

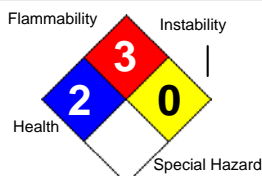
SAFETY DATA SHEET

Bulldog Adhesion Promoter

Page: 1



HEALTH	*	2
FLAMMABILITY		3
PHYSICAL		0
PPE	X	



Printed: 05/08/2014
Revision: 04/29/2014
Supersedes Revision: 07/23/2009

1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: 5000.2

Product Name: Bulldog Adhesion Promoter

Manufacturer Information

Company Name: W. M. Barr
2105 Channel Avenue
Memphis, TN 38113

Phone Number: (901)775-0100

Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346

Information: W.M. Barr Customer Service (800)398-3892

Web site address: www.wmbarr.com

Preparer Name: W.M. Barr EHS Dept (901)775-0100

Intended Use: Paint adhesion.

Synonyms
QTPO123, GTPO123

2. HAZARDS IDENTIFICATION

GHS Classification	Placard	Key word	GHS hazard phrase
Flammable Liquids, Category 2	Flame	Danger	Highly flammable liquid and vapor
Self-Reactive Substances, Type G	none		
Acute Toxicity: Inhalation, Category 4	Exclamation point	Warning	Harmful if inhaled
Skin Corrosion/Irritation, Category 1A-1C	Corrosive	Danger	Causes severe skin burns and eye damage
Serious Eye Damage/Eye Irritation, Category 2A	Exclamation point	Warning	Causes serious eye irritation
Skin Sensitization, Category 1	Exclamation point	Warning	May cause an allergic skin reaction
Germ Cell Mutagenicity, Category 2	Health hazard	Warning	Suspected of causing genetic defects
Toxic To Reproduction, Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child
Target Organ Systemic Toxicity (single exposure), Category 3	Exclamation point	Warning	May cause respiratory irritation, or may cause drowsiness and dizziness
Target Organ Systemic Toxicity (repeated exposure), Category 2	Health hazard	Warning	May cause damage to liver and kidney through prolonged or repeated exposure.
Aspiration Toxicity, Category 1	Health hazard	Danger	May be fatal if swallowed and enters airways.
Aquatic Toxicity (Acute), Category 3	none		Harmful to aquatic life
Aquatic Toxicity (Chronic), Category 3	none		Harmful to aquatic life with long lasting effects

GHS Hazard Phrases

H225: Highly flammable liquid and vapor.

H332: Harmful if inhaled.

H314: Causes severe skin burns and eye damage.

H319: Causes serious eye irritation.

H317: May cause an allergic skin reaction.

H341: Suspected of causing genetic defects.

H361: Suspected of damaging fertility or the unborn child.

H335: May cause respiratory irritation.

SAFETY DATA SHEET

Bulldog Adhesion Promoter

Page: 2

Printed: 05/08/2014

Revision: 04/29/2014

Supersedes Revision: 07/23/2009

H336: May cause drowsiness or dizziness.
H373: May cause damage to liver and kidney through prolonged or repeated exposure.
H304: May be fatal if swallowed and enters airways.
H402: Harmful to aquatic life.
H412: Harmful to aquatic life with long lasting effects.

GHS Precaution Phrases

P233: Keep container tightly closed.
P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting equipment.
P243: Take precautionary measures against static discharge.
P242: Use only non-sparking tools.
P271: Use only outdoors or in a well-ventilated area.
P261: Avoid breathing vapours.
P260: Do not breathe vapours.
P264: Wash hands thoroughly after handling.
P272: Contaminated work clothing should not be allowed out of the workplace.
P362+364: Take off contaminated clothing and wash it before reuse.
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P281: Use personal protective equipment as required.
P273: Avoid release to the environment.

GHS Response Phrases

P370+378: In case of fire use carbon dioxide, dry chemical, or foam to extinguish.
P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312: Call a POISON CENTER/doctor if you feel unwell.
P363: Wash contaminated clothing before reuse.
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301+330+331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P310: Immediately call a POISON CENTER/doctor.
P321: Specific treatment see First Aid.
P337+313: If eye irritation persists, get medical advice/attention.
P302+352: IF ON SKIN: Wash with plenty of soap and water.
P333+313: If skin irritation or rash occurs, seek medical advice/attention.
P308+313: IF exposed or concerned: Get medical attention/advice.
P309+311: Call a POISON CENTER or doctor/physician if exposed or you feel unwell.
P314: Get medical attention/advice if you feel unwell.
P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331: Do NOT induce vomiting.

