PLASTIC WELDER II ACTIVATOR

This product appears in the following stock number(s):
14335 14340 14390 DA320

Last revised: 11/16/1999
Printed: 12/12/2000

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Tradename: PLASTIC WELDER II ACTIVATOR

General use: Adhesive

Chemical family: Acrylate

MANUFACTURER

ITW Devcon
30 Endicott St.
Danvers, MA 01923

EMERGENCY INFORMATION

Emergency telephone number
(CHEMTREC): (800) 424-9300
Other Calls: (978) 777-1100

2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS CONSTITUENTS **Exposure limits**

Constituent	Abbr.	CAS No.	Weight percent	ACGIH TLV	OSHA PEL	Other Limits
3,5-Diethyl-1,2-dihydro-1-phenyl-2-propylpyridine		34562317	1-10	n/e	n/e	n/e
Methyl Methacrylate Monomer	MMA	80626	70-80	100 ppm	100 ppm	100 ppm (Canada)

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) established by the American Conference of Governmental Industrial Hygienists. "STEL" indicates a short-term exposure limit. "PEL" indicates the OSHA Permissible Exposure Limit."n/e" indicates that no exposure limit has been established. An asterisk (*) indicates a substance whose identity is a trade secret of our supplier and unknown to us.

3. HAZARDS IDENTIFICATION

Emergency Overview

Appearance, form, odor: Paste with varied fragrant odor.

WARNING! Flammable. Overexposure to liquid, mist or vapor may have the following effects: EYE AND SKIN EXPOSURE: Irritant and potential skin sensitizer. May cause redness, itching, burning, rash. RESPIRATORY EXPOSURE: Irritant. May cause headache, nausea, dizziness, fatigue, drowsiness. Avoid breathing vapor. Use with adequate ventilation or use proper respiratory equipment. Wash thoroughly after handling. Do not take internally. Keep away from heat, sparks, open flames.

Potential health effects

Primary routes of exposure: ☒ Skin contact ☒ Skin absorption ☒ Eye contact ☒ Inhalation ☐ Ingestion

Symptoms of acute overexposure:

Skin: May cause irritation and sensitization. MMA may be absorbed through the skin.

Eyes: Liquid and vapors causes moderate irritation (burning ssensation, tearing, redness, swelling). May cause corneal damage.

Inhalation:
High concentration is irritant to respiratory tract and may cause dizziness, headache, and anaesthetic effects.

Ingestion:
Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.

Effects of chronic overexposure:
Prolonged exposure may lead to kidney, lung, heart and liver damage.

Carcinogenicity -- OSHA regulated: No ACGIH: No National Toxicology Program: No
International Agency for Research on Cancer: No

Medical conditions which may be aggravated by exposure:
Preexisting eye and skin disorders and diseases of the lung.

Other effects:
Developmental toxicity observed in animal tests with MMA at levels toxic to the mother. Overexposure to pyridine and some of its derivatives may include weakness, dizziness, nausea, loss of consciousness, loss of appetite, and sleep disturbances.

4. FIRST AID MEASURES

First aid for eyes:
Flush eye with clean water for at least 15 minutes while gently holding eyelids open. Get immediate medical attention.

First aid for skin:
Immediately remove contaminated clothing and excess contaminant. Flush skin with water. Wash thoroughly with warm soap and water. Consult a physician if irritation develops.

First aid for inhalation:
Remove patient to fresh air. Administer oxygen if breathing is difficult. Get medical attention if symptoms persist.

First aid for ingestion:
Do NOT induce vomiting. Give two glasses of water to dilute if patient is conscious. Get medical attention.

5. FIRE FIGHTING MEASURES

General fire and explosion characteristics:
Vapor forms explosive mixture with air.

