1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Ashland
P.O. Box 2219
Columbus, OH 43216

Regulatory Information Number: 1-800-325-3751
Telephone: 614-790-3333
Emergency telephone number: 1-800-ASHLAND (1-800-274-5263)

Product name: 1778 BALE
Product code: 809653

2. HAZARDS IDENTIFICATION

Emergency Overview
Appearance: liquid, Semisolid, dark amber

CAUTION! MAY CAUSE EYE IRRITATION. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE.

Potential Health Effects

Exposure routes
Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

Eye contact
May cause eye irritation.

Skin contact
Unlikely to cause skin irritation or injury.

Ingestion
Aspiration hazard if swallowed - can enter lungs and cause damage.

Inhalation
It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful.

Aggravated Medical Condition
Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material; Skin, lung (for example, asthma-like conditions)

Symptoms
Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), runny nose, Cough, Exposure to this product (or a component) may cause an allergic reaction
(narrowing of the air passages of the lungs resulting in difficult breathing, tightness in the chest, coughing and wheezing) in some sensitive individuals. Other symptoms of an allergic reaction may include itchy and watery eyes, runny and stuffy nose, sweating, flushing, hives, rapid heart rate, and lowered blood pressure.

**Target Organs**

No data.

**Carcinogenicity**

This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).

**Reproductive hazard**

Based on the available information, risk to the fetus from maternal exposure to this material cannot be assessed. This material was not harmful to the fetus in laboratory animal studies. There are no data available for assessing risk to the fetus from maternal exposure to this material.

**Other information**

Prolonged exposure to smoke or fumes generated by heating this product may cause respiratory irritation with throat discomfort, coughing, or breathing difficulty. Repeated exposure may lead to respiratory sensitization (asthma) in susceptible individuals.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>CAS-No. / Trade Secret No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTA</td>
<td>64742-52-5</td>
<td>&gt;=20-&lt;30%</td>
</tr>
<tr>
<td>FATTY ACIDS, C14-18 AND C16-18-UNSATD.</td>
<td>67701-06-8</td>
<td>&gt;=1.5-&lt;5%</td>
</tr>
<tr>
<td>ROSIN, POTASSIUM SALT</td>
<td>61790-50-9</td>
<td>&gt;=1.5-&lt;5%</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**Eyes**

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

**Skin**

First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.

**Ingestion**
Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation
If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Notes to physician
Hazards: Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.
Treatment: No hazards which require special first aid measures.

5. FIREFIGHTING MEASURES

Suitable extinguishing media
Dry chemical, Carbon dioxide (CO2), Water spray

Hazardous combustion products
carbon dioxide and carbon monoxide, Hydrocarbons, Nitrogen oxides (NOx), Sulphur oxides, Polymers decompose under fire conditions. The smoke may contain polymer fragments of varying composition and unidentified toxic and/or irritating compounds.

Precautions for fire-fighting
Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

NFPA Flammable and Combustible Liquids Classification
Not applicable

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions
Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not let product enter drains. Do not flush into surface water or sanitary sewer system.
Methods for cleaning up
Keep in suitable, closed containers for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Other information
Comply with all applicable federal, state, and local regulations.

7. HANDLING AND STORAGE

Handling
Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Storage
Store in a cool, dry, ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

<table>
<thead>
<tr>
<th>DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTA</th>
<th>64742-52-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA Z1 Permissible exposure limit</td>
<td>500 ppm</td>
</tr>
<tr>
<td>OSHA Z1 Permissible exposure limit</td>
<td>2,000 mg/m³</td>
</tr>
<tr>
<td>NIOSH Recommended exposure limit (REL)</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>NIOSH Short term exposure limit</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>OSHA Z1 Permissible exposure limit</td>
<td>5 mg/m³</td>
</tr>
</tbody>
</table>

General advice
These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure controls
Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Eye protection
Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>Form</td>
<td>Semisolid</td>
</tr>
<tr>
<td>Colour</td>
<td>dark amber</td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Density</td>
<td>0.94 - 0.97 g/cm³</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability
Stable.

