

**Issuing Date** 05-May-2020

**Revision Date** 05-May-2020

**Revision Number** 1

## 1. Identification

### Product identifier

**Product Name** Willowood Oxyflo 2EC

### Other means of identification

**Product Code(s)** 87290-8

**Synonyms** Oxyfluoren

### Recommended use of the chemical and restrictions on use

**Recommended use** Herbicide

**Restrictions on use** For professional use only

### Details of the supplier of the safety data sheet

#### Manufacturer Address

Generic Crop Science  
 1887 Whitney Mesa Drive #9740  
 Henderson, NV 89014-2069  
 866-396-0465

**E-mail** cs@genericcropscience.com

### Emergency telephone number

**Emergency telephone** CHEMTREC: +1-703-527-3887 (INTERNATIONAL)  
 1-800-424-9300 (NORTH AMERICA) 24/7 Health Emergencies: Call 800-858-7378  
 (National Pesticide Information Center)

## 2. Hazard(s) identification

### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 1B
Aspiration hazard	Category 1

### Hazards not otherwise classified (HNOC)

Not applicable

### Label elements

#### **Danger**

#### **Hazard statements**

Causes skin irritation.  
 Causes serious eye irritation.  
 May cause cancer.

May be fatal if swallowed and enters airways.



#### Precautionary Statements - Prevention

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Wear protective gloves/protective clothing/eye protection/face protection  
Wash face, hands and any exposed skin thoroughly after handling

#### Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention  
Specific treatment (see .? 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 ON SKIN: Wash with plenty of water and soap  
If skin irritation occurs: Get medical advice/attention  
Take off contaminated clothing and wash it before reuse  
IF SWALLOWED: Immediately call a POISON CENTER or doctor  
Do NOT induce vomiting

#### Precautionary Statements - Storage

Store locked up

#### Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

#### Other information

May be harmful if swallowed. May be harmful in contact with skin. Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

#### Unknown acute toxicity

### 3. Composition/information on ingredients

#### Substance

Not applicable.

#### Mixture

#### Synonyms

Oxyfluoren

Chemical name	CAS No	Weight-%	Trade secret
Naphtha (petroleum), heavy aromatic	64742-94-5	50-60	*
Anionic/nonionic blend	-	10-20	*
Octanamide, N,N-dimethyl-	1118-92-9	5-10	*
Decanamide, N,N-dimethyl-	14433-76-2	5-10	*
Naphthalene	91-20-3	5-10	*
Isobutyl alcohol	78-83-1	< 3	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

## 4. First-aid measures

### Description of first aid measures

<b>General advice</b>	IF exposed or concerned: Get medical advice/attention. Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
<b>Inhalation</b>	Aspiration into lungs can produce severe lung damage. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If breathing is difficult, (trained personnel should) give oxygen. Get immediate medical advice/attention. Delayed pulmonary edema may occur.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. Do NOT induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.
<b>Self-protection of the first aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

### Most important symptoms and effects, both acute and delayed

<b>Symptoms</b>	Difficulty in breathing. Coughing and/ or wheezing. Dizziness. May cause redness and tearing of the eyes. Burning sensation.
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### Indication of any immediate medical attention and special treatment needed

<b>Note to physicians</b>	Because of the danger of aspiration, emesis or gastric lavage should not be employed unless the risk is justified by the presence of additional toxic substances.
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## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable extinguishing media</b>	No information available.
<b>Specific hazards arising from the chemical</b>	No information available.
<b>Hazardous combustion products</b>	Carbon oxides. Nitrogen oxides (NOx). Hydrogen fluoride.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	None.
<b>Sensitivity to static discharge</b>	None.
<b>Special protective equipment for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Ensure adequate ventilation. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.
<b>Other information</b>	Refer to protective measures listed in Sections 7 and 8.

### Methods and material for containment and cleaning up

<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Pick up and transfer to properly labeled containers.

## 7. Handling and storage

### Precautions for safe handling

<b>Advice on safe handling</b>	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.
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### Conditions for safe storage, including any incompatibilities

<b>Storage Conditions</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Store away from other materials.
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## 8. Exposure controls/personal protection

### Control parameters

<b>Exposure Limits</b>	The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.
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Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Naphthalene 91-20-3	TWA: 10 ppm S*	TWA: 10 ppm TWA: 50 mg/m <sup>3</sup> (vacated) TWA: 10 ppm (vacated) TWA: 50 mg/m <sup>3</sup> (vacated) STEL: 15 ppm (vacated) STEL: 75 mg/m <sup>3</sup>	IDLH: 250 ppm TWA: 10 ppm TWA: 50 mg/m <sup>3</sup> STEL: 15 ppm STEL: 75 mg/m <sup>3</sup>
Isobutyl alcohol 78-83-1	TWA: 50 ppm	TWA: 100 ppm TWA: 300 mg/m <sup>3</sup> (vacated) TWA: 50 ppm (vacated) TWA: 150 mg/m <sup>3</sup>	IDLH: 1600 ppm TWA: 50 ppm TWA: 150 mg/m <sup>3</sup>

