</tr>
<tr>
<td>Hexane</td>
<td>Inhalation</td>
<td>respiratory system</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>NOAEL 24.6 mg/l</td>
<td>8 hours</td>
</tr>
<tr>
<td>3-Methylpentane</td>
<td>Inhalation</td>
<td>central nervous system depression</td>
<td>May cause drowsiness or dizziness</td>
<td>NOAEL, Not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-Methylpentane</td>
<td>Inhalation</td>
<td>respiratory irritation</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>NOAEL, Not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-Methylpentane</td>
<td>Inhalation</td>
<td>cardiac sensitization</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>NOAEL, Not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-Methylpentane</td>
<td>Inhalation</td>
<td>central nervous system depression</td>
<td>May cause drowsiness or dizziness</td>
<td>NOAEL, Not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-Methylpentane</td>
<td>Inhalation</td>
<td>respiratory irritation</td>
<td>Some positive data exist, but the</td>
<td>NOAEL, Not available</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Specific Target Organ Toxicity - repeated exposure

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Target Organ(s)</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>Inhalation</td>
<td>peripheral nervous system</td>
<td>Causes damage to organs through prolonged or repeated exposure</td>
<td>Human</td>
<td>NOAEL, Not available</td>
<td>occupational exposure</td>
</tr>
<tr>
<td>Hexane</td>
<td>Inhalation</td>
<td>respiratory system</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Mouse</td>
<td>LOAEL 1.76 mg/l</td>
<td>13 weeks</td>
</tr>
<tr>
<td>Hexane</td>
<td>Inhalation</td>
<td>liver</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>NOAEL, Not available</td>
<td>6 months</td>
</tr>
<tr>
<td>Hexane</td>
<td>Inhalation</td>
<td>kidney and/or bladder</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>LOAEL 1.76 mg/l</td>
<td>6 months</td>
</tr>
<tr>
<td>Hexane</td>
<td>Inhalation</td>
<td>hematopoietic system</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Mouse</td>
<td>NOAEL 35.2 mg/l</td>
<td>13 weeks</td>
</tr>
<tr>
<td>Hexane</td>
<td>Inhalation</td>
<td>auditory system</td>
<td>immune system</td>
<td>eyes</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Human</td>
</tr>
<tr>
<td>Hexane</td>
<td>Inhalation</td>
<td>heart</td>
<td>skin</td>
<td>endocrine system</td>
<td>All data are negative</td>
<td>Rat</td>
</tr>
<tr>
<td>Hexane</td>
<td>Ingestion</td>
<td>peripheral nervous system</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>NOAEL 1.140</td>
<td>90 days</td>
</tr>
<tr>
<td>Hexane</td>
<td>Ingestion</td>
<td>endocrine system</td>
<td>hematopoietic system</td>
<td>liver</td>
<td>immune system</td>
<td>kidney and/or bladder</td>
</tr>
<tr>
<td>3-Methylpentane</td>
<td>Inhalation</td>
<td>peripheral nervous system</td>
<td>All data are negative</td>
<td>Rat</td>
<td>NOAEL 5.3 mg/l</td>
<td>14 weeks</td>
</tr>
<tr>
<td>3-Methylpentane</td>
<td>Ingestion</td>
<td>peripheral nervous system</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>NOAEL, Not available</td>
<td>8 weeks</td>
</tr>
<tr>
<td>3-Methylpentane</td>
<td>Ingestion</td>
<td>kidney and/or bladder</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>LOAEL 2,000 mg/kg</td>
<td>28 days</td>
</tr>
<tr>
<td>2-Methylpentane</td>
<td>Inhalation</td>
<td>peripheral nervous system</td>
<td>All data are negative</td>
<td>Rat</td>
<td>NOAEL 5.3 mg/l</td>
<td>14 weeks</td>
</tr>
<tr>
<td>2-Methylpentane</td>
<td>Ingestion</td>
<td>peripheral nervous system</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>NOAEL, Not available</td>
<td>8 weeks</td>
</tr>
<tr>
<td>2-Methylpentane</td>
<td>Ingestion</td>
<td>kidney and/or bladder</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>LOAEL 2,000 mg/kg</td>
<td>28 days</td>
</tr>
</tbody>
</table>
Ethyl Alcohol   Inhalation  liver  Some positive data exist, but the data are not sufficient for classification  Rabbit  LOAEL 124 mg/l  365 days

Ethyl Alcohol   Inhalation  hematopoietic system | immune system  Some positive data exist, but the data are not sufficient for classification  Rat  NOAEL 25 mg/l  14 days

Ethyl Alcohol   Ingestion  liver  Some positive data exist, but the data are not sufficient for classification  Rat  LOAEL 8,000 mg/kg/day  4 months

Ethyl Alcohol   Ingestion  kidney and/or bladder  Some positive data exist, but the data are not sufficient for classification  Dog  NOAEL 3,000 mg/kg/day  7 days

Aspiration Hazard

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>Aspiration hazard</td>
</tr>
<tr>
<td>3-Methylpentane</td>
<td>Aspiration hazard</td>
</tr>
<tr>
<td>2-Methylpentane</td>
<td>Aspiration hazard</td>
</tr>
<tr>
<td>Methylcyclopentane</td>
<td>Aspiration hazard</td>
</tr>
</tbody>
</table>

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods

Dispose of contents/container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.
311/312 Hazard Categories:

Fire Hazard - Yes  Pressure Hazard - No  Reactivity Hazard - No  Immediate Hazard - Yes  Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>110-54-3</td>
<td>30 - 50</td>
</tr>
<tr>
<td>Zinc Resinate (ZINC COMPOUNDS)</td>
<td>68334-35-0</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories
The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations
Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 2 Flammability: 3 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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