



SAFETY DATA SHEET

Preparation Date 12-Mar-2015

Revision Date 16-Mar-2015

Revision Number 2

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Name **DICROMAX 8**

Other means of identification

Product Code 2121510
CAS Number Mixture
Formula Mixture
Synonyms Mixture
UN-No UN3017
EPA Registration Number 5481-448-2794

Recommended use of the chemical and restrictions on use

Recommended Use Agriculture
Uses advised against Repeated contact with food. Avoid prolonged contact with eyes, skin, and clothing.

Details of the supplier of the safety data sheet

Supplier Address ACETO AGRICULTURAL CHEMICALS CORPORATION
4 Tri Harbor Court
Port Washington, NY 11050-4661
Phone: (516) 627-6000
Fax: (516) 627-6093
Email: aceto@aceto.com

Emergency Telephone Number(s)

ChemTrec: 1-800-424-9300 Outside of the United States: 1-703-527-3887

2. HAZARDS IDENTIFICATION

Classification

Acute Toxicity - Oral	Category 2
Acute Toxicity - Dermal	Category 3
Acute toxicity - Inhalation (Vapors)	Category 4
Serious eye damage/eye irritation	Category 2
Carcinogenicity	Category 1A

Label elements

Emergency Overview

Signal Word**DANGER****Hazard statements**

Fatal if swallowed
 Toxic in contact with skin
 Harmful if inhaled
 Causes serious eye irritation
 May cause cancer
 Very toxic to aquatic life with long lasting effects

**Appearance**

Light yellow to Dark amber

Physical State

Liquid

Odor

Mild Ester-like

Precautionary Statements - Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Wear eye/face protection

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention
 Specific treatment (see supplemental first aid instructions on this label)
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
 Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None known

Other Information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS**Synonyms**

Mixture

Formula Mixture

Chemical Name	CAS-No	Weight %	North American Hazard Indicator
Phosphoric Acid 3-(Dimethylamino)-1-Methyl-3-Oxo-1-Propenyl Dimethyl Ester	141-66-2	82	1 0.05 mg/m ³ TWA (inhalable fraction and vapor)
2-Propanol	67-63-0	<=18	1 400 ppm TWA; 980 mg/m ³ TWA 400 ppm STEL 200 ppm TWA Monograph 71 [1999]; Supplement 7 [1987]; Monograph 15 [1977]
Other Ingredients	N/A	<=18	False

4. FIRST AID MEASURES

First Aid Measures

General Advice

This product is a severe cholinesterase inhibitor. A physician should be contacted in all cases of exposure to Dicrotophos and its formulations. Wear protective equipment when treating someone exposed to Dicrotophos to prevent exposure of the rescuer.

NOTE TO PHYSICIANS. This is an Organophosphate (OP) Insecticide. IV Atropine sulfate is the antidote of choice against parasympathetic nerve stimulation. If there are signs of parasympathetic stimulation, Atropine Sulfate should be injected at 10 minute intervals in doses of 1 to 2 milligrams until complete atropinization has occurred. Pralidoxime chloride (2-PAM chloride) may also be used as an effective antidote in addition to and while maintaining full atropinization. In adults, an initial dose of 1 gram of 2-PAM should be injected, preferably as an infusion, in 250 cc of saline over a 15 to 20 minute period. If this is not practical, 2-PAM may be administered slowly by intravenous injection as a 5% solution in water over not less than 2 minutes. After about an hour, a second dose of 1 gram of 2-PAM will be indicated if muscle weakness has not been relieved. For infants and children, the dose of 2-PAM is 0.25 grams. Avoid morphine, aminophylline, phenothiazines, reserpine, furosemide and ethacrynic acid. Clear chest by postural drainage. Oxygen administration may be necessary. Observe patient continuously for 48 hours. Repeated exposure to cholinesterase inhibitors may without warning cause prolonged susceptibility to very small doses of any cholinesterase inhibitor. Allow no further exposure until time for cholinesterase regeneration has been attained as determined by a blood test. Bathe and shampoo contaminated skin and hair. If ingested, empty stomach; activated charcoal is useful to further limit absorption. If victim is alert, Syrup of Ipecac (2 tablespoons in adults, 1 tablespoon in small children) followed by water (2 glasses for adults, 1 glass for children) is indicated. If symptoms such as loss of gag reflex, convulsions, or unconsciousness occur before emesis, gastric lavage should be considered following intubation with a cuffed endotracheal tube.

