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Pliobond™ 25 ADHESIVE ™ Trademark, Ashland or its subsidiaries, registered in various countries 153106		

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Pliobond™ 25
ADHESIVE
™ Trademark, Ashland or its subsidiaries, registered in various countries

**PACKAGED AND MARKETED BY: THE RUSCOE COMPANY 485 KENMORE BLVD. AKRON OHIO 44301
PH:330-253-8148 TOLL FREE: 800-293-8148 FAX: 330-253-2933**

Recommended use of the chemical and restrictions on use

<p>Details of the supplier of the safety data sheet Ashland P.O. Box 2219 Columbus, OH 43216 United States of America</p> <p>EHS Customer Requests@ashland.com</p>	<p>Emergency telephone number 1-800-ASHLAND (1-800-274-5263)</p> <p>Regulatory Information Number 1-800-325-3751</p> <p>Product Information 614-790-3333</p>
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SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 2

Skin irritation : Category 2

Eye irritation : Category 2A

Skin sensitization : Category 1

Carcinogenicity : Category 1B

Specific target organ systemic toxicity - single exposure : Category 3 (Central nervous system)

Specific target organ systemic toxicity - repeated exposure : Category 2 (Skin, Nervous system, Liver, Kidney)

GHS Label element

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Hazard pictograms :



Signal Word :

Danger

Hazard Statements :

Highly flammable liquid and vapor.
 Causes skin irritation.
 May cause an allergic skin reaction.
 Causes serious eye irritation.
 May cause drowsiness or dizziness.
 May cause cancer.
 May cause damage to organs (Skin, Nervous system, Liver, Kidney) through prolonged or repeated exposure.

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.
 Keep container tightly closed.
 Ground/bond container and receiving equipment.
 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
 Use only non-sparking tools.
 Take precautionary measures against static discharge.
 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
 Wash skin thoroughly after handling.
 Use only outdoors or in a well-ventilated area.
 Contaminated work clothing must not be allowed out of the workplace.
 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 IF exposed or concerned: Get medical advice/ attention.
 If skin irritation or rash occurs: Get medical advice/ attention.
 If eye irritation persists: Get medical advice/ attention.
 Take off contaminated clothing and wash before reuse.
 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

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

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Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Defatter

Hazardous components

Chemical Name	CAS-No.	Classification	Concentration (%)
ACETONE	67-64-1	Flam. Liq. 2; H225 Eye Irrit. 2A; H319 STOT SE 3; H336	71.76
METHYL ETHYL KETONE	78-93-3	Flam. Liq. 2; H225 Eye Irrit. 2A; H319 STOT SE 3; H336	4.75
CALCIUM CARBONATE	471-34-1		2.89
PHENOL	108-95-2	Acute Tox. 3; H301 Acute Tox. 3; H331 Acute Tox. 3; H311 Skin Corr. 1; H314 Eye Dam. 1; H318 STOT RE 2; H373	1.02
FORMALDEHYDE	50-00-0	Flam. Liq. 4; H227 Acute Tox. 3; H301	0.12

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		Acute Tox. 3; H331	
		Acute Tox. 3; H311	
		Skin Corr. 1B; H314	
		Eye Dam. 1; H318	
		Skin Sens. 1; H317	
		Carc. 1B; H350	

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Call a POISON CENTRE or doctor/physician if exposed or you feel unwell.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : Move to fresh air.
If unconscious place in recovery position and seek medical advice.
Consult a physician after significant exposure.
- In case of skin contact : Remove contaminated clothing. If irritation develops, get medical attention.
If on skin, rinse well with water.
Wash contaminated clothing before re-use.
If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
- If swallowed : Obtain medical attention.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Do not induce vomiting. Phenol concentrations greater than 1.5% produce irritation and greater than 5% are corrosive; vomiting can cause further damage to the mouth and throat.
Do not dilute the swallowed material, since this may enhance its absorption. Seek immediate medical attention. If possible, do not leave the individual unattended. Vomiting and diarrhea may occur spontaneously.

