

MA 320 / MA 3940 ACTIVATOR

This product appears in the following stock number(s):

32000 32400 IT900

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**Tradename:** MA 320 / MA 3940 ACTIVATOR**General use:** This information applies to the activator component of the two-part kit. After curing, the product is not hazardous.**Chemical family:** Epoxy resin**MANUFACTURER**ITW Plexus
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
p(BD/MMA/STY)		25053092	5 - 15	n/e	n/e	n/e
Bisphenol A diglycidyl ether resin	DGEBPA	25068386	30 - 40	n/e	n/e	n/e
Butyl benzyl phthalate	BBP	85687	1 - 10	n/e	n/e	5 mg/m ³
Benzoyl peroxide	BPO	94360	5 - 15	5 mg/m ³	5 mg/m ³	5 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: viscous liquid with little odor.

WARNING! Eye and skin irritant. Potential skin sensitizer.**Potential health effects****Primary routes of exposure:** ☒ Skin contact ☒ Skin absorption ☒ Eye contact ☐ Inhalation ☐ Ingestion**Symptoms of acute overexposure:****Skin:** Moderate irritant. Contact at elevated temperatures can cause thermal burns which may result in permanent damage. May cause skin sensitization (itching, redness, rashes, hives, burning, swelling).

Eyes: Moderate irritant (stinging, burning sensation, tearing, redness, swelling). Contact at elevated temperatures can cause thermal burns which may result in permanent damage or blindness.

Inhalation:

The low vapor pressure of the resin makes inhalation unlikely in normal use. In applications where vapors (caused by high temperature) or mists (caused by mixing) are created, breathing may cause a mild burning sensation in the nose, throat and lungs.

Ingestion:

Acute oral toxicity is low. May cause gastric distress (nausea, vomiting, diarrhea). May cause adverse reproductive affects at high doses.

Effects of chronic overexposure:

Prolonged or repeated skin contact may cause sensitization, with itching, swelling, or rashes on later exposure. Pure benzoyl peroxide is reported to be an allergen.

Carcinogenicity -- OSHA regulated: No

ACGIH: No

National Toxicology Program: No

International Agency for Research on Cancer:No

Cancer-suspect constituent(s) : None

Medical conditions which may be aggravated by exposure:

Preexisting eye and skin disorders. Development of preexisting skin or lung allergy symptoms may increase.

Other effects:

See section 11.

4. FIRST AID MEASURES

First aid for eyes:

Flush eye with clean water for at least 20 minutes while gently holding eyelids open, lifting upper and lower lids. Get immediate medical attention.

First aid for skin:

Immediately remove contaminated clothing and excess contaminant. Flush skin with water for at least 15 minutes. Wash thoroughly with soap and warm 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. Rinse mouth out with water, then sip 2 glasses of water. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips (if sitting) or to the side (if lying down) to prevent aspiration. Get medical attention.

5. FIRE FIGHTING MEASURES

General fire and explosion characteristics:

Decomposition products can be flammable. Self accelerating decomposition temperature is 129 F (estimated).

Extinguishing media:

☐ Water

☒ Carbon dioxide

☒ Dry chemical

☒ Foam

☐ Alcohol foam

Flash Point (°F): n/d

Method: (No flashpoint method for peroxides)

Explosive limits in air (percent) -- Lower: n/d

Upper: n/d

Special firefighting procedures:

If large amounts of material are involved, evacuate area and fight fire from safe distance. Do not enter confined space without full bunker gear. Firefighters should wear self-contained breathing apparatus and protective clothing. Cool fire exposed containers with water.

Unusual fire and explosion hazards:

Benzoyl peroxide can decompose violently if heated strongly while confined. Personnel in vicinity and downwind should be evacuated.

Hazardous products of combustion:

When heated to decomposition it emits fumes of Cl- , carbon monoxide, carbon dioxide, other fumes and vapors varying in composition and toxicity.

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 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. Flush area with water to remove trace residue.

Special procedures:

Prevent spill from entering drainage/ sewer systems, waterways, and surface waters. Notify appropriate authorities as required. Use non-sparking tools.

7. HANDLING AND STORAGE**Handling precautions:**

Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after using and particularly before eating, drinking, smoking, applying cosmetics, or using toilet facilities.

Laundry contaminated clothing and protective gear before reuse. Discard contaminated leather articles.

Provide appropriate ventilation/ respiratory protection against decomposition products (see Section 10) during welding/ flame cutting operations and against particulates during sanding/ grinding. Use nonsparking equipment.

Storage:

Store in a cool, dry area away from high temperatures and flames. Storage above 100 F will reduce useful life of the material. Keep from heat, sparks, and open flame. Exposure to high heat may cause a reaction. Do not store near combustibles.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Engineering controls****Ventilation :**

Local exhaust ventilation is preferred although good general mechanical ventilation is usually adequate for most industrial applications. Local exhaust is recommended for confined areas.

Other engineering controls :

Have emergency shower and eye wash available.

Personal protective equipment**Eye and face protection:**

Chemical goggles if liquid contact is likely, or Safety glasses with side shields.

Skin protection:

Chemical-resistant gloves and other gear as required to prevent skin contact.

Respiratory protection:

None required at normal handling temperatures and conditions. Use NIOSH approved organic vapor cartridges for uncured resin and dust/ particle respirators during grinding/sanding operations of cured resin as exposure levels dictate.