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Remove/Take off immediately all contaminated clothing. Do not attempt to neutralize with chemical agents. Wash contaminated clothing before reuse. Call a physician immediately.

Inhalation

Move to fresh air. Call a physician immediately. If not breathing, give artificial respiration. Be sure the contact areas are clean to prevent contamination of the rescuer.

Ingestion

Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician immediately. If swallowed, and the victim is conscious and alert, induce vomiting immediately, as directed by medical personnel.

Protection of First-aiders

Do not handle the patient without the following protective equipment in place: Chemical

resistant gloves and apron (preferably nitrile). Remove contaminated clothing and do not reuse without thorough cleaning with detergent and hot water. Dispose of heavily contaminated clothing, including shoes, as a hazardous waste.

Most important symptoms and effects, both acute and delayed

Main Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Water fog. "Alcohol" Foam. Dry chemical. Carbon dioxide (CO₂).

Unsuitable Extinguishing Media No information available.

Hazardous Combustion Products Thermal decomposition or combustion may produce hazardous gases and/or materials.

Explosion Data Not available

Sensitivity to mechanical impact Not explosive.

Sensitivity to static discharge Not available.

Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

Protective Equipment and Precautions for Firefighters

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. In case of insufficient ventilation, wear suitable respiratory equipment.

Environmental Precautions Local authorities should be advised if significant spillages cannot be contained. Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Should not be released into the environment.

Methods and material for containment and cleaning up

Methods for Cleaning up Pick up and transfer to properly labelled containers.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Handling Use only in an area equipped with a safety shower. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation. Do not breathe vapours/dust. Avoid contact with skin, eyes and clothing. Avoid repeated exposure.

Conditions for safe storage, including any incompatibilities

Storage Keep container tightly closed in a dry and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition.

Incompatible Materials Alkalines.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Phosphoric Acid 3-(Dimethylamino)-1-Methyl-3-Oxo-1-Propenyl Dimethyl Ester 141-66-2	0.05 mg/m ³ TWA (inhalable fraction and vapor) Skin - potential significant contribution to overall exposure by the cutaneous route	(vacated) S* (vacated) TWA: 0.25 mg/m ³	-
2-Propanol 67-63-0	200 ppm TWA 400 ppm STEL	TWA: 400 ppm TWA: 980 mg/m ³ (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m ³ (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m ³	2000 ppm IDLH (10% LEL)
Other Ingredients N/A	-	-	-

Appropriate engineering controls

Engineering Controls Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Individual protection measures, such as personal protective equipment

Eye/face Protection Goggles. If splashes are likely to occur, wear: Face-shield.

Skin and body protection Impervious gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching the glove's outer surface) to avoid skin contact with this product. The type of protective equipment must be selected according to the concentration and amount of dangerous substance at the specific workplace.

Respiratory Protection Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as appropriate. Specific use regulations are listed on the label. For emergency and other conditions where the exposure limit may be greatly exceeded, use an approved positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance Light yellow to Dark amber
Physical State Liquid
Odor Mild Ester-like
Odor Threshold No information available

Property	Values	Remarks • Method
pH	No data available	
Melting/freezing point	No data available	No data available
Boiling Point/Range	No information available	
Flash Point	38-43 °C	No information available
Evaporation Rate		

Flammability (solid, gas)	
Flammability Limits in Air	
upper flammability limit	12.7%
lower flammability limit	2.0%
Vapor Pressure	No information available
Vapor Density	Not available
Specific Gravity	1.19 g/mL / 9.9 lb/gal @ 20°C
Water Solubility	Miscible with water
Solubility in other solvents	This product is soluble in ketones, esters, aromatic hydrocarbons
Partition coefficient: n-octanol/water	E-isomer - 2.445; Z-isomer = 0.000481
Autoignition temp (°C)	No data available Estimated
Decomposition temperature	No data available
Viscosity, kinematic	No information available
Viscosity, dynamic	Not available
Explosive Properties	No information available
Oxidizing Properties	No information available