Conditions to avoid
excessive heat, Heat, flames and sparks, Exposure to sunlight.

Incompatible products
Strong oxidizing agents

Hazardous decomposition products
carbon dioxide and carbon monoxide, Hydrocarbons

Hazardous reactions
Product will not undergo hazardous polymerization.

11. TOXICOLOGICAL INFORMATION
Information on likely routes of exposure:
- Inhalation
- Skin absorption
- Skin contact
- Eye Contact
- Ingestion

**Product**

**Acute oral toxicity**: No data available

**Acute inhalation toxicity**: No data available

**Acute dermal toxicity**: No data available

**Skin corrosion/irritation**: No data available

**Serious eye damage/eye irritation**: No data available

**Respiratory or skin sensitisation**: No data available

**Aspiration toxicity**: The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

**Components:**

**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTA:**

**Acute oral toxicity**: LD 50 Rat: > 5 g/kg

**Acute inhalation toxicity**: LC50 Rat: > 5.53 mg/l
- Exposure time: 4 h
- Test atmosphere: dust/mist
- Method: OECD Test Guideline 403
- Not classified as acutely toxic by inhalation under GHS.

**Acute dermal toxicity**: LD 50 Rabbit: > 2,000 mg/kg
- Not classified as acutely toxic by dermal absorption under GHS.
- No mortality observed at this dose.

**Respiratory or skin sensitisation**: Species: Guinea pig
- Classification: Does not cause skin sensitisation.
- Method: OECD Test Guideline 406
Carcinogenicity - Assessment: Sufficient evidence of carcinogenicity in animal experiments

Reproductive toxicity - Assessment: Some evidence of adverse effects on development, based on animal experiments.

STOT - repeated exposure: Exposure routes: Skin contact
Target Organs: Adrenal gland, Bone marrow, Liver, Immune system, Kidney, Stomach, thymus gland
Assessment: Causes damage to organs through prolonged or repeated exposure.

Aspiration toxicity: May be fatal if swallowed and enters airways.

**FATTY ACIDS, C14-18 AND C16-18-UNSATD.:**
Acute oral toxicity: LD 50 Rat: > 2,000 mg/kg
Method: OECD Test Guideline 401
No adverse effect has been observed in acute oral toxicity tests.

Acute dermal toxicity: LD 50 Rabbit: > 2,000 mg/kg
Not classified as acutely toxic by dermal absorption under GHS.
Information given is based on data obtained from similar substances.

**ROSION, POTASSIUM SALT:**
Acute oral toxicity: LD 50 Rat: > 2,000 mg/kg
Based on similar product.

Acute dermal toxicity: LD 50 Rat: > 2,000 mg/kg
Based on similar product.

Respiratory or skin sensitisation: Species: Mouse
Classification: Did not cause sensitisation on laboratory animals.
Result: Did not cause sensitisation on laboratory animals.
Method: Local lymph node assay

### 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Product:**
No data available
Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTA:
Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
    Exposure time: 96 h
    Test Method: static test
    Test substance: WAF
    Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
    Exposure time: 48 h
    Test Method: static test
    Test substance: WAF
    Method: OECD Test Guideline 202

Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
    Exposure time: 72 h
    Test Method: static test
    Test substance: WAF
    Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL: 10 mg/l
    Exposure time: 21 d
    Species: Daphnia (water flea)
    Test Method: semi-static test
    Test substance: WAF
    Method: OECD Test Guideline 211

FATTY ACIDS, C14-18 AND C16-18-UNSATD.:
Toxicity to fish : LC 50 (Danio rerio (zebra fish)): > 1,000 mg/l
    Exposure time: 96 h
    Test Method: semi-static test
    Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates : LC 50 (Aquatic invertebrates): 357.5 mg/l
    Exposure time: 48 h
    Test Method: semi-static test
    Method: OECD Test Guideline 202
    Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 0.22 mg/l
    Exposure time: 21 d
    Reproduction Test
Species: Water flea (Daphnia magna)
Test Method: semi-static test
Method: OECD Test Guideline 211
Information given is based on data obtained from similar substances.

