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	1-800-ASHLAND (1-800-274-5263)

Product name	PLIOBOND® 30 ADHESIVE
Product code	571681
Product Use Description	No data

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: liquid, tan

WARNING! FLAMMABLE LIQUID AND VAPOR. MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. MAY BE HARMFUL IF SWALLOWED. MAY BE HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. CAUSES EYE IRRITATION. MAY CAUSE SKIN AND RESPIRATORY TRACT IRRITATION.PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE DERMATITIS AND BURNS. MAY CAUSE ALLERGIC SKIN REACTION.

Potential Health Effects

Routes of exposure

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

Eye contact

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

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. Passage of this material into the body through the skin is possible, and may add to toxic effects from breathing or swallowing.

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.

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 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), liver, kidney, eye

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), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), allergic skin reaction (delayed skin rash which may be followed by blistering, scaling and other skin effects)

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 effects in laboratory animals:, mild, reversible liver effects, mild, reversible kidney effects, Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans:, liver abnormalities, eye damage, kidney damage, central nervous system 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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Concentration
METHYL ETHYL KETONE	78-93-3	>=60-<70%
CALCIUM CARBONATE	471-34-1	>=1.5-<5%
PHENOL	108-95-2	>=1.5-<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, 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

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, Carbon dioxide (CO2), Dry chemical

Hazardous combustion products

carbon dioxide and carbon monoxide, Hydrogen cyanide (hydrocyanic acid), nitrogen compounds, 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. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA).

Flammability Class for Flammable Liquids

Flammable Liquid Class IB

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

Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

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 NFPA 77.

Storage

Store in a cool, dry, ventilated area, away from incompatible substances. Keep containers closed when not in use. Do not store near extreme heat, open flame, or sources of ignition.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

METHYL ETHYL KETONE	**78-93-3**		
ACGIH	time weighted 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	
CALCIUM CARBONATE	**471-34-1**		
US CA OEL	Time Weighted Average (TWA) Permissible Exposure Limit (PEL):	5 mg/m3	Respirable fraction.
US CA OEL	Time Weighted Average (TWA) Permissible Exposure Limit (PEL):	10 mg/m3	Total dust.
NIOSH	Recommended exposure limit (REL):	5 mg/m3	Respirable.
NIOSH	Recommended exposure limit (REL):	10 mg/m3	Total

OSHA Z1	Permissible exposure limit	5 mg/m3	Respirable fraction.
OSHA Z1	Permissible exposure limit	15 mg/m3	Total dust.
OSHA Z1A	time weighted average	5 mg/m3	Respirable fraction.
OSHA Z1A	time weighted average	15 mg/m3	Total dust.
PHENOL		**108-95-2**	
ACGIH	time weighted 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**	
ACGIH	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	time weighted average	0.75 ppm	
OSHA	Short term exposure limit	2 ppm	
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 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 or any component is exceeded (see exposure guidelines), a NIOSH-approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Form	No data
Colour	tan
Odour	No data
Boiling point/boilingrange	79.40 °C / 174.9 °F@ 760.00 mmHg
pH	No data
Flash point	21 °F / -6 °C, Seta closed cup
Evaporation rate	1 (Ethyl Ether)
Explosion limits	2.0 %(V) 12.0 %(V)
Vapour pressure	121.32 hPa @ 77 °F / 25 °C
Vapour density	(>) 1 (AIR=1)
Density	0.894 g/cm3 @ 77 °F / 25 °C 7.44 lb/gal @ 77 °F / 25 °C
Solubility	No data
Partition coefficient: n-octanol/water	No data
Autoignition temperature	No data

10. STABILITY AND REACTIVITY

Stability

Stable.

Conditions to avoid

Incompatible products

Avoid contact with:, strong oxidizing agents

Hazardous decomposition products

May form:, carbon dioxide and carbon monoxide, Hydrogen cyanide (hydrocyanic acid), nitrogen compounds, various hydrocarbons

Hazardous reactions

Product will not undergo hazardous polymerization.

Thermal decomposition

No data

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

METHYL ETHYL KETONE	LD 50 Mouse: 670 mg/kg LD 50 Rat: 2,300 - 3,500 mg/kg
CALCIUM CARBONATE	LD 50 Rat: 6,450 mg/kg
PHENOL	LD 50 Rat: 317 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	LC 50 Rat: 11,700 mg/l , 4 h
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 , 1 h

FORMALDEHYDE	LC 50 Rat: 203 mg/m3 , 2 h

Acute dermal toxicity

METHYL ETHYL KETONE	LD 50 Rabbit: > 5 g/kg
PHENOL	LD 50 Rabbit: 850 mg/kg
ORTHO CRESOL	LD 50 Rabbit: 890 mg/kg
FORMALDEHYDE	LD 50 Rabbit: 288 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

Waste 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 800-637-7922.

14. TRANSPORT INFORMATION

IMDG:

UN1133, ADHESIVES 3, II
IATA_P:
UN1133, Adhesives 3, II
IATA_C:
UN1133, Adhesives 3, II
CFR_ROAD:
UN1133, Adhesives 3, II
CFR_RAIL:
UN1133, Adhesives 3, II
CFR_INWTR:
UN1133, Adhesives 3, II

Dangerous goods descriptions (if indicated above) may not reflect package size, 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
WARNING! This product contains a chemical known in the State of California to cause cancer.
1,3, BUTADIENE
ARSENIC
LEAD
ACRYLONITRILE
VINYLCYCLOHEXENE, 4-
QUARTZ / SAND
FORMALDEHYDE

WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.
LEAD
1,3, BUTADIENE

SARA Hazard Classification Fire Hazard
Acute Health Hazard
Chronic Health Hazard

SARA 313 Component(s)

PHENOL	108-95-2	1.5528%

FORMALDEHYDE	50-00-0	0.1921%

	Health	Flammability	Reactivity	Other
HMIS	2*	3	0	
NFPA	2	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 current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).