GHS Storage and Disposal Phrases

P403+235: Store in cool/well-ventilated place.
P501: Dispose of contents/container according to all applicable local, state, and federal regulations..
P403+233: Store container tightly closed in well-ventilated place - if product is as volatile as to generate hazardous atmosphere.

SAFETY DATA SHEET

Bulldog Adhesion Promoter

Page: 3
Printed: 05/08/2014
Revision: 04/29/2014
Supersedes Revision: 07/23/2009

Potential Health Effects (Acute and Chronic)

INHALATION ACUTE EXPOSURE EFFECTS:

Vapor Harmful. May cause dizziness, headache, irritation of the upper respiratory tract and lungs, irritation and injury to mucous membranes, watering of the eyes, weakness, drowsiness, nausea, loss of coordination, numbness in fingers, arms and legs, depression of the central nervous system, pulmonary edema, shortness of breath, loss of appetite, fatigue, stupor, anesthesia, narcosis, vomiting, lightheadedness, liver and kidney injury, insensibility and other central nervous system effects, blood disorders, nose tumors, brain damage, giddiness, olfactory changes, confusion, hearing impairment, slurred speech, coughing, hallucinations, irregular heartbeat, unconsciousness, coma, and death. Intentional misuse of this product by deliberately concentrating and inhaling vapors can be harmful or fatal.

SKIN CONTACT ACUTE EXPOSURE EFFECTS:

This product is a skin irritant. Product may be absorbed through the skin. May cause irritation, drying and cracking of the skin, defatting of the skin, dermatitis, itching, redness, swelling, tissue damage, inflammation, numbness in fingers and arms, discomfort or pain, erythema. May be absorbed readily to produce symptoms similar to those listed under ingestion.

EYE CONTACT ACUTE EXPOSURE EFFECTS:

This material is an eye irritant. May cause redness, tearing, corneal clouding, discomfort or pain with excessive blinking and tear production, excess redness and possible slight swelling of the conjunctiva, stinging, conjunctivitis, visual intolerance to light. If not promptly removed, will injure eye tissue, which may result in permanent damage.

INGESTION ACUTE EXPOSURE EFFECTS:

Harmful or fatal if swallowed. May cause dizziness, headache, drowsiness, nausea, weakness, loss of coordination, irritation to mouth, throat and stomach, vomiting, gastrointestinal irritation, diarrhea, loss of appetite, pain and discomfort, cough and hoarseness, salivation, changes in white blood cells, burning sensation in mouth and stomach, unconsciousness and coma. Ingestion of significant quantities may result in red blood cell hemolysis. Liquid aspirated into lungs can cause chemical pneumonitis, which can be fatal.

CHRONIC EXPOSURE EFFECTS:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Prolonged skin contact may result in absorption of a harmful amount of this material. Prolonged or repeated contact may cause dermatitis. May cause dizziness, headaches, weakness, eye irritation, drying and cracking of the skin, dermatitis, fatigue, nausea, numbness in the hands and feet, permanent central nervous system changes, some loss of memory, liver and kidney damage, blood disorders, thyroid effects, enlarged liver, and irritation to the respiratory tract. Prolonged or repeated contact may cause skin irritation, even a burn. Prolonged exposure may cause slight swelling of the conjunctiva, blurring of vision may occur. Prolonged skin contact may cause mild to moderate redness and swelling.

Medical Conditions Generally Aggravated By Exposure

Diseases of the skin, liver, kidneys, and cardiovascular system.

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components (Chemical Name)	CAS #	Concentration	RTECS #
1. Toluene {Benzene, Methyl-; Toluol}	108-88-3	15.0 -40.0 %	XS5250000
2. Methyl ethyl ketone {MEK; 2-Butanone}	78-93-3	10.0 -30.0 %	EL6475000