Extinguishing media:
☐ Water ☒ Carbon dioxide ☒ Dry chemical ☒ Foam ☐ Alcohol foam

Flash Point (°F): 50 **Method:** TCC

Explosive limits in air (percent) -- **Lower:** 2.1 **Upper:** 12.5

Special firefighting procedures:

Keep personnel removed and upwind from fire. Wear self contained breathing apparatus and full protective equipment. Cool tank with water spray. Fight fire from a distance as the heat may rupture the tanks.

Unusual fire and explosion hazards:

Sealed containers at elevated temperatures may rupture due to polymerization. Vapors are heavier than air and may travel to ignition sources and flash back.

Hazardous products of combustion:

Toxic vapors may be released upon thermal decomposition (cyanide, nitrogen oxides).

6. ACCIDENTAL RELEASE MEASURES

Spill control:

Avoid personal contact. Eliminate ignition sources. Ventilate area.

Containment:

Dike, contain and absorb with clay, sand or other suitable non-combustible material.

Cleanup:

For large spills, pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand, or other suitable material and dispose of properly (RCRA hazardous waste). Add inhibitor to prevent polymerization.

Special procedures:

Prevent spill from entering drainage/sewer systems, waterways, and surface waters. Use non-sparking tools

7. HANDLING AND STORAGE

Handling precautions:

Do not breathe vapor or mist. Do not get in eyes, on skin or clothing. Wash thoroughly after handling. Close container after each use. Ground container when pouring. Keep away from heat, flame or sparks. Use non-sparking tools.

Storage:

Keep in a cool place, without direct exposure to sunlight. Keep container tightly closed and otherwise in accordance with NFPA regulations. Maintain air space in storage containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls

Ventilation :

Use ventilation that is adequate to keep employee exposure to airborne concentrations below exposure limits.

Other engineering controls :

Keep container tightly closed. Observe label precautions. Have emergency eye wash and safety shower present.

Personal protective equipment

Eye and face protection:

Wear safety glasses. Wear coverall chemical splash goggles and face shield when eye and face contact is possible.

Skin protection:

Wear impervious butyl rubber clothing as appropriate to prevent contact.

Respiratory protection:
A NIOSH/MSHA air purifying respirator with an organic vapor cartridge may be permissible, however use a positive pressure air supplied respirator if there is any potential for uncontrolled release, or unknown exposure levels.

9. PHYSICAL AND CHEMICAL PROPERTIES

Specific gravity:	0.96	**Boiling point (°F):**	213
Melting point (°F):	n/d	**Vapor density (air = 1):**	3.5
Vapor pressure (mmHg):	28 mm Hg at 68 °F	**Evaporation rate (butyl acetate = 1):**	3
VOC (grams/liter):	< 50 mixed	**Solubility in water:**	n/d
Percent volatile by volume:	n/d	**pH (5% solution or slurry in water):**	4.5-5.5
Percent solids by weight:	n/d		

10. STABILITY AND REACTIVITY

This material is chemically stable. Hazardous polymerization may occur.

Conditions to avoid :
Unstable with heat, direct sunlight, inert gas blanketing, ultraviolet radiation.

Incompatible materials:
Incompatible with strong oxidizing agents and reducing agents, acids and bases. Material is a strong solvent and can soften paint and rubber.

Hazardous products of decomposition:
Carbon monoxide, carbon dioxide, nitrogen oxides, cyanide and smoke.

Conditions under which hazardous polymerization may occur:
Excessive heat, storage in the absence of inhibitor and inadvertant addition of catalyst.

11. TOXICOLOGICAL INFORMATION

Acute oral effects: LD50 (rat): Not available.
Toxicity of MMA exposed near LD50 include blood in the urine and liver changes.

Acute dermal effects: LD50 (rabbit): Not available.
Dermatitis.

Acute inhalation effects: LC50 (rat): Not available. Exposure: 4 hours.
Toxicity of MMA at 8-100 times TLV from respiratory and gastrointestional irritation, lung damage, nervous system effects and blood in urine.

Eye irritation:
Not available.