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Most important symptoms and effects, both acute and delayed : This material (or a component) has produced hyperglycemia and ketosis following substantial ingestion. Ingestion of large amounts or other significant exposure to this material (or a component) may cause alkalosis. Excessive calcium intake may cause gastrointestinal symptoms, hypertension, hypercalcemia, kidney stones, and may inhibit absorption of iron, zinc, and possibly other trace elements. Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. Pulmonary edema may be delayed. 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)
Cough
low body temperature
irregular heartbeat
cyanosis (causes blue coloring of the skin and nails from lack of oxygen)
lung edema (fluid buildup in the lung tissue)
Convulsions
respiratory failure
Difficulty in breathing
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause drowsiness or dizziness.
May cause cancer.
May cause damage to organs through prolonged or repeated exposure.

Notes to physician : Phenol adsorbs to activated charcoal, and it maybe preferable to ipecac-induced emesis because seizures or coma may onset rapidly and because of the corrosive effects of phenol. A usual activated charcoal dose in adults is 30-100 g and in children is 15-30 g. Activated charcoal should be administered with, or followed by, a cathartic. If endoscopy is planned, charcoal may obscure visualization of affected areas. Gastric lavage may be indicated if it is performed soon after ingestion or in patients who are comatose or at risk of seizures. Monitor for seizures, metabolic acidosis and ventricular dysrhythmias.

SECTION 5. FIREFIGHTING MEASURES

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- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrogen cyanide (hydrocyanic acid)
nitrogen oxides (NOx)
calcium oxide
acid vapors
- Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.
- Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Use a water spray to cool fully closed containers.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.
Remove all sources of ignition.
Use personal protective equipment.
Ensure adequate ventilation.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

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Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Other information : Comply with all applicable federal, state, and local regulations. Suppress (knock down) gases/vapours/mists with a water spray jet.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Open drum carefully as content may be under pressure. Avoid formation of aerosol. Provide sufficient air exchange and/or exhaust in work rooms. Do not breathe vapours/dust. Do not smoke. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Container hazardous when empty. Take precautionary measures against static discharges. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8. Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. No smoking. Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis

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ACETONE	67-64-1	TWA	500 ppm	ACGIH
		STEL	750 ppm	ACGIH
		REL	250 ppm 590 mg/m3	NIOSH/GUID E
		PEL	1,000 ppm 2,400 mg/m3	OSHA_TRA NS
		TWA	250 ppm	ACGIHLIS_P
		STEL	500 ppm	ACGIHLIS_P
		TWA	750 ppm 1,800 mg/m3	Z1A
		STEL	1,000 ppm 2,400 mg/m3	Z1A
METHYL ETHYL KETONE	78-93-3	TWA	200 ppm	ACGIH
		STEL	300 ppm	ACGIH
		REL	200 ppm 590 mg/m3	NIOSH/GUID E
		STEL	300 ppm 885 mg/m3	NIOSH/GUID E
		PEL	200 ppm 590 mg/m3	OSHA_TRA NS
CALCIUM CARBONATE	471-34-1	PEL	5 mg/m3 Respirable fraction.	OSHA_TRA NS
		PEL	15 mg/m3 Total dust.	OSHA_TRA NS
		REL	5 mg/m3 Respirable.	NIOSH/GUID E
		REL	10 mg/m3 Total	NIOSH/GUID E
PHENOL	108-95-2	TWA	5 ppm	ACGIH
		REL	5 ppm 19 mg/m3	NIOSH/GUID E
		Ceil_Time	15.6 ppm 60 mg/m3	NIOSH/GUID E
		PEL	5 ppm 19 mg/m3	OSHA_TRA NS
		TWA	5 ppm 19 mg/m3	TN OEL
FORMALDEHYDE	50-00-0	Ceiling	0.3 ppm	ACGIH
		REL	0.016 ppm	NIOSH/GUID E
		Ceil_Time	0.1 ppm	NIOSH/GUID E
		TWA	0.75 ppm	OSHASP
		STEL	2 ppm	OSHASP
		OSHA_ACT	0.5 ppm	OSHASP
		Ceiling	0.3 ppm	ACGIHLIS_P

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Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
ACETONE	67-64-1	acetone	Urine	Sampling time: End of shift.	50 mg/l	
Remarks:	Nonspecific					
METHYL ETHYL KETONE	78-93-3	methylEthyl Ketone	Urine	Sampling time: End of shift.	2 mg/l	ACGIH BEI
Remarks:	Nonspecific					
PHENOL	108-95-2	Phenol with hydrolysis	Creatinine in urine	Sampling time: End of shift.	250 mg/g	
Remarks:	Background, Nonspecific					

Engineering measures : 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.