SAFETY DATA SHEET

Bulldog Adhesion Promoter

Page: 4

Printed: 05/08/2014

Revision: 04/29/2014

Supersedes Revision: 07/23/2009

Hazardous Components (Chemical Name)	CAS #	Concentration	RTECS #
3. Butyl acetate {n-Butyl acetate, Acetic acid, Butyl ester}	123-86-4	10.0 -30.0 %	AF7350000
4. m-Xylene {Benzene, m-Dimethyl-}	108-38-3	5.0 -10.0 %	ZE2275000
5. Ethylbenzene {Ethylbenzol; Phenylethane}	100-41-4	1.0 -10.0 %	DA0700000
6. Styrene {Phenylethylene; Vinyl benzene; Styrol}	100-42-5	3.0 -7.0 %	WL3675000
7. o-Xylene {Benzene, o-Dimethyl-}	95-47-6	1.0 -5.0 %	ZE2450000
8. p-Xylene {Benzene, p-Dimethyl-}	106-42-3	1.0 -5.0 %	ZE2625000
9. Divinyl benzene (Benzene, Diethenyl-)	1321-74-0	1.0 -5.0 %	CZ9370000
10. Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, (a glycol ether)}	111-76-2	1.0 -5.0 %	KJ8575000
11. Ethyl methacrylate {2-Propenoic acie, 2-methyl-, ethyl ester}	97-63-2	1.0 -5.0 %	OZ4550000

4. FIRST AID MEASURES

Emergency and First Aid Procedures

INHALATION:

If user experiences breathing difficulty, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

SKIN CONTACT:

Wash with soap and water. Get medical attention if irritation develops or persists.

EYE CONTACT:

Immediately flush eyes with water for at least 15 minutes. Remove contact lenses if worn. Seek medical attention.

INGESTION:

If swallowed, do NOT induce vomiting. Call a physician, hospital emergency room, or poison control center immediately. Never give anything by mouth to an unconscious person.

Signs and Symptoms Of Exposure

Primary Routes of Exposure: Inhalation, Skin Contact.

5. FIRE FIGHTING MEASURES

Flammability Classification:

IB

Flash Pt:

39 F Method Used: Setaflash Closed Cup (Rapid Setaflash)

Explosive Limits:

LEL: No data.

UEL: No data.

Autoignition Pt:

No data available.

Fire Fighting Instructions

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved or equivalent and full protective gear.

Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Flammable Properties and Hazards

Danger! Flammable! Keep away from heat, sparks, flame, and all other sources of ignition. Do not smoke.

Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and all other sources of ignition during use and until all vapors are gone. Beware of static electricity that may be generated by synthetic clothing and other sources. Vapors can travel to a source of ignition and flash back.

SAFETY DATA SHEET

Bulldog Adhesion Promoter

Page: 5
Printed: 05/08/2014
Revision: 04/29/2014
Supersedes Revision: 07/23/2009

Hazardous Combustion Products

Carbon monoxide and carbon dioxide. Irritating or toxic vapors and gases.

Suitable Extinguishing Media

Use carbon dioxide, dry powder, or foam.

Unsuitable Extinguishing Media

No data available.

6. ACCIDENTAL RELEASE MEASURES

Steps To Be Taken In Case Material Is Released Or Spilled

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area. Wear appropriate personal protective equipment.

Small Spills: take up liquid with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

Large Spills: dike far ahead of spill for later disposal.

7. HANDLING AND STORAGE

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Precautions To Be Taken in Storing

Store in a cool dry place. Avoid extreme high or low temperatures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Hazardous Components (Chemical Name)	CAS #	OSHA TWA	ACGIH TWA	Other Limits
1. Toluene {Benzene, Methyl-, Toluol}	108-88-3	PEL: 200 ppm STEL: 500 ppm/(10min) CEIL: 300 ppm	TLV: 50 ppm	No data.
2. Methyl ethyl ketone {MEK; 2-Butanone}	78-93-3	PEL: 200 ppm	TLV: 200 ppm STEL: 300 ppm	No data.
3. Butyl acetate {n-Butyl acetate, Acetic acid, Butyl ester}	123-86-4	PEL: 150 ppm	TLV: 150 ppm STEL: 200 ppm	No data.
4. m-Xylene {Benzene, m-Dimethyl-}	108-38-3	No data.	TLV: 100 ppm STEL: 150 ppm	No data.
5. Ethylbenzene {Ethylbenzol; Phenylethane}	100-41-4	PEL: 100 ppm	TLV: 100 ppm STEL: 125 ppm	No data.
6. Styrene {Phenylethylene; Vinyl benzene; Styrol}	100-42-5	PEL: 100 ppm STEL: 600 ppm/(5min/3hr) CEIL: 200 ppm	TLV: 20 ppm STEL: 40 ppm	No data.
7. o-Xylene {Benzene, o-Dimethyl-}	95-47-6	PEL: 100 ppm	TLV: 100 ppm STEL: 150 ppm	No data.
8. p-Xylene {Benzene, p-Dimethyl-}	106-42-3	No data.	TLV: 100 ppm STEL: 150 ppm	No data.
9. Divinyl benzene (Benzene, Diethenyl-)	1321-74-0	No data.	TLV: 10 ppm	No data.
10. Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, (a glycol ether)}	111-76-2	PEL: 50 ppm	TLV: 20 ppm	No data.
11. Ethyl methacrylate {2-Propenoic acid, 2-methyl-, ethyl ester}	97-63-2	No data.	No data.	No data.