### **Biological occupational exposure limits**

Chemical name	ACGIH
Naphthalene 91-20-3	- (1-Naphthol with hydrolysis plus 2-Naphthol with hydrolysis) - end of shift

**Appropriate engineering controls**

<b>Engineering controls</b>	Showers Eyewash stations Ventilation systems.
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**Individual protection measures, such as personal protective equipment**

<b>Eye/face protection</b>	If splashes are likely to occur, wear safety glasses with side-shields.
<b>Hand protection</b>	Wear suitable gloves. Impervious gloves.
<b>Skin and body protection</b>	Wear suitable protective clothing. Long sleeved clothing.
<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>General hygiene considerations</b>	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing.

**9. Physical and chemical properties****Information on basic physical and chemical properties****Appearance**

<b>Physical state</b>	Liquid
<b>Color</b>	Amber
<b>Odor</b>	No data available
<b>Odor threshold</b>	No data available

<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>
<b>pH</b>	4.98	None known
<b>Melting point / freezing point</b>	No data available	None known
<b>Boiling point / boiling range</b>	No data available	None known
<b>Flash point</b>	98 °C / 208.4 °F	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapor pressure</b>	No data available	None known
<b>Vapor density</b>	No data available	None known
<b>Relative density</b>	1.0471 g/mL	None known
<b>Water solubility</b>	No data available	None known
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>	No data available	None known
<b>Kinematic viscosity</b>	11.74 cSt @20.1°C	None known
<b>Dynamic viscosity</b>	No data available	None known

**Other information**

<b>Explosive properties</b>	No information available.
<b>Oxidizing properties</b>	No information available.
<b>Softening point</b>	No information available.

Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available

## 10. Stability and reactivity

Reactivity	None under normal use conditions.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	Strong acids. Strong bases. Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides. Nitrogen oxides (NOx). Hydrogen fluoride.

## 11. Toxicological information

### Information on likely routes of exposure

#### Product Information

<b>Inhalation</b>	Specific test data for the substance or mixture is not available. Aspiration into lungs can produce severe lung damage. May cause pulmonary edema. Pulmonary edema can be fatal. May cause irritation of respiratory tract.
<b>Eye contact</b>	Specific test data for the substance or mixture is not available. May cause irritation. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
<b>Skin contact</b>	Repeated exposure may cause skin dryness or cracking. Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).
<b>Ingestion</b>	Specific test data for the substance or mixture is not available. Potential for aspiration if swallowed. May cause lung damage if swallowed. Aspiration may cause pulmonary edema and pneumonitis. May be fatal if swallowed and enters airways. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Symptoms</b>	Difficulty in breathing. Coughing and/ or wheezing. Dizziness. Redness. May cause redness and tearing of the eyes.
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### Acute toxicity

#### Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	3,802.10 mg/kg
ATEmix (dermal)	2,640.90 mg/kg
ATEmix (inhalation-dust/mist)	195.07 mg/l

#### Unknown acute toxicity

#### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
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Naphtha (petroleum), heavy aromatic 64742-94-5	> 5000 mg/kg ( Rat )	> 2 mL/kg ( Rabbit )	> 590 mg/m <sup>3</sup> ( Rat ) 4 h
Octanamide, N,N-dimethyl- 1118-92-9	= 1250 mg/kg ( Rat )	400 - 2000 mg/kg ( Rat )	-
Naphthalene 91-20-3	= 1110 mg/kg ( Rat )	= 1120 mg/kg ( Rabbit )	> 340 mg/m <sup>3</sup> ( Rat ) 1 h
Isobutyl alcohol 78-83-1	= 2460 mg/kg ( Rat )	= 3400 mg/kg ( Rabbit )	> 6.5 mg/L ( Rat ) 4 h

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

<b>Skin corrosion/irritation</b>	Classification based on data available for ingredients. Irritating to skin.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Causes serious eye irritation.
<b>Respiratory or skin sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Naphthalene 91-20-3	A3	Group 2B	Reasonably Anticipated	X

#### Legend

##### ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

##### IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

##### NTP (National Toxicology Program)

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

##### OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Target organ effects</b>	liver, kidney, Respiratory system, Eyes, Skin, Central nervous system, blood.
<b>Aspiration hazard</b>	May be fatal if swallowed and enters airways.
<b>Other adverse effects</b>	No information available.
<b>Interactive effects</b>	No information available.