Other Information

Softening Point	No information available
Molecular Weight	No information available
VOC Content	No information available
Density	No information available
Bulk Density	No information available

10. STABILITY AND REACTIVITY

Reactivity	Not applicable.
Chemical Stability	Stable under recommended storage conditions
Conditions to Avoid	Heat, flames and sparks.
Incompatible Materials	Alkalines.
Hazardous Decomposition Products	Carbon monoxide. Unidentified organic compounds may be formed during combustion.
Possibility of Hazardous Reactions	None under normal processing

11. TOXICOLOGICAL INFORMATION**Product Information**

LD50 Oral:	8/11 mg/kg; (females/males); Tox Category I
LD50 Dermal:	876/487 mg/kg; (male&female); Tox Category II
LC50 Inhalation:	> 0.059 mg/L; Tox Category II

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Phosphoric Acid 3-(Dimethylamino)-1-Methyl-3-Oxo- 1-Propenyl Dimethyl Ester 141-66-2	= 13 mg/kg (Rat)	= 168 mg/kg (Rabbit) = 42 mg/kg (Rat)	= 90 mg/m ³ (Rat) 4 h
2-Propanol 67-63-0	= 4396 mg/kg (Rat)	12800 mg/kg (Rat) 12870 mg/kg (Rabbit)	72.6 mg/L (Rat) 4 h
Other Ingredients N/A		-	-

Information on likely routes of exposure

Eyes	Irritating to eyes.
-------------	---------------------

Skin Non-irritating.

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity Dicrotophos has shown an increased incidence of thyroid follicular cell adenomas in male mice receiving 50 ppm dicrotophos, the highest dose level tested in a two year study. EPA's Cancer Classification for Dicrotophos states only 'Suggestive Evidence of Carcinogenicity but Not Sufficient to Assess Human Carcinogenic Potential.' None of the following have classified Dicrotophos as carcinogenic: IARC, NTP, OSHA, or ACGIH.

Chemical Name	ACGIH	IARC	NTP	OSHA
Phosphoric Acid 3-(Dimethylamino)-1-Methyl- 3-Oxo-1-Propenyl Dimethyl Ester 141-66-2	A4 - Not Classifiable as a Human Carcinogen	Group 2A		Present
2-Propanol 67-63-0	A4 - Not Classifiable as a Human Carcinogen	Group 3		Present

Eye damage/irritation No information available.

Skin Corrosion/Irritation No information available.

Sensitization May cause sensitization by skin contact.

Reproductive Effects Dicrotophos has shown effects on reproductive performance, pup survival and pup growth but only at dose levels (25 to 5 ppm) that also showed paternal toxicity in a rat multigeneration study.

Mutagenic Effects Not considered to be mutagenic.

Developmental Effects No information available.

Teratogenic Effects No evidence of teratogenicity in laboratory animals.

STOT - single exposure No information available.

STOT - Repeated Exposure No information available.

Aspiration Hazard No information available.

Numerical measures of toxicity - Product Information

ATEmix (inhalation-dust/mist) 11.3 mg/L
ATEmix (inhalation-vapor) 11.3 mg/L
LD50 Oral: 8/11 mg/kg (females/males) Tox Category I
LD50 Dermal: 876/487 mg/kg (male&female) Tox Category II
LC50 Inhalation: > 0.059 mg/L Tox Category II

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Chemical Name	Freshwater Algae Data	Freshwater Fish Species Data	Microtox Data	Water Flea Data
2-Propanol 67-63-0	> 1000 mg/L EC50 1000: 72 h Desmodesmus subspicatus mg/L EC50 1000: 96 h Desmodesmus subspicatus mg/L EC50	11130: 96 h Pimephales promelas mg/L LC50 static 9640: 96 h Pimephales promelas mg/L LC50 flow-through 1400000: 96 h Lepomis macrochirus µg/L LC50	= 35390 mg/L EC50 Photobacterium phosphoreum 5 min	= 13299 mg/L EC50 13299: 48 h Daphnia magna mg/L EC50

Persistence / Degradability No information available.