SAFETY DATA SHEET

Bulldog Adhesion Promoter

Page: 6

Printed: 05/08/2014

Revision: 04/29/2014

Supersedes Revision: 07/23/2009

Respiratory Equipment (Specify Type)

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

If the work area is not properly ventilated to keep airborne levels below their exposure limits, you must use a properly fitted and maintained NIOSH approved respirator for organic vapors. A dust mask does not provide protection against vapors.

Eye Protection

Safety glasses, chemical goggles, or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves

Wear impermeable gloves. Gloves contaminated with product should be discarded.

Other Protective Clothing

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure.

Engineering Controls (Ventilation etc.)

Use only with adequate ventilation to prevent the buildup of vapors. Do not use in areas where vapors can accumulate and concentrate. Whenever possible, use outdoors in an open air area. If using indoors, open all windows and doors and maintain a cross ventilation of moving fresh air across the work area away from the individual. If strong odor is noticed or you experience slight dizziness, headache, nausea, or other signs of inhalation exposure, STOP. The ventilation is inadequate. Leave the area immediately.

For OSHA controlled workplaces, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Work/Hygienic/Maintenance Practices

A source of clean water should be available in the work area for flushing of the eyes and skin. Wash hands thoroughly after use. Do not eat, drink, or smoke in the work area. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical States:	[] Gas [X] Liquid [] Solid
Melting Point:	No data.
Boiling Point:	No data.
Autoignition Pt:	No data.
Flash Pt:	39 F Method Used: Setaflash Closed Cup (Rapid Setaflash)
Specific Gravity (Water = 1):	0.9 - 0.915
Bulk density:	7.54 LB/GL
Vapor Pressure (vs. Air or mm Hg):	<=26 MM HG at 20 C
Vapor Density (vs. Air = 1):	> 1
Evaporation Rate:	~ 1
Solubility in Water:	No data.
Percent Volatile:	83 %
VOC / Volume:	<= 750 G/L
Appearance and Odor	
	Hazy, light yellow

10. STABILITY AND REACTIVITY

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability

No data available.

Incompatibility - Materials To Avoid

Incompatible with strong oxidizing agents, strong caustics, acids, strong bases, hydrogen peroxide, nitric acid, nitrates, sulfuric acid, amines, chemically active metals, salts, aldehydes, ammonia, and halogens.

Hazardous Decomposition Or Byproducts

Thermal decomposition may produce carbon monoxide, carbon dioxide, acrylic monomers, acrid smoke and fumes.

Possibility of Hazardous Reactions: Will occur [] Will not occur [X]

Conditions To Avoid - Hazardous Reactions

No data available.

11. TOXICOLOGICAL INFORMATION

Toxicological Information

CAS# 108-88-3:

Mutagenicity:, Mutation test: Sister chromatid exchange., Inhalation, Human, 252.0 g/L.

Result:

Effects on Newborn: Behavioral.

- Mutation Research., Elsevier Science Pub. B.V., POB 211, 1000 AE, Amsterdam Netherlands, Vol/p/yr: 519,171, 2002

Acute toxicity, LD50, Oral, Rat, 636.0 MG/KG.

Result:

Behavioral: Convulsions or effect on seizure threshold.

Behavioral: Coma.

Lungs, Thorax, or Respiration: Respiratory stimulation.

- Neurotoxicology., Intox Press, Inc., POB 34075, Little Rock, AR 72203, Vol/p/yr: 2,567, 1981

Acute toxicity, LC50, Inhalation, Rat, 49.00 GM/M3, 4 H.

