PLIOBOND 20

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity
Product Name: PLIOBOND 20
Product Code: 544404
General or Generic ID: NITRILE RUBBER/RESIN IN SOLVENT

Company
Ashland Ashland Distribution Co. & Ashland Specialty Chemical Co.
P. O. Box 2219 Columbus, OH 43216 614-790-3333

Emergency Telephone Number:
1-800-ASHLAND (1-800-274-5263)
24 hours everyday

Regulatory Information Number:
1-800-325-3751

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>CAS Number</th>
<th>% (by weight)</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHYL ETHYL KETONE</td>
<td>78-93-3</td>
<td>79.0- 79.0</td>
</tr>
<tr>
<td>NITRILE RUBBER</td>
<td></td>
<td>Trade Secret</td>
</tr>
<tr>
<td>ALKYLPHENOLIC RESIN</td>
<td>471-34-1</td>
<td>1.0- 5.0</td>
</tr>
<tr>
<td>CALCIUM CARBONATE</td>
<td>50-00-0</td>
<td>0.1- 0.1</td>
</tr>
<tr>
<td>FORMALDEHYDE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye
Can cause eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes.

Skin
Can cause skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of skin, burns and other skin damage. Additional symptoms of skin contact may include allergic skin reaction (delayed skin rash which may be followed by blistering, scaling and other skin effects).

Swallowing
Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

Inhalation
Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8).

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MATERIAL SAFETY DATA SHEET

PLIOBOND 20

Symptoms of Exposure
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), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness).

Target Organ Effects
Based on animal studies, exposure to methyl ethyl ketone (MEK) increases the onset of peripheral neuropathy caused by exposure to methyl butyl ketone (MBK), and/or n-hexane, and/or ethyl butyl ketone. MEK alone has not been shown to cause peripheral neuropathy. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: mild, reversible liver effects, mild, reversible kidney effects.

Developmental Information
This material (or a component) has been shown to cause harm to the fetus in laboratory animal studies. The relevance of these findings to humans is uncertain.

Cancer Information
Inhalation of formaldehyde has been shown to cause nasal tumors in rats, and ingestion of formaldehyde in drinking water has been shown to cause leukemia and gastrointestinal tract tumors in rats. Epidemiology studies have not clearly associated exposure to formaldehyde with cancer in man. Formaldehyde is listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) and the Occupational Safety and Health Administration (OSHA).

Other Health Effects
No data

Primary Route(s) of Entry
Inhalation, Skin contact, Eye contact, Ingestion.

4. FIRST AID MEASURES

Eyes
If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

Skin
Remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. If skin is not damaged and symptoms persist, seek medical attention. Launder clothing before reuse.

Swallowing
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.

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Inhalation
If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

Note to Physicians
This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (See Section 3 - Swallowing) when deciding whether to induce vomiting. Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin (for example, asthma-like conditions).

5. FIRE FIGHTING MEASURES

Flash Point
23.0  F (-5.0  C) TOC

Explosive Limit
(for product) Lower 2.0  Upper 12.0  %

Autoignition Temperature
No data

Hazardous Products of Combustion
May form: carbon dioxide and carbon monoxide, hydrogen cyanide, nitrogen compounds, phenols, various hydrocarbons.

Fire and Explosion Hazards
Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

Extinguishing Media
regular foam, water fog, carbon dioxide, dry chemical.

Fire Fighting Instructions
No data

NFPA Rating
Health - 1, Flammability - 3, Reactivity - 0

6. ACCIDENTAL RELEASE MEASURES

Small Spill
Eliminate all sources of ignition such as flares, flames (including pilot lights), and electrical sparks. Absorb liquid on vermiculite, floor absorbent or other absorbent material.

Continued on next page
Large Spill
Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal.