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

Hand protection
 Remarks

: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection

: Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

Skin and body protection

: Wear as appropriate:
 impervious clothing
 Safety shoes
 Flame-resistant clothing
 Choose body protection according to the amount and

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concentration of the dangerous substance at the work place.
Discard gloves that show tears, pinholes, or signs of wear.
Wear resistant gloves (consult your safety equipment
supplier).

Hygiene measures : Wash hands before breaks and at the end of workday.
When using do not eat or drink.
When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid

Colour : tan

Odour : No data available

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : No data available

Flash point : -4 °F / -20 °C
Method: Seta closed cup

Evaporation rate : 1
Ethyl Ether

Flammability (solid, gas) : No data available

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : 0.8577 (77.00 °F)

Density : 0.8577 g/cm³ (77.00 °F)

Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

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Partition coefficient: n-
 octanol/water : No data available

Thermal decomposition : No data available

Viscosity
 Viscosity, dynamic : 600 mPa.s

Viscosity, kinematic : No data available

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous
 reactions : Vapours may form explosive mixture with air. Formaldehyde
 reacts with peroxides, phenol, strong acids, amines and
 strong oxidizing agents. Formaldehyde reacts violently with
 nitrogen dioxide, nitromethane, perchloric acid, perchloric
 acid-aniline mixtures, or peroxyformic acid to yield explosive
 compounds. It reacts with hydrochloric acid or to organic
 chlorides to form the carcinogen, bis(chloromethyl)ether.

Conditions to avoid : Heat, flames and sparks.

excessive heat

Incompatible materials : 1,3-butadiene
 Acids alkalis
 ammonium salts
 aluminum
 aluminum salts
 Amines
 Ammonia
 Copper
 Copper alloys
 halogenated hydrocarbons
 halogens
 Iron Lead
 magnesium
 peroxides
 Reducing agents
 strong alkalis
 Strong oxidizing agents
 Zinc

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Hazardous decomposition
products

acid vapors
calcium oxide
carbon dioxide and carbon monoxide

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity

Not classified based on available information.

Components:**ACETONE:**

Acute oral toxicity : LD 50 (Rat, female): 5,800 mg/kg

Acute inhalation toxicity : LC 50 (Rat, female): 76 mg/l
Exposure time: 4 h

Acute dermal toxicity : LD 50 (Rabbit): > 7,426 mg/kg

METHYL ETHYL KETONE:

Acute oral toxicity : LD 50 (Rat): 2,300 - 3,500 mg/kg

Acute dermal toxicity : LD 50 (Rabbit): > 5 g/kg

CALCIUM CARBONATE:

Acute oral toxicity : LD 50 (Rat): 6,450 mg/kg

Acute inhalation toxicity : LC 50 (Rat): > 3 mg/l
Exposure time: 4 h
Method: OECD Test Guideline 403
Assessment: Not classified as acutely toxic by inhalation
under GHS.
Remarks: Aerosol

Acute dermal toxicity : LD 50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402

PHENOL:

Acute oral toxicity : LD 50 (Rat): 317 mg/kg

LD 50 (Mouse): 270 mg/kg
Assessment: The component/mixture is classified as acute
oral toxicity, category 3.

Acute inhalation toxicity : Assessment: The component/mixture is classified as acute
inhalation toxicity, category 3.

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Acute dermal toxicity : LD 50 (Rabbit): 850 mg/kg
 LD50 (Rat, females): 660 mg/kg
 Method: OECD Test Guideline 402

FORMALDEHYDE:
 Acute oral toxicity : LD 50 (Guinea pig): 260 mg/kg
 LD 50 (Rat): 100 mg/kg
 LD 50 (Rat, Male): 800 mg/kg
 Assessment: The component/mixture is classified as acute oral toxicity, category 3.

Acute inhalation toxicity : LC 50 (Rat): 588 mg/m³
 Exposure time: 4 h
 Test atmosphere: gas
 Assessment: The component/mixture is classified as acute inhalation toxicity, category 3.

Acute dermal toxicity : LD 50 (Rabbit): 288 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Product:

Result: Repeated exposure may cause skin dryness or cracking.

Remarks: May cause skin irritation and/or dermatitis.

Components:

ACETONE:

Result: Mildly irritating to skin

Result: Repeated exposure may cause skin dryness or cracking.