Result:

Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

- Gigiena Truda i Professional'nye Zabolevaniya.(Labor Hygiene and Occupational Disease), V/O Mezhdunarodnaya Kniga, Moscow 113095 Russia, Vol/p/yr: 32(10),23, 1988

Standard Draize Test, Eyes, Human, 300.0 PPM.

Result:

Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

- Journal of Industrial Hygiene and Toxicology, Vol/p/yr: 25,282, 1943

CAS# 78-93-3:

Acute toxicity, LD50, Oral, Rat, 2737. MG/KG.

Result:

Gastrointestinal:Ulceration or bleeding from stomach.

- Toxicology and Applied Pharmacology, Academic Press, Inc., 1 E. First St., Duluth, MN 55802, Vol/p/yr: 19,699, 1971

Acute toxicity, LC50, Inhalation, Rat, 23500. MG/M3, 8 H.

SAFETY DATA SHEET
Bulldog Adhesion Promoter

Page: 8

Printed: 05/08/2014

Revision: 04/29/2014

Supersedes Revision: 07/23/2009

Result:

Gastrointestinal: Other changes.

Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: Other oxidoreductases.

- American Industrial Hygiene Association Journal., AIHA, 475 Wolf Ledges Pkwy., Akron, OH 44311,
Vol/p/yr: 20,364, 1959

Acute toxicity, LD50, Skin, Species: Rabbit, 6480. MG/KG.

Result:

Biochemical: Neurotransmitters or modulators (putative): Dopamine at other sites.

- Shell Chemical Company., Vol/p/yr: MSDS-5390-,

Standard Draize Test, Eyes, Human, 350.0 PPM.

Result:

Behavioral: Anticonvulsant.

- Journal of Industrial Hygiene and Toxicology, Vol/p/yr: 25,282, 1943

CAS# 100-41-4:

Mutagenicity:, Mutation test: Mutation in mammalian somatic cells., Mouse, 80.00 MG/L, Cell Type:
lymphocyte..

Result:

Behavioral: Alteration of operant conditioning.

Behavioral: Changes in psychophysiological tests.

- Environmental and Molecular Mutagenesis., Alan R. Liss, Inc., 41 E. 11th St, New York, NY 10003, Vol/p/yr:
12,85, 1988

Acute toxicity, LD50, Oral, Rat, 3500. MG/KG.

Result:

Liver: Other changes.

Kidney, Ureter, Bladder: Other changes.

- AMA Archives of Industrial Health., For publisher information, see AEHLAU, Chicago, IL, Vol/p/yr: 14,387,
1956

Acute toxicity, LD50, Skin, Species: Rabbit, 17800. UL/KG.

Result:

Effects on Newborn: Physical.

Effects on Newborn: Other postnatal measures or effects.

- Food and Cosmetics Toxicology., For publisher information, see FCTOD7, London United Kingdom, Vol/p/yr:
13,803, 1975

Acute toxicity, LC50, Inhalation, Rabbit, 4000. ppm.

Result:

Behavioral: Ataxia.

Behavioral: Alteration of classical conditioning.

Open irritation test., Skin, Species: Rabbit, 15.00 MG, 24 H, Mild.

Result:

Effects on Newborn: Viability index (e.g., # alive at day {4} per # born alive).

Effects on Newborn: Weaning or lactation index (e.g., # alive at weaning per # alive at day {4}).

Effects on Newborn: Biochemical and metabolic.

SAFETY DATA SHEET
Bulldog Adhesion Promoter

Page: 9

Printed: 05/08/2014

Revision: 04/29/2014

Supersedes Revision: 07/23/2009

- American Industrial Hygiene Association Journal., AIHA, 475 Wolf Ledges Pkwy., Akron, OH 44311,
Vol/p/yr: 23,95, 1962

Standard Draize Test, Eyes, Species: Rabbit, 500.0 MG, Severe.

Result:

Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth).

Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

- American Journal of Ophthalmology., Ophthalmic Pub. Co., 435 N. Michigan Ave., Suite 1415, Chicago, IL 60611, Vol/p/yr: 29,1363, 1946

CAS# 111-76-2:

Mutagenicity:, Mutation test: DNA damage., Route of Application: Unreported., Mouse, 3150. mg/kg.

Result:

Effects on Newborn: Live birth index (# fetuses per litter; measured after birth).

