

PLIOBOND® 20 ADHESIVE 571656
(Musson PBC20 & PBC220)

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

Ashland	Regulatory Information Number	1-800-325-3751
P.O. Box 2219	Telephone	614-790-3333
Columbus, OH 43216	Emergency Telephone Number	1-800-ASHLAND (1-800-274-5263)

Product Name	PLIOBOND® 20 ADHESIVE (GENERAL PURPOSE/INDUSTRIAL)
Product Code	571656
Product Use Description	No Data

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: liquid, tan

WARNING! Flammable Liquid, Highly toxic by inhalation, Toxic by ingestion, Toxic by skin absorption, Corrosive to skin, Corrosive to eyes, Carcinogen.

Potential Health Effects

Routes of Exposure

Inhalation, Skin contact, Eye contact, Ingestion

Eye Contact

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

Skin Contact

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)

Ingestion

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.

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Ingestion

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 are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

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, and diarrhea), irritation (nose, throat, airways), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness)

Target Organs

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 butylketone. 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 effect in laboratory animals: mild, reversible liver effects, mild, reversible kidney effects.

Carcinogenicity

Human studies have associated nasopharyngeal cancers (area of the upper throat behind the nose) and possibly other respiratory cancers (nasal cavity and sinuses) with formaldehyde exposure in the workplace. Although the evidence is not conclusive, some studies suggest an association between workplace formaldehyde exposure and leukemia. In studies in rats, inhalation of formaldehyde has caused nasal tumors, while ingestion in drinking water has caused leukemia and gastrointestinal tract tumors. 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).

Reproductive Hazard

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.

Other Information

No data

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Concentration
METHYL ETHYL KETONE	78-93-3	>=70-<80%
PHENOL	108-95-2	>=1-<1.5%
ORTHO CRESOL	95-48-7	>=0.1-<0.5%
FORMALDEHYDE	50-00-0	>=0.1-<0.5%

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.

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, 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.

Notes to Physician

Hazards: This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (See Section 2 – Swallowing) when deciding whether to induce vomiting.

Treatment: No information available.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water mist, dry powder, foam, carbon dioxide (CO2)

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Hazardous Combustion Products

May form; carbon dioxide and carbon monoxide, hydrogen cyanide, nitrogen compounds, phenols, various hydrocarbons

Precautions for Fire-Fighting

Material is volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, flames, sparks, heaters, smoking, electric motors, static discharge or other ignition sources at locations near the material handling point.

Flammability Class for Flammable Liquids

Flammable Liquid Class 1B

6. ACCIDENTAL RELEASE MEASURES**Personal Precautions**

For personal protection see Section 8. 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.

Environmental Precautions

No data

Methods for Cleaning Up

Absorb liquid on vermiculite, floor absorbent or other absorbent material.

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. Static ignition hazard can result from handling and use. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Special precautions may be necessary to dissipate static electricity for non-conductive containers. Use proper bonding and grounding during product transfer as described in National Fire Protection Association document NFP 77.

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Storage

No data

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Exposure Guidelines

METHYL ETHYL KETONE

78-93-3

ACCIH	time weighed average	200 ppm
ACGIH	Short term exposure limit	300 ppm
NIOSH	Recommended exposure limit (REL):	200 ppm
NIOSH	Recommended exposure limit (REL):	590 mg/m3
NIOSH	Short term exposure limit	300 ppm
NIOSH	Short term exposure limit	885 mg/m3
OSHA Z1	Permissible exposure limit	200 ppm
OSHA Z1	Permissible exposure limit	590 mg/m3

PHENOL

108-95-2

ACCIH	time weighed average	5 ppm
NIOSH	Recommended exposure limit (REL):	5 ppm
NIOSH	Recommended exposure limit (REL):	19 mg/m3
NIOSH	Ceiling Limit Value and Time Period (if specified):	15.6 ppm
NIOSH	Ceiling Limit Value and Time Period (if specified):	60 mg/m3
OSHA Z1	Permissible exposure limit	5 ppm
OSHA Z1	Permissible exposure limit	19 mg/m3

FORMALDEHYDE

50-00-0

ACCIH	Ceiling Limit Value	0.3 ppm
NIOSH	Recommended exposure limit (REL):	0.016 ppm
NIOSH	Recommended exposure limit (REL):	0.016 ppm
NIOSH	Ceiling Limit Value and Time Period (if specified):	0.1 ppm
NIOSH	Ceiling Limit Value and Time Period (if specified):	0.1 ppm
OSHA	timed weighted average	0.75 ppm
OSHA	Short term exposure limit	19 mg/m3
OSHA	OSHA Action level:	0.5 ppm

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

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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 TLV(s).