Persistence and degradability

Product:
No data available

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTA:
Biodegradability : Result: Inherently biodegradable
Biodegradation: 31 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

FATTY ACIDS, C14-18 AND C16-18-UNSATD.:
Biodegradability : aerobic
Biodegradation: 93.9 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

ROSIN, POTASSIUM SALT:
Biodegradability : Biodegradation: 89.5 %
Method: OECD Test Guideline 302B

Bioaccumulative potential

Product:
No data available

Components:

ROSIN, POTASSIUM SALT:
Partition coefficient: n-octanol/water : log Pow: 3 - 7
Mobility in soil
13. DISPOSAL CONSIDERATIONS

Waste disposal methods
Dispose of in accordance with all applicable local, state and federal regulations.

14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>REGULATION</th>
<th>ID NUMBER</th>
<th>PROPER SHIPPING NAME</th>
<th>*HAZARD CLASS</th>
<th>SUBSIDIARY HAZARDS</th>
<th>PACKING GROUP</th>
<th>MARINE POLLUTANT / LTD. QTY.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES</td>
<td>Not dangerous goods</td>
<td></td>
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<tr>
<td>INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER</td>
<td>Not dangerous goods</td>
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<td></td>
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<tr>
<td>INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO</td>
<td>Not dangerous goods</td>
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<tr>
<td>INTERNATIONAL MARITIME DANGEROUS GOODS</td>
<td>Not dangerous goods</td>
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<tr>
<td>TRANSPORT CANADA - INLAND WATERWAYS</td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRANSPORT CANADA - RAIL</td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRANSPORT CANADA - ROAD</td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
U.S. DOT - INLAND WATERWAYS
Not dangerous goods

U.S. DOT - RAIL
Not dangerous goods

U.S. DOT - ROAD
Not dangerous goods

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

15. REGULATORY INFORMATION

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

SARA Hazard Classification
SARA 311/312 Classification
Acute Health Hazard
Chronic Health Hazard

SARA 313 Component(s)
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.

Notification status
US. Toxic Substances Control Act y (positive listing)
16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet:
ACGIH: American Conference of Industrial Hygienists
BEI: Biological Exposure Index
CAS: Chemical Abstracts Service (Division of the American Chemical Society)
CMR: Carcinogenic, Mutagenic or Toxic for Reproduction
FG: Food grade
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
H-statement: Hazard Statement
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO: International Civil Aviation Organization
ICAO-TI (ICAO): Technical Instructions by the "International Civil Aviation Organization"
IMDG: International Maritime Code for Dangerous Goods
ISO: International Organization for Standardization
logPow: octanol-water partition coefficient
LCxx: Lethal Concentration, for xx percent of test population
LDxx: Lethal Dose, for xx percent of test population.
ICxx: Inhibitory Concentration for xx of a substance
Ecxx: Effective Concentration of xx
N.O.S.: Not Otherwise Specified
OECD: Organization for Economic Co-operation and Development
OEL: Occupational Exposure Limit
P-Statement: Precautionary Statement
PBT: Persistent, Bioaccumulative and Toxic
PPE : Personal Protective Equipment
STEL : Short-term exposure limit
STOT : Specific Target Organ Toxicity
TLV : Threshold Limit Value
TWA : Time-weighted average
vPvB : Very Persistent and Very Bioaccumulative
WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
DOT : Department of Transportation
FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
HMIRC : Hazardous Materials Information Review Commission
HMIS : Hazardous Materials Identification System
NFPA : National Fire Protection Association
NIOSH : National Institute for Occupational Safety and Health
OSHA : Occupational Safety and Health Administration
PMRA : Health Canada Pest Management Regulatory Agency
RTK : Right to Know
WHMIS : Workplace Hazardous Materials Information System