Effects on Newborn: Growth statistics (e.g., reduced weight gain).

- Toxicologist., Soc. of Toxicology, Inc., 475 Wolf Ledge Parkway, Akron, OH 44311, Vol/p/yr: 66,306, 2002

Acute toxicity, LD50, Oral, Rat, 470.0 MG/KG.

Result:

Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

- Dow Chemical Company Reports., Dow Chemical USA, Health and Environment Research, Toxicology Research Lab, Midland, MI 48640, Vol/p/yr: MSD-46,

Acute toxicity, LC50, Inhalation, Rat, 450.0 PPM, 4 H.

Result:

Behavioral: Ataxia.

Nutritional and Gross Metabolic: Weight loss or decreased weight gain.

- Toxicology and Applied Pharmacology, Academic Press, Inc., 1 E. First St., Duluth, MN 55802, Vol/p/yr: 68,405, 1983

Standard Draize Test, Eyes, Species: Rabbit, 100.0 MG, Severe.

Result:

Effects on Newborn: Apgar score (human only).

Effects on Newborn: Other neonatal measures or effects.

Effects on Newborn: Drug dependency.

- American Journal of Ophthalmology., Ophthalmic Pub. Co., 435 N. Michigan Ave., Suite 1415, Chicago, IL 60611, Vol/p/yr: 29,1363, 1946

Carcinogenicity/Other Information

IARC Group 2B: Possibly Carcinogenic to Humans.

IARC Group 3: Not Classifiable as to Carcinogenicity in Humans.

ACGIH A3: Confirmed animal carcinogen with unknown relevance to humans.

ACGIH A4: Not classifiable as a human carcinogen.

SAFETY DATA SHEET

Bulldog Adhesion Promoter

Page: 10

Printed: 05/08/2014

Revision: 04/29/2014

Supersedes Revision: 07/23/2009

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Toluene {Benzene, Methyl-, Toluol}	108-88-3	n.a.	3	A4	n.a.
2. Methyl ethyl ketone {MEK; 2-Butanone}	78-93-3	n.a.	n.a.	n.a.	n.a.
3. Butyl acetate {n-Butyl acetate, Acetic acid, Butyl ester}	123-86-4	n.a.	n.a.	n.a.	n.a.
4. m-Xylene {Benzene, m-Dimethyl-}	108-38-3	n.a.	n.a.	A4	n.a.
5. Ethylbenzene {Ethylbenzol; Phenylethane}	100-41-4	n.a.	2B	A3	n.a.
6. Styrene {Phenylethylene; Vinyl benzene; Styrol}	100-42-5	Possible	2B	A4	n.a.
7. o-Xylene {Benzene, o-Dimethyl-}	95-47-6	n.a.	n.a.	A4	n.a.
8. p-Xylene {Benzene, p-Dimethyl-}	106-42-3	n.a.	n.a.	A4	n.a.
9. Divinyl benzene (Benzene, Diethenyl-)	1321-74-0	n.a.	n.a.	n.a.	n.a.
10. Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, (a glycol ether)}	111-76-2	n.a.	3	A3	n.a.
11. Ethyl methacrylate {2-Propenoic acie, 2-methyl-, ethyl ester}	97-63-2	n.a.	n.a.	n.a.	n.a.

12. ECOLOGICAL INFORMATION

Results of PBT and vPvB assessment

CAS# 108-88-3:

LC50, Fathead Minnow (Pimephales promelas), 31700. UG/L, 96 H, Mortality, Water temperature: 26 C C, pH: 7.60, Hardness: 46.70 MG/L.

Result:

Age Effects.

- Acute Toxicities of Organic Chemicals to Fathead Minnows (Pimephales promelas), Volume 5, Geiger, D.L., L.T. Brooke, and D.J. Call, 1990

LC50, Water Flea (Daphnia magna), 310000. UG/L, 24 H, Mortality, Water temperature: 22 C C, pH: 8.10, Hardness: 72.00 MG/L.

Result:

Age Effects.

- Acute Toxicity of Priority Pollutants to Water Flea (Daphnia magna), LeBlanc, G.A., 1980

CAS# 78-93-3:

LC50, Fathead Minnow (Pimephales promelas), 3220000. UG/L, 96 H, Mortality, Water temperature: 26 C C, pH: 7.50, Hardness: 47.70 MG/L.

Result:

Affected fish swam at or near surface.