Subchronic effects:
Inhalation: Repeated exposure of MMA at 5-100 times the TLV include lung damage, pulmonary irritation, liver changes, eye irritation, nasal tissue changes, incoordination and upper respiratory irritation. Ingestion: Liver and kidney affects

with altered function in both organs. Skin permeation may occur.

Carcinogenicity, teratogenicity, and mutagenicity:
Possible reproductive hazard based on animal data.

Other chronic effects:
Inhalation: long term exposure of MMA caused inflammation of the nasal cavity, changes in nasal sensory cells and decreased body weight. Ingestion: Can cause decreased body weight, and increased kidney weight

Toxicological information on hazardous chemical constituents of this product:

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 4hr, (rat)
3,5-Diethyl-1,2-dihydro-1-phenyl-2-propylpyridine	> 500 mg/kg	> 1000 mg/kg	n/d
Methyl Methacrylate Monomer	7872 mg/kg	> 5000 mg/kg	7093 ppm

'n/d' = 'not determined'

12 ECOLOGICAL INFORMATION

Ecotoxicity:
MMA has: estimate of 96 hour median threshold limit: 100-1,000 ppm; 96 hour LC50, fathead minnow: 150 ppm; 96 hour LC50, bluegill sunfish: 232 ppm

Mobility and persistence:
MMA is partially biodegradable in water. BOD-5 day: 0.14 g/g - 0.90 g/g; THOD : 1.92 g/g

Environmental fate:
MMA produces high tonnage material in wholly contained systems. Liquid with moderate mobility. Sparingly soluble in water. High potential for bioaccumulation. Low mobility in soil.

13. DISPOSAL CONSIDERATIONS

Please see also Section 15, Regulatory Information.

Waste management recommendations:
Do not dispose of in a landfill. Incineration is the preferred method of disposal.

14. TRANSPORT INFORMATION

Proper shipping name: Adhesives *****

Technical name : N/A

Hazard class : 3

UN number: 1133

Packing group: II

Emergency Response Guide no.: 128

IMDG page number: 3174

Other: Containers < 30 liters are PG III

*Depending upon the size and type of container, this material may be reclassified as "Consumer Commodity, ORM-D" for shipments within the United States, or "Limited Quantity" elsewhere. Refer to the appropriate regulation.

15. REGULATORY INFORMATION

U.S. Federal Regulations

TSCA:
All ingredients of this product are listed, or are exempt from listing, on the TSCA inventory.

The following RCRA code(s) applies to this material if it becomes waste:
D001

Regulatory status of hazardous chemical constituents of this product:

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs)	TSCA 12B Export Notification
3,5-Diethyl-1,2-dihydro-1-phenyl-2-propylpyridine	No	No	0.0	Not required
Methyl Methacrylate Monomer	No	Yes	1000.0	Required

*Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance list.
**Substances for which the "Toxic Chemical" column is marked "Yes" are on the SARA Section 313 list of Toxic Chemicals, for which release reporting may be required. For specific requirements, consult the appropriate regulations.

For purposes of SARA Section 312 hazardous materials inventory reporting, the following hazard classes apply to this material: - Immediate health hazard -- Delayed health hazard -- Fire hazard -- Reactivity hazard -

Canadian regulations

WHMIS hazard class(es) : B2; D2B

Regulatory notes:

In normal use, the methyl methacrylate in this product is polymerized during cure. For purposes of air quality regulations, the maximum amount of VOC (i.e. MMA) emitted is negligible (less than 5 %). Actual emissions are a function of substrate and process and should be considered on an individual basis.

16. OTHER INFORMATION

Hazardous Materials Identification System (HMIS) ratings:	Health	Flammability	Reactivity
	2*	3	2

The information and recommendations in this document are based on the best information available to us at the time of preparation, but we make no other warranty, express or implied, as to its correctness or completeness, or as to the results of reliance on this document.