METHYL ETHYL KETONE:

Result: Not irritating to skin

CALCIUM CARBONATE:

Result: Not irritating to skin

PHENOL:

Result: Corrosive to skin

FORMALDEHYDE:

Result: Causes burns.

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin., Causes

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serious eye irritation.

Components:

ACETONE:

Result: Irritating to eyes

METHYL ETHYL KETONE:

Result: Irritating to eyes

CALCIUM CARBONATE:

Result: Not irritating to eyes

PHENOL:

Result: Corrosive to eyes

FORMALDEHYDE:

Result: Corrosive to eyes

Respiratory or skin sensitisation

Skin sensitisation: May cause an allergic skin reaction.

Respiratory sensitisation: Not classified based on available information.

Components:

FORMALDEHYDE:

Result: Does not cause respiratory sensitisation.

Result: May cause sensitisation by skin contact.

Germ cell mutagenicity

Not classified based on available information.

Components:

PHENOL:

Genotoxicity in vitro

: Test Type: Chromosome aberration test in vitro
Test species: Chinese hamster ovary cells
Metabolic activation: with metabolic activation
Method: OECD Test Guideline 473
Result: positive

: Test Type: Micronucleus test
Test species: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 487
Result: positive

Genotoxicity in vivo

: Test Type: Micronucleus test
Test species: Mouse (male and female)
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: positive

FORMALDEHYDE:

Genotoxicity in vitro

: Test Type: Ames test
Test species: Salmonella typhimurium
Metabolic activation: without metabolic activation

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Result: positive

: Test Type: Chromosome aberration test in vitro
 Test species: mouse lymphoma cells
 Metabolic activation: with and without metabolic activation
 Result: positive

: Test Type: In vitro mammalian cell gene mutation test
 Test species: Chinese hamster fibroblasts
 Metabolic activation: with and without metabolic activation
 Result: negative

: Test Type: in vitro assay
 Test species: Human lymphocytes
 Metabolic activation: with and without metabolic activation
 Result: Conflicting results have been seen in different studies.

Genotoxicity in vivo

: Test Type: Micronucleus test
 Test species: Mouse
 Application Route: Oral
 Result: negative

Test Type: Micronucleus test
 Test species: Mouse
 Application Route: inhalation (gas)
 Result: negative

Test Type: in vivo assay
 Test species: Rat
 Application Route: inhalation (gas)
 Result: negative

Test Type: Mouse specific locus test
 Test species: Mouse
 Application Route: inhalation (gas)
 Result: negative

Test Type: Mammalian bone marrow sister chromatid exchange
 Test species: Rat
 Application Route: inhalation (gas)
 Result: negative

Test Type: comet assay
 Test species: Rat
 Application Route: inhalation (gas)
 Result: negative

Carcinogenicity
 May cause cancer.
Components:
 FORMALDEHYDE:
 Species: Rat

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Application Route: Ingestion
Result: negative

Species: Mouse
Application Route: Dermal
Result: negative

Species: Rat
Application Route: Inhalation
Result: positive
Carcinogenicity - Assessment : Presumed to have carcinogenic potential for humans

Reproductive toxicity

Not classified based on available information.

Components:

FORMALDEHYDE:

Effects on fertility : Remarks: No data available
Effects on foetal development : Species: Rat
Result: No teratogenic effects

STOT - single exposure

May cause drowsiness or dizziness.

Components:

ACETONE:

Exposure routes: Inhalation
Target Organs: Nervous system
Assessment: May cause drowsiness or dizziness.

METHYL ETHYL KETONE:

Assessment: May cause drowsiness or dizziness.

STOT - repeated exposure

May cause damage to organs (Skin, Nervous system, Liver, Kidney) through prolonged or repeated exposure.

Components:

PHENOL:

Target Organs: Skin
Assessment: May cause damage to organs through prolonged or repeated exposure.

Target Organs: Nervous system
Assessment: May cause damage to organs through prolonged or repeated exposure.

Target Organs: Liver
Assessment: May cause damage to organs through prolonged or repeated exposure.

Target Organs: Kidney
Assessment: May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

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FORMALDEHYDE:

Species: Rat
No observed adverse effect level: 82 mg/kg
Application Route: Ingestion

Species: Rat
No observed adverse effect level: 1.2 mg/m3
Application Route: inhalation (gas)
Target Organs: Nose, Upper respiratory tract

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

ACETONE:

May be harmful if swallowed and enters airways.

