MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	FORMULA 512 M
Product number	303004
Company information	Brulin & Company, Inc. P.O. Box 270 Indianapolis, IN 46206 US www.Brulin.com
Emergency	CHEMTREC 1-800-424-9300
General information	Phone: 317-923-3211 Fax: 317-925-4596

2. Hazards Identification

Emergency overview This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Potential health effects

Eyes	Causes severe eye burns.
Skin	Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis. May be absorbed through the skin in harmful amounts.
Inhalation	Inhalation of high vapour concentrations can cause CNS-depression and narcosis.
Ingestion	Harmful: may cause lung damage if swallowed.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Naphtha (petroleum), heavy aromatic	64742-94-5	< 40
2-Butoxyethanol	111-76-2	< 20
Ethanolamine	141-43-5	< 2.5
Non-hazardous and other components below reportable levels		< > 40

4. First Aid Measures

First aid procedures

Eye contact	Immediately flush eyes with plenty of water for at least 20 minutes. Get medical attention immediately.
Skin contact	Wash with soap and water. Launder contaminated clothing before reuse.
Ingestion	Do not induce vomiting. Give several glasses of water to dilute contents of stomach and call a physician.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately.

General advice In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

5. Fire Fighting Measures

Flammable properties Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition.

Extinguishing media

Suitable extinguishing media	Dry chemical, CO2, water spray or regular foam.

Protection of firefighters

Protective equipment and precautions for firefighters	In the event of fire, wear self contained breathing apparatus. Cool containers with flooding quantities of water until well after fire is out.
Hazardous combustion products	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

6. Accidental Release Measures

Personal precautions	Ensure adequate ventilation. Avoid inhalation of vapor, fumes, dust and/or mist from the spilled material.
Methods for containment	Remove sources of ignition. Stop source of leak if possible.
Methods for cleaning up	Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

7. Handling and Storage

Handling	Do not breathe gas/fumes/vapor/spray.
Storage	Keep in a well-ventilated place. Keep at temperatures between 4 and 49??C.

8. Exposure Controls / Personal Protection

Engineering controls	Use general ventilation.

Personal protective equipment

Eye / face protection	Wear chemical goggles.
Skin protection	Wear appropriate chemical resistant gloves.
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
General hygeine considerations	Handle in accordance with good industrial hygiene and safety practice. Keep away from food and drink. When using do not smoke. Wash hands before breaks and immediately after handling the product.

9. Physical & Chemical Properties

Appearance	clear liquid
Color	green
Odor	solvent
Odor threshold	Not available.
Form	Liquid.
pH	13.5
Freezing point	Not available.
Boiling point	212 °F (100 °C)
Flash point	152 °F (66.7 °C) Pensky-Martens Closed Cup
Evaporation rate	1 (water = 1)
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor density	4 approximately
Specific gravity	0.975
Solubility (water)	100 %
VOC	52.68 %

10. Chemical Stability & Reactivity Information

Chemical stability	Stable, however, may decompose if heated.
Conditions to avoid	Do not freeze.

Incompatible materials	Strong oxidizing agents.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Acute effects	Acute LD50: 3111 mg/kg, Rat, Oral Acute LC50: 1496 mg/l/4h, Rat, Inhalation Causes severe burns.
Local effects	Harmful by inhalation, in contact with skin and if swallowed. Irritating to respiratory system. Blood disorder may occur after ingestion.
Chronic effects	Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood. Prolonged or repeated exposure may cause lung injury. Prolonged exposure may cause chronic effects.
Further information	Symptoms may be delayed.

12. Ecological Information

Ecotoxicity	Components of this product have been identified as having potential environmental concerns.

13. Disposal Considerations

Waste codes	D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel]
Disposal instructions	Dispose in accordance with all applicable regulations. This material and its container must be disposed of as hazardous waste.
Contaminated packaging	Triple rinse containers. Can be offered for recycling, re-conditioning or puncture.

14. Transport Information

DOT

Basic shipping requirements:

Proper shipping name	Ethanolamine solution
Hazard class	8
UN number	UN2491
Packing group	III
Additional information:	
Special provisions	IB3, T4, TP1
Packaging exceptions	154
Packaging non bulk	203
Packaging bulk	241
ERG number	153

IATA

Basic shipping requirements:

Proper shipping name	Ethanolamine solution
Hazard class	8
UN number	2491
Packing group	III
Additional information:	
Packaging instructions cargo only	820
Maximum net quantity packaging	5 L
Maximum net quantity packaging cargo only	60 L
ERG code	8L

IMDG

Basic shipping requirements:

Proper shipping name	ETHANOLAMINE or ETHANOLAMINE SOLUTION
Hazard class	8

UN number 2491
Packing group III

DOT

IATA

IMDG

15. Regulatory Information

US federal regulations All components are on the U.S. EPA TSCA Inventory List.

CERCLA (Superfund) reportable quantity

2-Butoxyethanol: 1.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

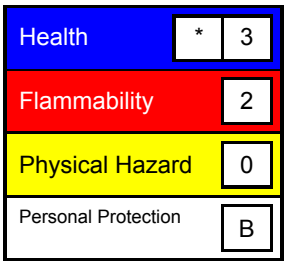
State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

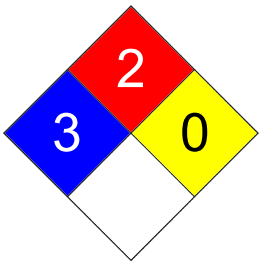
2-Butoxyethanol (111-76-2)	Listed.
Ethanolamine (141-43-5)	Listed.

16. Other Information

HMIS rating



NFPA codes



Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.

This data sheet contains changes from the previous version in section(s):

Hazards Identification: Emergency overview
Transport Information: Product Shipping Name/Packing Group

Issue date

06-03-2011