Bioaccumulation / Accumulation No information available.

Mobility in Soil No information available.

Chemical Name	log Pow =
2-Propanol 67-63-0	0.05

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Method Contact waste disposal services. Dispose of in accordance with local regulations.

Contaminated Packaging Triple rinse (or equivalent). Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

DOT

UN-No UN3017
Proper Shipping Name Organophosphorus pesticides, liquid, toxic, flammable
Hazard Class 6.1
Subsidiary Class 3
Packing Group II
Description UN3017, ORGANOPHOSPHORUS PESTICIDES, LIQUID, TOXIC, FLAMMABLE, 6.1 (3), II, Marine pollutant
Emergency Response Guide Number 131

TDG

UN-No UN3017
Proper Shipping Name Organophosphorus pesticide, liquid, toxic, flammable
Hazard Class 6.1
Subsidiary Class 3
Packing Group II
Description UN3017, Organophosphorus pesticide, liquid, toxic, flammable (Phosphoric Acid 3-(Dimethylamino)-1-Methyl-3-Oxo-1-Propenyl Dimethyl Ester, 2-Propanol), 6.1 (3), II

MEX

UN-No UN3017
Proper Shipping Name Organophosphorus pesticide, liquid, toxic, flammable
Hazard Class 6.1
Subsidiary Class 3
Packing Group II
Description UN3017, Organophosphorus pesticide, liquid, toxic, flammable (Phosphoric Acid

3-(Dimethylamino)-1-Methyl-3-Oxo-1-Propenyl Dimethyl Ester, 2-Propanol), 6.1 (3), II

ICAO

UN-No UN3017
Proper Shipping Name Organophosphorus pesticide, liquid, toxic, flammable
Hazard Class 6.1
Subsidiary Class 3
Packing Group II
Description UN3017, Organophosphorus pesticide, liquid, toxic, flammable (Phosphoric Acid 3-(Dimethylamino)-1-Methyl-3-Oxo-1-Propenyl Dimethyl Ester, 2-Propanol), 6.1 (3), II

IATA

UN-No UN3017
Proper Shipping Name Organophosphorus pesticide, liquid, toxic, flammable
Hazard Class 6.1
Subsidiary Class 3
Packing Group II
Description UN3017, Organophosphorus pesticide, liquid, toxic, flammable (Phosphoric Acid 3-(Dimethylamino)-1-Methyl-3-Oxo-1-Propenyl Dimethyl Ester, 2-Propanol), 6.1 (3), II

IMDG/IMO

UN-No UN3017
Proper Shipping Name Organophosphorus pesticide, liquid, toxic, flammable
Hazard Class 6.1
Subsidiary Class 3
Packing Group II
EmS No. F-E, S-D
Description UN3017, Organophosphorus pesticide, liquid, toxic, flammable (Phosphoric Acid 3-(Dimethylamino)-1-Methyl-3-Oxo-1-Propenyl Dimethyl Ester, 2-Propanol), 6.1 (3), II, (0°C c.c.)

RID

UN-No UN3017
Proper Shipping Name Organophosphorus pesticide, liquid, toxic, flammable
Hazard Class 6.1
Packing Group II
Classification Code TF2
Description UN3017, Organophosphorus pesticide, liquid, toxic, flammable (Phosphoric Acid 3-(Dimethylamino)-1-Methyl-3-Oxo-1-Propenyl Dimethyl Ester, 2-Propanol), 6.1 (3), II
ADR/RID-Labels 6.1 + 3