## 12. Ecological information

**Ecotoxicity** Very toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Naphtha (petroleum), heavy aromatic 64742-94-5	-	LC50: =1740mg/L (96h, Lepomis macrochirus) LC50: =19mg/L (96h, Pimephales promelas)	-	EC50: =0.95mg/L (48h, Daphnia magna)

		LC50: =2.34mg/L (96h, Oncorhynchus mykiss) LC50: =41mg/L (96h, Pimephales promelas) LC50: =45mg/L (96h, Pimephales promelas)		
Naphthalene 91-20-3	-	LC50: 0.91 - 2.82mg/L (96h, Oncorhynchus mykiss) LC50: 5.74 - 6.44mg/L (96h, Pimephales promelas) LC50: =1.6mg/L (96h, Oncorhynchus mykiss) LC50: =1.99mg/L (96h, Pimephales promelas) LC50: =31.0265mg/L (96h, Lepomis macrochirus)	-	EC50: 1.09 - 3.4mg/L (48h, Daphnia magna) EC50: =1.96mg/L (48h, Daphnia magna) LC50: =2.16mg/L (48h, Daphnia magna)
Isobutyl alcohol 78-83-1	-	LC50: 1120 - 1520mg/L (96h, Oncorhynchus mykiss) LC50: 1370 - 1670mg/L (96h, Pimephales promelas) LC50: 1480 - 1730mg/L (96h, Lepomis macrochirus) LC50: =375mg/L (96h, Pimephales promelas)	-	EC50: 1070 - 1933mg/L (48h, Daphnia magna) EC50: =1300mg/L (48h, Daphnia magna)

**Persistence and degradability** No information available.

**Bioaccumulation** There is no data for this product.

**Component Information**

Chemical name	Partition coefficient
Naphtha (petroleum), heavy aromatic 64742-94-5	2.9 - 6.1
Naphthalene 91-20-3	3.6
Isobutyl alcohol 78-83-1	0.79

**Other adverse effects** No information available.

### 13. Disposal considerations

**Waste treatment methods**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

**US EPA Waste Number** U140 U165

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Naphthalene 91-20-3	U165	Included in waste streams: F024, F025, F034, F039, K001, K035, K060, K087, K145	-	U165



Isobutyl alcohol 78-83-1	U140	Included in waste streams: F005, F039	-	U140
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Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Naphthalene 91-20-3	-	-	Toxic waste waste number F025 Waste description: Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	-

**California Hazardous Waste Status** This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Naphthalene 91-20-3	Toxic

## 14. Transport information

### DOT

Not regulated when shipped domestically, by highway, in individual containers less than 119 gallons ({{ 171.4}} of 49CFR) .  
For packages greater than 119 gallons, use the IMDG shipping description below when shipping internationally, or by vessel.

### IATA

**UN number** UN3082  
**UN proper shipping name** Environmentally hazardous substance, liquid, n.o.s.  
**Transport hazard class(es)** 9  
**Packing group** III  
**ERG Code** 9L  
**Special Provisions** A97, A158, A197  
**Description** UN3082, Environmentally hazardous substance, liquid, n.o.s.(Naphthalene), 9, III

### IMDG

**UN number** UN3082  
**UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
**Transport hazard class(es)** 9  
**Packing group** III  
**EmS-No** F-A, S-F  
**Marine pollutant** P  
**Marine pollutant** Naphthalene  
**Special Provisions** 274, 335, 969  
**Description** UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(Naphthalene), 9, III, Marine pollutant

**15. Regulatory information****International Inventories****TSCA**

Contact supplier for inventory compliance status.

**Legend:****TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Naphthalene - 91-20-3	0.1

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Naphthalene 91-20-3	100 lb	X	X	X

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Naphthalene 91-20-3	100 lb	-
Isobutyl alcohol 78-83-1	5000 lb	-

**US State Regulations****California Proposition 65**

This product contains the following Proposition 65 chemicals:

Chemical name	California Proposition 65
Naphthalene - 91-20-3	Carcinogen

**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Oxyfluorfen 42874-03-3	X	-	-
Naphthalene 91-20-3	X	X	X
Isobutyl alcohol	X	X	X

78-83-1			
1,2,4 Trimethylbenzene 95-63-6	X	X	X
Propylene glycol 57-55-6	X	-	X
1-Hexanol 111-27-3	X	-	X

**U.S. EPA Label Information**

EPA Pesticide Registration Number 87290-8

**16. Other information**

<b>NFPA</b>	Health hazards 2	Flammability 1	Instability 0	Physical and chemical properties -
<b>HMIS</b>	Health hazards 2 *	Flammability 1	Physical hazards 0	Personal protection X
<i>Chronic Hazard Star Legend</i>	<i>* = Chronic Health Hazard</i>			

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AEG L(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 Japan GHS Classification  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
 Organization for Economic Co-operation and Development Screening Information Data Set  
 World Health Organization

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**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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

**End of Safety Data Sheet**