PLASTIC WELDER II ADHESIVE

This product appears in the following stock number(s):
14335 14340 14390 DA305 DA320

Last revised: 12/04/1998
Printed: 12/12/2000

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Tradename: PLASTIC WELDER II ADHESIVE

General use: Adhesive

Chemical family: Acrylate

MANUFACTURER

ITW Devcon
30 Endicott St.
Danvers, MA 01923

EMERGENCY INFORMATION

Emergency telephone number
(CHEMTREC): (800) 424-9300
Other Calls: (978) 777-1100

2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS CONSTITUENTS **Exposure limits**

Constituent	Abbr.	CAS No.	Weight percent	ACGIH TLV	OSHA PEL	Other Limits
Maleic acid		110167	1-10	n/e	n/e	n/e
2,6-Di-tertiary-butyl-para-cresol	BHT	128370	1-10	10 mg/m3	10mg/m3	n/e
Methyl Methacrylate Monomer	MMA	80626	50-60	100 ppm	100 ppm	100 ppm (Canada)

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) established by the American Conference of Governmental Industrial Hygienists. "STEL" indicates a short-term exposure limit. "PEL" indicates the OSHA Permissible Exposure Limit."n/e" indicates that no exposure limit has been established. An asterisk (*) indicates a substance whose identity is a trade secret of our supplier and unknown to us.

3. HAZARDS IDENTIFICATION

Emergency Overview

Appearance, form, odor: Off-white paste with varied fragrant odor.

WARNING! Flammable. Overexposure to liquid, mist or vapor may have the following effects: EYE AND SKIN EXPOSURE: Irritant and potential skin sensitizer. May cause redness, itching, burning, rash. RESPIRATORY EXPOSURE: Irritant. May cause headache, nausea, dizziness, fatigue, drowsiness. Avoid breathing vapor. Use with adequate ventilation or use proper respiratory equipment. Wash thoroughly after handling. Do not take internally. Keep away from heat, sparks, open flames.

Potential health effects

Primary routes of exposure: ☒ Skin contact ☒ Skin absorption ☒ Eye contact ☒ Inhalation ☐ Ingestion

Symptoms of acute overexposure:

Skin: May cause irritation and sensitization. MMA and maleic acid may pass through intact skin.

Eyes: Liquid and vapors causes moderate irritation (burning ssensation, tearing, redness, swelling). May cause conjunctivitis and corneal damage.

Inhalation:
High concentration is irritant to respiratory tract and may cause dizziness, headache, and anaesthetic effects.

Ingestion:
Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain. May cause vomiting.

Effects of chronic overexposure:
Prolonged exposure may lead to kidney, lung, heart and liver damage.

Carcinogenicity -- OSHA regulated: No ACGIH: No National Toxicology Program: No
International Agency for Research on Cancer: No

Medical conditions which may be aggravated by exposure:
Preexisting eye and skin disorders and diseases of the lung.

Other effects:
Developmental toxicity observed in animal tests with MMA at levels toxic to the mother.

4. FIRST AID MEASURES

First aid for eyes:
Flush eye with clean water for at least 15 minutes while gently holding eyelids open. Get immediate medical attention.

First aid for skin:
Immediately remove contaminated clothing and excess contaminant. Flush skin with water. Wash thoroughly with warm soap and water. Consult a physician if irritation develops.

First aid for inhalation:
Remove patient to fresh air. Administer oxygen if breathing is difficult. Get medical attention if symptoms persist.

First aid for ingestion:
Do NOT induce vomiting. Give two glasses of water to dilute if patient is conscious. Get medical attention.

5. FIRE FIGHTING MEASURES

General fire and explosion characteristics:
Vapor forms explosive mixture with air.

Extinguishing media:
☐ Water ☒ Carbon dioxide ☒ Dry chemical ☒ Foam ☐ Alcohol foam

Flash Point (°F): 50 **Method:** TCC

Explosive limits in air (percent) -- Lower: 2.1 **Upper:** 12.5

Special firefighting procedures:
Keep personnel removed and upwind from fire. Wear self contained breathing apparatus and full protective equipment. Cool tank with water spray. Fight fire from a distance as the heat may rupture the tanks.