Affected fish lost equilibrium prior to death.

- Acute Toxicities of Organic Chemicals to Fathead Minnows (Pimephales promelas), Vol. 1, Brooke, L.T., D.J. Call, D.L. Geiger, and C.E. Northcott, 1984

LC50, Water Flea (Daphnia magna), 520000. UG/L, 24 H, Mortality, Water temperature: 22 C C, pH: 9.40, Hardness: 173.00 MG/L.

Result:

Age Effects.

- Acute Toxicity of Priority Pollutants to Water Flea (Daphnia magna), LeBlanc, G.A., 1980

CAS# 100-41-4:

LC50, Fathead Minnow (Pimephales promelas), 9090. UG/L, 96 H, Mortality, Water temperature: 22 C C, pH:

SAFETY DATA SHEET

Bulldog Adhesion Promoter

Page: 11
Printed: 05/08/2014
Revision: 04/29/2014
Supersedes Revision: 07/23/2009

7.20, Hardness: 50.00 MG/L.

Result:

Affected fish stopped schooling behavior.

Affected fish became hypoactive.

Fish were underreactive to external stimuli.

Affected fish lost equilibrium prior to death.

- Acute Toxicities of Organic Chemicals to Fathead Minnows (*Pimephales promelas*), Volume 5, Geiger, D.L., L.T. Brooke, and D.J. Call, 1990

LC50, Fathead Minnow (*Pimephales promelas*), 48510. UG/L, 48 H, Mortality, Water temperature: 25 C C, pH: 7.50, Hardness: 20.00 MG/L.

Result:

Affected fish stopped schooling behavior.

- Acute Toxicity of Some Important Petrochemicals to Fish, Pickering, Q.H., and C. Henderson, 1966

LC50, Fathead Minnow (*Pimephales promelas*), 42330. UG/L, 24 H, Mortality, Water temperature: 25 C C, pH: 8.20, Hardness: 360.00 MG/L.

Result:

Affected fish stopped schooling behavior.

- Acute Toxicity of Some Important Petrochemicals to Fish, Pickering, Q.H., and C. Henderson, 1966

LC50, Water Flea (*Daphnia magna*), 77000. UG/L, 24 H, Mortality, Water temperature: 22 C C, pH: 8.10, Hardness: 72.00 MG/L.

Result:

Affected fish became hypoactive.

Affected fish lost equilibrium prior to death.

- Acute Toxicity of Priority Pollutants to Water Flea (*Daphnia magna*), LeBlanc, G.A., 1980

LC50, Water Flea (*Daphnia magna*), neonate, 13900. UG/L, 48 H, Mortality, Water temperature: 20 C - 22 C C, pH: 8.20.

Result:

Age Effects.

- The Comparative Toxicity of Crude and Refined Oils to *Daphnia magna* and *Artemia*, MacLean, M.M., and K.G. Doe, 1989

CAS# 111-76-2:

LC50, Water Flea (*Daphnia magna*), 1720. MG/L, 24 H, Intoxication,, Water temperature: 20 C - 22 C C, pH: 7.70, Hardness: 16.00 dH.

Result:

Age Effects.

- Results of the Damaging Effect of Water Pollutants on *Daphnia magna* (Befunde der Schadwirkung Wassergefahrdender Stoffe Gegen *Daphnia magna*), Bringmann, G., and R. Kuhn, 1977

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method

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

SAFETY DATA SHEET

Bulldog Adhesion Promoter

Page: 12
Printed: 05/08/2014
Revision: 04/29/2014
Supersedes Revision: 07/23/2009

14. TRANSPORT INFORMATION

LAND TRANSPORT (US DOT)

DOT Hazard Class: 3
DOT Hazard Label: FLAMMABLE LIQUID
UN/NA Number: 1866
Packing Group: II

Additional Transport Information

For D.O.T. information, contact W.M. Barr Technical Services at 1-800-398-3892.