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 and Body Protection

To prevent repeated or prolonged skin contact, wear impervious clothing and boots. Wear resistant gloves such as: Natural Rubber

Respiratory Protection

If workplace exposure limit(s) of product exceeded (see exposure guidelines), a NIOSH approved air-purifying particulate/organic vapor/acid gas combination cartridge is recommended in the absence of proper environmental controls or when there is a potential for dust/vapor inhalation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Form	No data
Colour	tan
Odour	No data
Boiling point/range	176°F / 80°C @ 760 mmHg
pH	No data
Flash Point	23°F / -5°C Tag open cup
Evaporation rate	1 Ethyl Ether
Exposure limits	2.0% (V) 12.0% (V)
Vapour pressure	71.0000 mmHg @ 68.00°F / 20.00°C
Vapour density	2.5
Density	0.8629 g/cm3 @ 77.00°F / 25.00°C 7.18 lb/gal @ 68.00°F / 20.00°C
Solubility	No data
Partition coefficient (n-Octanol/water)	No data
Autoignition temperature	No data

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10. STABILITY AND REACTIVITY

Stability

Stable

Conditions to Avoid

Avoid contact with:

Incompatible Products:

Avoid contact with: strong oxidizing agents

Hazardous Decomposition Products:

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

Hazardous Reactions

Product will not undergo hazardous polymerization

Thermal Decomposition

No data

11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity

METHYL ETHYL KETONE

LD50 Mouse: 670 mg/kg LD 50 Rat: 2,300 – 3,500 mg/kg

PHENOL

LD 50 Rat: 317 mg/kg LD 50 Mouse: 270
mg/kg LD 50 Rat: 317 mg/kg LD 50 Dog: 500
mg/kg LD 50 Cat: 100 mg/kg LD 50 Rat: 530 mg/kg

ORTHO CRESOL

LD 50 Rat: 120 mg/kg

FORMALDEHYDE

LD 50 Mouse: 42 mg/kg LD 50 Rat: 100 mg/kg

Acute Inhalation Toxicity

METHYL ETHYL KETONE

LC50 Rat: 11,700 mg/l, 4 h

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PHENOL	LC 50 Rat: 316 mg/m3, 4 h
ORTHO CRESOL	LC 50 Mouse: 0.179 mg/l, LC 50 Rat: 1,220 mg/m3, 2 h
FORMALDEHYDE	LC 50 Rat: 203 mg/m3, 2 h

Acute Dermal Toxicity

METHYL ETHYL KETONE	LD50 Rabbit: 5 g/kg
PHENOL	LD 50 Rabbit: 850 mg/kg LD 50 Rabbit: 850 mg/kg LD 50 Rat: 669 mg/kg
ORTHO CRESOL	LD 50 Rabbit: 890 mg/kg
FORMALDEHYDE	LD 50 Rabbit: 280 mg/kg

12. ECOLOGICAL INFORMATION**Aquatic Toxicity****Acute and Prolonged Toxicity to Fish**

No data

Acute Toxicity to Aquatic Invertebrates

No data

Environmental Fate and Pathways

No data

13. DISPOSAL CONSIDERATIONS**Waster Disposal Methods**

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's Environmental Services Group at 1-800-637-7922.

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14. TRANSPORT INFORMATION

IMDG:

UN1133, ADHESIVES 3, 11

IATA_P:

UN1133, ADHESIVES 3, 11

IATA_C:

UN1133, ADHESIVES 3, 11

CFR_ROAD:

UN1133, ADHESIVES 3, 11

CFR_RAIL:

UN1133, ADHESIVES 3, 11

CFR_INWTR:

UN1133, ADHESIVES 3, 11

IMDG_INWTR:

UN1133, ADHESIVES 3, 11

IMDG_ROAD:

UN1133, ADHESIVES 3, 11

IMDG_RAIL:

UN1133, ADHESIVES 3, 11

15. REGULATORY INFORMATION

California Prop. 65

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

FORMALDEHYDE

Additional Regulations

US. Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures
(21 CFR 1310.12(c))

SARA Hazard Classification

Fire Hazard

Acute Health Hazard

Chronic Health Hazard

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SARA 313 Component(s)

PHENOL	108-95-2	1.088%
FORMALDEHYDE	50-00-0	0.1346%

OSHA Hazards

Flammable Liquid
Highly toxic by inhalation
Toxic by ingestion
Toxic by skin absorption
Corrosive to skin
Corrosive to eyes
Carcinogen

	Health	Flammability	Reactivity	Other
HMIS	1	3	0	
NFPA	1	3	0	

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 correct, applicable, and suitable to their circumstances.

This MSDS has been prepared by Ashland's Environmental Health and Safety Department