Unusual fire and explosion hazards:

Sealed containers at elevated temperatures may rupture due to polymerization. Vapors are heavier than air and may travel to ignition sources and flash back.

Hazardous products of combustion:

Carbon monoxide, carbon dioxide, fumaric acid, maleic anhydride fumes, and smoke.

6. ACCIDENTAL RELEASE MEASURES

Spill control:

Avoid personal contact. Eliminate ignition sources. Ventilate area.

Containment:

Dike, contain and absorb with clay, sand or other suitable non-combustible material.

Cleanup:

For large spills, pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand, or other suitable material and dispose of properly (RCRA hazardous waste). Add inhibitor to prevent polymerization.

Special procedures:

Prevent spill from entering drainage/sewer systems, waterways, and surface waters. Use non-sparking tools

7. HANDLING AND STORAGE

Handling precautions:

Do not breathe vapor or mist. Do not get in eyes, on skin or clothing. Wash thoroughly after handling. Close container after each use. Ground container when pouring. Keep away from heat, flame or sparks. Use non-sparking tools.

Storage:

Keep in a cool place, without direct exposure to sunlight. Keep container tightly closed and otherwise in accordance with NFPA regulations. Maintain air space in storage containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls

Ventilation :

Use ventilation that is adequate to keep employee exposure to airborne concentrations below exposure limits.

Other engineering controls :

Keep container tightly closed. Observe label precautions. Have emergency eye wash and safety shower present.

Personal protective equipment

Eye and face protection:

Wear safety glasses. Wear coverall chemical splash goggles and face shield when eye and face contact is possible.

Skin protection:

Wear impervious butyl rubber clothing as appropriate to prevent contact.

Respiratory protection:

A NIOSH/MSHA air purifying respirator with an organic vapor cartridge may be permissible, however use a positive pressure air supplied respirator if there is any potential for uncontrolled release, or unknown exposure levels.

9. PHYSICAL AND CHEMICAL PROPERTIES

Specific gravity:	0.93-1.05	**Boiling point (°F):**	213
Melting point (°F):	-54	**Vapor density (air = 1):**	3.5
Vapor pressure (mmHg):	28 mm Hg at 68 °F	**Evaporation rate (butyl acetate = 1):**	3
VOC (grams/liter):	< 50 mixed	**Solubility in water:**	n/d
Percent volatile by volume:	n/d	**pH (5% solution or slurry in water):**	
Percent solids by weight:	n/d		

10. STABILITY AND REACTIVITY

This material is chemically stable. Hazardous polymerization may occur.

Conditions to avoid :
Unstable with heat, direct sunlight, inert gas blanketing, ultrviolet radiation.

Incompatible materials:
Incompatible with strong oxidizing agents and reducing agents, metals, amines. Material is a strong solvent and can soften paint and rubber

Hazardous products of decomposition:
Carbon monoxide, carbon dioxide, fumaric acid, maleic anhydride fumes, and smoke.

Conditions under which hazardous polymerization may occur:
Excessive heat, storage in the absence of inhibitor and inadvertant addition of catalyst.

11. TOXICOLOGICAL INFORMATION

Acute oral effects: LD50 (rat): > 2000 mg/kg (estimate)
Toxicity of MMA exposed near LD50 include blood in the urine and liver changes.

Acute dermal effects: LD50 (rabbit): > 3000 mg/kg (estimate)
Dermatitis. Maleic acid is a skin and mucous membrane irritant.

Acute inhalation effects: LC50 (rat): Not available. Exposure: 4 hours.
Toxicity of MMA at 8-100 times TLV from respiratory and gastrointestional irritation, lung damage, nervous system effects and blood in urine.

Eye irritation:
Maleic acid is a severe eye irritant.