METHYL ETHYL KETONE:

May be harmful if swallowed and enters airways.

Further information

Product:

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.

Components:

METHYL ETHYL KETONE:

Remarks: Central nervous system

PHENOL:

Remarks: Central nervous system

Remarks: Blood

Carcinogenicity:

IARC

Group 1: Carcinogenic to humans

FORMALDEHYDE 50-00-0

OSHA

OSHA specifically regulated carcinogen

FORMALDEHYDE 50-00-0

NTP

Known to be human carcinogen

FORMALDEHYDE 50-00-0

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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

ACETONE:

Toxicity to fish : LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss)): 4,740 - 6,330 mg/l
 Exposure time: 96 h
 Test Type: static test

LC 50 (Fathead minnow (Pimephales promelas)): 8,733 - 9,482 mg/l
 Exposure time: 96 h
 Test Type: flow-through test

Toxicity to algae : NOEC (Microcystis aeruginosa): 530 mg/l
 Exposure time: 8 d
 Test Type: static test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 2,112 mg/l
 Exposure time: 28 d
 Test Type: flow-through test

METHYL ETHYL KETONE:

Toxicity to fish : LC 50 (Fathead minnow (Pimephales promelas)): 3,130 - 3,320 mg/l
 Exposure time: 96 h
 Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC 50 (Water flea (Daphnia magna)): 4,025 - 6,440 mg/l
 Exposure time: 48 h
 Test Type: static test
 Remarks: Intoxication

CALCIUM CARBONATE:

Toxicity to fish : LC 50 (Gambusia affinis (Mosquito fish)): > 56,000 mg/l
 Exposure time: 96 h
 Test Type: static test

PHENOL:

Toxicity to fish : LC 50 (Oncorhynchus mykiss (rainbow trout)): 7.5 - 14 mg/l
 Exposure time: 96 h
 Test Type: static test

LC 50 (Fathead minnow (Pimephales promelas)): 67.5 mg/l
 Exposure time: 96 h
 Test Type: flow-through test

LC 50 (Danio rerio (zebra fish)): 27.8 mg/l

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Exposure time: 96 h
 Method: Static
 Remarks: Mortality

Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (*Ceriodaphnia dubia*)): 3.1 mg/l
 Exposure time: 48 h
 Test Type: static test

Toxicity to algae : EC50 (*Pseudokirchneriella subcapitata* (green algae)): 61.1 mg/l
 Exposure time: 96 h Test
 Type: static test NOEC

Toxicity to fish (Chronic toxicity) : (Fish): 0.077 mg/l
 Exposure time: 60 d
 Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Water flea (*Daphnia magna*)): 0.16 mg/l
 Exposure time: 16 d
 Test Type: semi-static test

FORMALDEHYDE:

Toxicity to fish : LC 50 (*Danio rerio* (zebra fish)): 41 mg/l
 Exposure time: 96 h
 Method: Static
 Remarks: Mortality

LC 50 (*Striped bass* (*Morone saxatilis*)): 6.7 mg/l
 Exposure time: 96 h
 Method: Static

Toxicity to daphnia and other aquatic invertebrates : EC 50 (Water flea (*Daphnia magna*)): 29 mg/l
 Exposure time: 48 h
 Method: Static
 Remarks: Intoxication

EC 50 (Water flea (*Daphnia pulex*)): 5.8 mg/l
 Exposure time: 48 h

Toxicity to algae : ErC50 (*Desmodesmus subspicatus*): 4.89 mg/l
 Exposure time: 72 h

Toxicity to bacteria : EC 50 (activated sludge): 19 mg/l
 Exposure time: 3 h
 Test Type: Respiration inhibition

Persistence and degradability

Components:

ACETONE:

Biodegradability : Result: Readily biodegradable
 Biodegradation: 90.9 %
 Exposure time: 28 d

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Method: OECD Test Guideline 301B

PHENOL:

Biodegradability : Result: Readily biodegradable
 Biodegradation: 62 %
 Exposure time: 100 h
 Method: OECD Test Guideline 301C

FORMALDEHYDE:

Biodegradability : aerobic
 Result: Readily biodegradable
 Biodegradation: 90 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301D

aerobic
 Result: Readily biodegradable
 Biodegradation: > 90 %
 Exposure time: 2 Weeks
 Method: OECD Test Guideline 301C

Photodegradation :

Bioaccumulative potential

Components:

ACETONE:

Partition coefficient: n-octanol/water : log Pow: -0.24

METHYL ETHYL KETONE:

Partition coefficient: n-octanol/water : log Pow: 0.29

PHENOL:

Partition coefficient: n-octanol/water : log Pow: 1.46

FORMALDEHYDE:

Bioaccumulation : Remarks: No bioaccumulation is to be expected (log Pow <= 4).