ADR

UN-No UN3017
Proper Shipping Name Organophosphorus pesticide, liquid, toxic, flammable
Hazard Class 6.1
Packing Group II
Classification Code TF2
Tunnel Restriction Code (D/E)
Description UN3017, Organophosphorus pesticide, liquid, toxic, flammable (Phosphoric Acid 3-(Dimethylamino)-1-Methyl-3-Oxo-1-Propenyl Dimethyl Ester, 2-Propanol), 6.1 (3), II
ADR/RID-Labels 6.1 + 3

ADN

Proper Shipping Name Organophosphorus pesticide, liquid, toxic, flammable
Hazard Class 6.1
Packing Group II
Classification Code TF2
Special Provisions 274, 61, 802
Description UN3017, Organophosphorus pesticide, liquid, toxic, flammable (Phosphoric Acid 3-(Dimethylamino)-1-Methyl-3-Oxo-1-Propenyl Dimethyl Ester, 2-Propanol), 6.1 (3), II
Hazard Labels 6.1 + 3
Limited Quantity 100 ml
Ventilation VE01, VE02

15. REGULATORY INFORMATION

International Inventories

U.S.A. (TSCA)	Does not Comply
Canada (DSL)	Does not Comply
EU (EINECS)	Does not Comply
EU (ELINCS)	Does not Comply
Japan (ENCS)	Does not Comply
China	Does not Comply
Korea (KECL)	Does not Comply
Philippines (PICCS)	Does not Comply
Australia (AICS)	Does not Comply

Chemical Name	U.S.A. (TSCA)	Canada (DSL)	EU (EINECS)	EU (ELINCS)	
Phosphoric Acid 3-(Dimethylamino)-1-Methyl- 3-Oxo-1-Propenyl Dimethyl Ester	-	-	Present	-	
2-Propanol	Present Sunset 06/16/1999	Present	Present	-	
Other Ingredients	-	-	-	-	
Component	Japan (ENCS)	China	Korea (KECL)	Philippines (PICCS)	Australia (AICS)
Phosphoric Acid 3-(Dimethylamino)-1-Methyl-3- -Oxo-1-Propenyl Dimethyl Ester 141-66-2 (82)	-	-	Present	Present	Present
2-Propanol 67-63-0 (<=18)	Present (2)-207	Present	Present	Present	Present
Other Ingredients N/A (<=18)	-	-	-	-	-

Federal Regulations

Component	TSCA Listing
2-Propanol 67-63-0 (<=18)	40 CFR 799.2325

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	SARA 313 - Threshold Values
2-Propanol 67-63-0 (<=18)	1.0 % de minimis concentration (only if manufactured by the strong acid process, no supplier notification)

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Chemical Name	CAS-No	VOCs
2-Propanol	67-63-0	Present

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

*State Regulations***California Proposition 65**

This product does not contain any Proposition 65 chemicals.

State Right-to-Know

This product does not contain any State Right-to-Know chemicals.

Chemical Name	New Jersey	Massachusetts	Illinois	Rhode Island	Pennsylvania
Phosphoric Acid 3-(Dimethylamino)-1-Methyl-3-Oxo-1-Propenyl Dimethyl Ester 141-66-2	sn 0676	Extraordinarily hazardous; Neurotoxin	Present	Toxic (skin)	Environmental hazard
2-Propanol 67-63-0	sn 1076	Present		Toxic; Flammable	Environmental hazard Special hazardous substance

U.S. EPA Label Information

EPA Pesticide Registration Number 5481-448-2794

EPA Statement

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

EPA Pesticide Label

Danger Fatal if swallowed. May be fatal if absorbed through skin or if inhaled. Causes moderate eye irritation. Prolonged or frequent repeated skin contact, may cause allergic reactions in some individuals.

*Canada***WHMIS Statement**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

NFPA

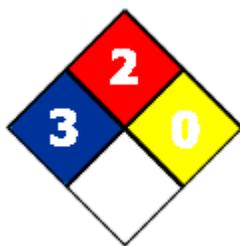
Health 3

Flammability 2

Instability 0

Physical Hazard 0

HMIS



Preparation Date

12-Mar-2015

Revision Date

16-Mar-2015

Revision Summary

Not available

Disclaimer

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

End of MSDS