Subchronic effects:
Inhalation: Repeated exposure of MMA at 5-100 times the TLV include lung damage, pulmonary irritation, liver changes, eye irritation, nasal tissue changes, incoordination and upper respiratory irritation. Ingestion: Liver and kidney affects with altered function in both organs. Skin permeation may occur.

Carcinogenicity, teratogenicity, and mutagenicity:
Possible reproductive hazard based on animal data.

Other chronic effects:

Inhalation: long term exposure of MMA caused inflammation of the nasal cavity, changes in nasal sensory cells and decreased body weight. Ingestion: Can cause decreased body weight, and increased kidney weight

Toxicological information on hazardous chemical constituents of this product:

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 4hr, (rat)
Maleic acid	708 mg/kg	1560 mg/kg	n/d
2,6-Di-tertiary-butyl-para-cresol	890 mg/kg	n/d	n/d
Methyl Methacrylate Monomer	7872 mg/kg	> 5000 mg/kg	7093 ppm

'n/d' = 'not determined'

12 ECOLOGICAL INFORMATION

Ecotoxicity:

MMA has: estimate of 96 hour median threshold limit: 100-1,000 ppm; 96 hour LC50, fathead minnow: 150 ppm; 96 hour LC50, bluegill sunfish: 232 ppm

Mobility and persistence:

MMA is partially biodegradable in water. BOD-5 day: 0.14 g/g - 0.90 g/g; THOD : 1.92 g/g

Environmental fate:

MMA produces high tonnage material in wholly contained systems. Liquid with moderate mobility. Sparingly soluble in water. High potential for bioaccumulation. Low mobility in soil.

13. DISPOSAL CONSIDERATIONS

Please see also Section 15, Regulatory Information.

Waste management recommendations:

Do not dispose of in a landfill. Incineration is the preferred method of disposal.

14. TRANSPORT INFORMATION

Proper shipping name: Adhesives *

Technical name : N/A

Hazard class : 3

UN number: 1133

Packing group: II

Emergency Response Guide no.: 128

IMDG page number: 3174

Other: Containers < 30 liters are PG III

*Depending upon the size and type of container, this material may be reclassified as "Consumer Commodity, ORM-D" for shipments within the United States, or "Limited Quantity" elsewhere. Refer to the appropriate regulation.

15. REGULATORY INFORMATION

U.S. Federal Regulations

TSCA:
All ingredients of this product are listed, or are exempt from listing, on the TSCA inventory.

The following RCRA code(s) applies to this material if it becomes waste:
D001, D019

Regulatory status of hazardous chemical constituents of this product:

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs)	TSCA 12B Export Notification
Maleic acid	No	No	0.0	Not required
2,6-Di-tertiary-butyl-para-cresol	No	No	0.0	Not required
Methyl Methacrylate Monomer	No	Yes	1000.0	Required

*Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance list.

**Substances for which the "Toxic Chemical" column is marked "Yes" are on the SARA Section 313 list of Toxic Chemicals, for which release reporting may be required. For specific requirements, consult the appropriate regulations.

For purposes of SARA Section 312 hazardous materials inventory reporting, the following hazard classes apply to this material: - Immediate health hazard -- Delayed health hazard -- Fire hazard -- Reactivity hazard -

Canadian regulations

WHMIS hazard class(es) : B2; D2B

Regulatory notes:

In normal use, the methyl methacrylate in this product is polymerized during cure. For purposes of air quality regulations, the maximum amount of VOC (i.e. MMA) emitted is negligible (less than 5 %). Actual emissions are a function of substrate and process and should be considered on an individual basis.

16. OTHER INFORMATION

Hazardous Materials Identification System (HMIS) ratings:	Health	Flammability	Reactivity
	2*	3	2

The information and recommendations in this document are based on the best information available to us at the time of preparation, but we make no other warranty, express or implied, as to its correctness or completeness, or as to the results of reliance on this document.