Partition coefficient: n-octanol/water : log Pow: 0.35 (25 °C)

Mobility in soil

Components:

No data available

Other adverse effects

Product:

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Additional ecological information : No data available

Components:

FORMALDEHYDE:

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : Do not dispose of waste into sewer.
 Do not contaminate ponds, waterways or ditches with chemical or used container.
 Send to a licensed waste management company.

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

Contaminated packaging : Empty remaining contents.
 Dispose of as unused product.
 Empty containers should be taken to an approved waste handling site for recycling or disposal.
 Do not re-use empty containers.
 Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International transport regulations

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

UN	1133	Adhesives	3	II	
----	------	-----------	---	----	--

U.S. DOT - RAIL

UN	1133	Adhesives	3	II	
----	------	-----------	---	----	--

U.S. DOT - INLAND WATERWAYS

UN	1133	Adhesives	3	II	
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TRANSPORT CANADA - ROAD

UN	1133	ADHESIVES	3	II
----	------	-----------	---	----

TRANSPORT CANADA - RAIL

UN	1133	ADHESIVES	3	II
----	------	-----------	---	----

TRANSPORT CANADA - INLAND WATERWAYS

UN	1133	ADHESIVES	3	II
----	------	-----------	---	----

INTERNATIONAL MARITIME DANGEROUS GOODS

UN	1133	ADHESIVES	3	II
----	------	-----------	---	----

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	1133	Adhesives	3	II
----	------	-----------	---	----

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	1133	Adhesives	3	II
----	------	-----------	---	----

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

UN	1133	ADHESIVOS	3	II
----	------	-----------	---	----

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine pollutant	no
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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.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ACETONE	67-64-1	5000	6967.670011

SARA 311/312 Hazards : Acute Health Hazard

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SARA 313 Component(s)	Chronic Health Hazard		
	Fire Hazard		
	PHENOL	108-95-2	1.02 %
	FORMALDEHYDE	50-00-0	0.12 %

California Prop 65	WARNING! This product contains a chemical known to the State of California to cause cancer.		
	FORMALDEHYDE	50-00-0	
	VINYLCYCLOHEXENE, 4-	100-40-3	
	BENZENE	71-43-2	
	ACRYLONITRILE	107-13-1	
	1,3, BUTADIENE	106-99-0	
	WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.		
	VINYLCYCLOHEXENE, 4-	100-40-3	
	BENZENE	71-43-2	
	1,3, BUTADIENE	106-99-0	

The components of this product are reported in the following inventories:

- TSCA : On TSCA Inventory
- DSL : All components of this product are on the Canadian DSL.
- AUSTR : On the inventory, or in compliance with the inventory
- NZIOC : On the inventory, or in compliance with the inventory
- ENCS : Not in compliance with the inventory
- KECL : On the inventory, or in compliance with the inventory
- PICCS : On the inventory, or in compliance with the inventory
- IECSC : On the inventory, or in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECL (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

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SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:						
<p style="text-align: center;">Special hazard.</p>	<table border="1" style="width: 100%;"> <tr> <td style="background-color: blue; color: white;">HEALTH</td> <td style="text-align: center;">3*</td> </tr> <tr> <td style="background-color: red; color: white;">FLAMMABILITY</td> <td style="text-align: center;">3</td> </tr> <tr> <td style="background-color: yellow;">PHYSICAL HAZARD</td> <td style="text-align: center;">2</td> </tr> </table> <p>0 = not significant, 1 =Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	HEALTH	3*	FLAMMABILITY	3	PHYSICAL HAZARD	2
HEALTH	3*						
FLAMMABILITY	3						
PHYSICAL HAZARD	2						

NFPA Flammable and Combustible Liquids Classification

not determined

Full text of H-Statements referred to under sections 2 and 3.

H225	Highly flammable liquid and vapor.
H227	Combustible liquid.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H350	May cause cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

Sources of key data used to compile the Safety Data Sheet

Ashland internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

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 SDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

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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