9. PHYSICAL AND CHEMICAL PROPERTIES

Specific gravity:	1.0-1.25	Boiling point (°F):	n/d
Melting point (°F):	n/d	Vapor density (air = 1):	n/d
Vapor pressure (mmHg):	n/d at 171 °F	Evaporation rate (butyl acetate = 1):	<<1
VOC (grams/liter):	n/d	Solubility in water:	slight
Percent volatile by volume:	< 4	pH (5% solution or slurry in water):	neutral
Percent solids by weight:	> 96		

10. STABILITY AND REACTIVITY

This material is chemically stable. Hazardous polymerization will not occur.

Conditions to avoid :

Heat, spark, open flame, contamination, and friction

Incompatible materials:

Strong Lewis or mineral acids, strong oxidizing agents, strong mineral and organic bases (especially primary and secondary aliphatic amines). Polymerization accelerators.

Hazardous products of decomposition:

Oxides of carbon; aldehydes, acids, flammable and toxic fumes, and other organic substances may be formed during combustion.

Conditions under which hazardous polymerization may occur:

Heat is generated when activator is mixed with adhesive; Run-a-way cure reactions may char and decompose the activator, generating unidentified fumes and vapors which may be toxic.

11. TOXICOLOGICAL INFORMATION

Acute oral effects: LD50 (rat): > 5000 mg/kg

BPO: slightly toxic to practically non-toxic to rats.

Acute dermal effects: LD50 (rabbit): Not available

BPO: non-irritating to rabbits (4-hr exposure). Repeated controlled human skin contact studies produced skin allergy.

Acute inhalation effects: LC50 (rat): Not available

Exposure: 8 hours.

BPO: practically non-toxic to rats (LC50 > 22.4 mg/L, 4-hr).

Eye irritation:

BPO: severely irritating to rabbits.

Subchronic effects:

No data available.

Carcinogenicity, teratogenicity, and mutagenicity:

1) **MUTAGENICITY:** Liquid resins based on diglycidyl ether of Bisphenol A (DGEBA), have proved to be inactive when tested by in vivo mutagenicity assays. These resins have shown activity in in vitro microbial mutagenicity screening and have produced chromosomal aberrations in cultured rat liver cells. The significance of these tests to man is unknown. 2) **CARCINOGENICITY:** Recent 2-year bioassays in rats and mice exposed by the dermal route to DGEBA yielded no evidence of carcinogenicity to the skin or any other organs. This study clarifies prior equivocal results from a 2-year mouse skin painting study, which were suggestive, but not conclusive, for weak carcinogenic activity. 3) The International Agency for Research on Cancer (IARC) concluded that DGEBA is not classifiable as a carcinogen (IARC group 3), that is human and animal evidence of carcinogenicity is inadequate. BPO: both positive and negative (mutagenic and non-mutagenic) responses occurred in tests with animal or bacterial cells. Repeated skin application with a known carcinogen enhanced skin tumor production in mice by the carcinogen.

Other chronic effects:

DGEBA: Prolonged or repeated skin contact may cause sensitization, with itching, swelling, or rashes on later exposure. Studies have shown bisphenol A diglycidyl ether resin to cause allergic contact dermatitis. BPO: Rats fed dose of 2800 mg/kg for 2-yrs showed increase incidence of testicular atrophy.

Toxicological information on hazardous chemical constituents of this product:

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 4hr, (rat)
p(BD/MMA/STY)	n/d	n/d	n/d
Bisphenol A diglycidyl ether resin	11.4 g/kg	>20 ml/kg	no deaths
Butyl benzyl phthalate	2330 mg/kg	>10 mg/kg	n/d
Benzoyl peroxide	7710 mg/kg	n/d	n/d

'n/d' = 'not determined'

12 ECOLOGICAL INFORMATION**Ecotoxicity:**

BPO: 96 hr, LC50 guppy (semi-static) = 2.0 mg/l, moderately toxic.

Mobility and persistence:

BPO: almost 60 % biodegradation was reached after 28 days in the closed bottle ready biodegradability test.

Environmental fate:

BPO: EC50 = 35 mg/L absorbed to gel for activated sludge respiration inhibition.

13. DISPOSAL CONSIDERATIONS

Please see also Section 15, Regulatory Information.

Waste management recommendations:

If this resin becomes a waste, it would not be a hazardous waste by RCRA criteria (40CFR 261). Dispose of according to applicable federal, state, and local regulations. Incineration is the preferred method of disposal.

14. TRANSPORT INFORMATION

Proper shipping name: Non-regulated
Technical name : N/A
Hazard class : N/A
UN number: N/A
Packing group: N/A
Emergency Response Guide no.: N/A
IMDG page number: N/A
Other: N/A

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:

None

Regulatory status of hazardous chemical constituents of this product:

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs)	TSCA 12B Export Notification
p(BD/MMA/STY)	No	No	0.0	Not required
Bisphenol A diglycidyl ether resin	No	No	0.0	Not required
Butyl benzyl phthalate	No	No	100.0	Required
Benzoyl peroxide	No	Yes	0.0	Not 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 -- Reactivity hazard -

Canadian regulations

WHMIS hazard class(es) : D2B

All components of this product are on the Domestic Substances List.

16. OTHER INFORMATION

**Hazardous Materials
Identification System (HMIS)
ratings:**

Health**2*****Flammability****2****Reactivity****1**

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.