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. All five-gallon pails and larger metal containers, including tank cars and tank trucks, should be grounded and/or bonded when material is transferred.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection
Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

Skin Protection
Wear resistant gloves such as: natural rubber. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Respiratory Protections
If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

Engineering Controls
Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

Exposure Guidelines
Component

METHYL ETHYL KETONE (78-93-3)
OSHA PEL 200.000 ppm - TWA
OSHA PERL 200.000 ppm - TWA
OSHA PEL 300.000 ppm - STEL
ACGIH TLV 200.000 ppm - TWA
ACGIH TLV 300.000 ppm - STEL

NITRILE RUBBER
No exposure limits established

ALKYLPHENOLIC RESIN
No exposure limits established

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CALCIUM CARBONATE (471-34-1)
No exposure limits established

FORMALDEHYDE (50-00-0)
OSHA PEL 0.750 ppm - TWA
OSHA PEL 2.000 ppm - STEL
OSHA VPEL 0.750 ppm - TWA
OSHA VPEL 2.000 ppm - STEL
ACGIH TLV 0.300 ppm - Ceiling

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point
(for product) 176.0 °F (80.0 °C) @ 760 mmHg

Vapor Pressure
(for product) 71.000 mmHg @ 69.00 °F

Specific Vapor Density
2.500 @ AIR-1

Specific Gravity
.862 @ 77.00 °F

Liquid Density
7.180 lbs/gal @ 77.00 °F
.862 kg/l @ 25.00 °C

Percent Volatiles
78.0 - 82.0 %

Evaporation Rate
Slower than ethyl ether

Appearance
No data

State
LIQUID

Physical Form
No data

Color
TAN COLORED LIQUID

Odor
No data

pH
Not applicable

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10. STABILITY AND REACTIVITY

Hazardous Polymerization
Product will not undergo hazardous polymerization.

Hazardous Decomposition
May form: carbon dioxide and carbon monoxide, hydrogen cyanide, nitrogen compounds, phenols, various hydrocarbons.

Chemical Stability
Stable.

Incompatibility
Avoid contact with: strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

No data

12. ECOLOGICAL INFORMATION

No data

13. DISPOSAL CONSIDERATION

Waste Management Information
Destroy by liquid incineration in accordance with applicable regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution Company, ICES Environmental Services Group at 800-637-7422.

14. TRANSPORT INFORMATION

DOT Information - 49 CFR 172.101
DOT Description: ADHESIVES,3, UN1193, II

Container/Mode: 55 GAL DRUM/TRUCK PACKAGE

NOS Component: None

RQ (Reportable Quantity) - 49 CFR 172.101
Product Quantity (lbs) Component
6295 ETHYL METHYL KETONE

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Other Transportation Information
The DOT Transportation Information may vary with the container and mode of shipment.

15. REGULATORY INFORMATION

US Federal Regulations

TSCA (Toxic Substances Control Act) Status
TSCA (UNITED STATES) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4(a)
Component | DQ (lbs)
METHYL ETHYL KETONE | 5000
FORMALDEHYDE | 100

CERCLA RQ - 40 CFR 302.4(b)
Materials without a "listed" RQ may be reportable as an "unlisted hazardous substance". See 40 CFR 302.5 (b).

SARA 302 Components - 40 CFR 355 Appendix A
Section 302 Component(s) | TPQ (lbs) | RQ (lbs)
FORMALDEHYDE | 500 | 100

Section 311/312 Hazard Class - 40 CFR 370.2
Immediate(X) Delayed(X) Fire(X) Reactive( ) Sudden Release of Pressure( )

SARA 313 Components - 40 CFR 372.65
Section 313 Component(s) | CAS Number | %
METHYL ETHYL KETONE | 78-93-3 | 79.42
FORMALDEHYDE | 50-00-0 | .10

OSHA Process Safety Management 29 CFR 1910
PSM Component(s) | Condition | TPQ (lbs)
FORMALDEHYDE | | 1000

EPA Accidental Release Prevention 40 CFR 68
RMP Component(s) | Condition | TPQ (lbs)
FORMALDEHYDE (SOLUTION) | | 15000

International Regulations

Inventory Status
DSL (CANADA) The intentional ingredients of this product are listed.

State and Local Regulations

California Proposition 65
The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains the following substance(s) known to the state of California to cause cancer.
FORMALDEHYDE (GAS)
1,3-BUTADIENE
ACRYLONITRILE

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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.