15. REGULATORY INFORMATION

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Toluene {Benzene, Methyl-, Toluol}	108-88-3	No	Yes 1000 LB	Yes	Yes
2. Methyl ethyl ketone {MEK; 2-Butanone}	78-93-3	No	Yes 5000 LB	No	Yes
3. Butyl acetate {n-Butyl acetate. Acetic acid, Butyl ester}	123-86-4	No	Yes 5000 LB	No	No
4. m-Xylene {Benzene, m-Dimethyl-}	108-38-3	No	Yes 1000 LB	Yes	No
5. Ethylbenzene {Ethylbenzol; Phenylethane}	100-41-4	No	Yes 1000 LB	Yes	Yes
6. Styrene {Phenylethylene; Vinyl benzene; Styrol}	100-42-5	No	Yes 1000 LB	Yes	Yes
7. o-Xylene {Benzene, o-Dimethyl-}	95-47-6	No	Yes 1000 LB	Yes	No
8. p-Xylene {Benzene, p-Dimethyl-}	106-42-3	No	Yes 100 LB	Yes	Yes
9. Divinyl benzene (Benzene, Diethenyl-)	1321-74-0	No	No	No	No
10. Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, (a glycol ether)}	111-76-2	No	No	Yes-Cat. N230	No
11. Ethyl methacrylate {2-Propenoic acie, 2-methyl-, ethyl ester}	97-63-2	No	Yes 1000 LB	No	No

Other US EPA or State Lists

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. Toluene {Benzene, Methyl-, Toluol}	108-88-3	HAP	Yes	Inventory, 8A CAIR	Yes
2. Methyl ethyl ketone {MEK; 2-Butanone}	78-93-3	No	No	Inventory	No
3. Butyl acetate {n-Butyl acetate. Acetic acid, Butyl ester}	123-86-4	No	Yes	Inventory, 4 Test	No
4. m-Xylene {Benzene, m-Dimethyl-}	108-38-3	HAP	No	Inventory	No
5. Ethylbenzene {Ethylbenzol; Phenylethane}	100-41-4	HAP	Yes	Inventory, 4 Test	Yes
6. Styrene {Phenylethylene; Vinyl benzene; Styrol}	100-42-5	HAP	Yes	Inventory, 8A CAIR	No
7. o-Xylene {Benzene, o-Dimethyl-}	95-47-6	HAP	No	Inventory	No
8. p-Xylene {Benzene, p-Dimethyl-}	106-42-3	HAP	No	Inventory, 4 Test, 8A PAIR	No
9. Divinyl benzene (Benzene, Diethenyl-)	1321-74-0	No	No	Inventory	No
10. Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, (a glycol ether)}	111-76-2	HAP	No	Inventory	No
11. Ethyl methacrylate {2-Propenoic acie, 2-methyl-, ethyl ester}	97-63-2	No	No	Inventory, 4 Test	No

SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:

Sec.302: EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. * indicates 10000 LB TPQ if not volatile.

SAFETY DATA SHEET

Bulldog Adhesion Promoter

Page: 13

Printed: 05/08/2014

Revision: 04/29/2014

Supersedes Revision: 07/23/2009

Sec.304:	EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. ** indicates statutory RQ.
Sec.313:	EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.
Sec.110:	EPA SARA 110 Superfund Site Priority Contaminant List

TSCA (Toxic Substances Control Act) Lists:

Inventory:	Chemical Listed in the TSCA Inventory.
5A(2):	Chemical Subject to Significant New Rules (SNURS)
6A:	Commercial Chemical Control Rules
8A:	Toxic Substances Subject To Information Rules on Production
8A CAIR:	Comprehensive Assessment Information Rules - (CAIR)
8A PAIR:	Preliminary Assessment Information Rules - (PAIR)
8C:	Records of Allegations of Significant Adverse Reactions
8D:	Health and Safety Data Reporting Rules
8D TERM:	Health and Safety Data Reporting Rule Terminations
12(b):	Notice of Export

Other Important Lists:

CWA NPDES:	EPA Clean Water Act NPDES Permit Chemical
CAA HAP:	EPA Clean Air Act Hazardous Air Pollutant
CAA ODC:	EPA Clean Air Act Ozone Depleting Chemical (1=CFC, 2=HCFC)
CA PROP 65:	California Proposition 65

International Regulatory Lists:

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

- [X] Yes [] No Acute (immediate) Health Hazard
[X] Yes [] No Chronic (delayed) Health Hazard
[X] Yes [] No Fire Hazard
[] Yes [X] No Sudden Release of Pressure Hazard
[X] Yes [] No Reactive Hazard

Regulatory Information Statement

All components of this material are listed on the TSCA Inventory or are exempt.

16. OTHER INFORMATION

Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

Revision Date: 04/29/2014

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required