1. Identification

Product identifier

Product Name 6990 X-50 BLACK

Other means of identification

Product Code(s) 8045264
Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Printing ink
Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier Address
Markem-Imaje Corp
150 Congress St. PO Box 2100
Keene, NH 03431
(603) 352-1130

Emergency telephone number

Emergency Telephone In case of emergency call CHEMTREC 1-800-424-9300 Outside the US call CHEMTREC at 1-703-527-3887 (collect)

2. Hazard(s) identification

Classification

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

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Oral</td>
<td>Category 4</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2A</td>
</tr>
</tbody>
</table>

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Warning

Hazard statements
Harmful if swallowed
Causes serious eye irritation
Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear eye protection/ face protection

Precautionary Statements - Response
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 SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
Rinse mouth

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other information
May be harmful in contact with skin

Unknown acute toxicity
99.99726968 % of the mixture consists of ingredient(s) of unknown toxicity
17.72527968 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
26.72708968 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
99.99726968 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
99.99726968 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
99.99726968 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. Composition/information on ingredients

Substance
Not applicable.

Mixture
Chemical nature
Mixture of solvents, polymers, colorants and additives.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>Trade secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol monophenyl ether</td>
<td>122-99-6</td>
<td>60 - 70</td>
<td>*</td>
</tr>
<tr>
<td>Diethylene glycol monophenyl ether</td>
<td>104-68-7</td>
<td>5 - 10</td>
<td>*</td>
</tr>
</tbody>
</table>

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

4. First-aid measures

Description of first aid measures
General advice
Show this safety data sheet to the doctor in attendance.

Inhalation
Remove to fresh air.
Eye contact
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.

Skin contact
Wash skin with soap and water.

Ingestion
Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider
Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed
Symptoms
Burning sensation.

Indication of any immediate medical attention and special treatment needed
Note to physicians
Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical
No information available.

Explosion data
Sensitivity to mechanical impact
None.
Sensitivity to static discharge
None.

Special protective equipment for fire-fighters
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

Personal precautions
Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

Other information
Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling
Advice on safe handling
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.

Conditions for safe storage, including any incompatibilities
Storage Conditions
Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach
of children.

8. Exposure controls/personal protection

Control parameters

Exposure Limits
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.

Other information
Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering controls
Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection
If splashes are likely to occur, wear safety glasses with side-shields. Wear safety glasses with side shields (or goggles).

Hand protection
Wear suitable gloves. Impervious gloves.

Skin and body protection
Wear suitable protective clothing. If there is a risk of contact: Protective shoes or boots.

Respiratory protection
No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations
Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

9. Physical and chemical properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
<td>None known</td>
</tr>
<tr>
<td>Color</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>NA</td>
<td>None known</td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>°C / °F</td>
<td>None known</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>242 °C / 467.6 °F</td>
<td>None known</td>
</tr>
<tr>
<td>Flash point</td>
<td>121 °C / 249.8 °F</td>
<td>None known</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td></td>
<td>None known</td>
</tr>
<tr>
<td>Upper flammability or explosive</td>
<td>ND</td>
<td>None known</td>
</tr>
<tr>
<td>limits</td>
<td>None known</td>
<td>None known</td>
</tr>
<tr>
<td>Lower flammability or explosive</td>
<td>0.9%</td>
<td>None known</td>
</tr>
<tr>
<td>limits</td>
<td>None known</td>
<td>None known</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.15</td>
<td>None known</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Insoluble in water</td>
<td>None known</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
<td>None known</td>
</tr>
</tbody>
</table>

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Partition coefficient | No data available | None known
Autoignition temperature | 495 °C / 923 °F | None known
Decomposition temperature | No data available | None known
Kinematic viscosity | No data available | None known
Dynamic viscosity | ND | None known

Other information
Explosive properties | No information available
Oxidizing properties | No information available
Softening point | No information available
Molecular weight | No information available
VOC Content (%) | No information available
Liquid Density | 9.61306626
Bulk density | ND

10. Stability and reactivity

Reactivity | No information available.
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 | None known based on information supplied.
Hazardous decomposition products | None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation | Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.
Eye contact | Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
Skin contact | Specific test data for the substance or mixture is not available. May cause irritation. Prolonged contact may cause redness and irritation. May be harmful in contact with skin.
Ingestion | Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms | May cause redness and tearing of the eyes.
Acute toxicity | 

Numerical measures of toxicity

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

ATEmix (oral) | 1,404.00 mg/kg
ATEmix (dermal) | 4,772.00 mg/kg
Unknown acute toxicity
99.99726968 % of the mixture consists of ingredient(s) of unknown toxicity
17.72527968 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
26.72708968 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
99.99726968 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
99.99726968 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
99.99726968 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol monophenyl ether</td>
<td>= 1260 mg/kg (Rat)</td>
<td>= 5 mL/kg (Rabbit)</td>
<td>-</td>
</tr>
<tr>
<td>122-99-6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diethylene glycol monophenyl ether</td>
<td>= 2140 mg/kg (Rat)</td>
<td>= 2120 µL/kg (Rabbit)</td>
<td>-</td>
</tr>
<tr>
<td>104-68-7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Skin corrosion/irritation
May cause skin irritation.

Serious eye damage/eye irritation
Classification based on data available for ingredients. Causes serious eye irritation.

Respiratory or skin sensitization
No information available.

Germ cell mutagenicity
No information available.

Carcinogenicity
No information available.

Reproductive toxicity
No information available.

STOT - single exposure
No information available.

STOT - repeated exposure
No information available.

Target organ effects
Eyes, Skin, respiratory system, blood, liver, kidney, Thyroid, Bladder, Central Vascular System (CVS), Respiratory system.

Aspiration hazard
No information available.

Other adverse effects
No information available.

Interactive effects
No information available.

12. Ecological information

Ecotoxicity

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol monophenyl ether</td>
<td>500: 72 h Desmodesmus subspicatus mg/L EC50</td>
<td>337 - 352: 96 h Pimephales promelas mg/L LC50 flow-through 220 - 460: 96 h Leuciscus idus mg/L LC50 static 366: 96 h Pimephales promelas mg/L LC50 static</td>
<td>-</td>
<td>500: 48 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>122-99-6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Persistence and degradability
No information available.

Bioaccumulation
There is no data for this product.

Component Information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol monophenyl ether</td>
<td>1.13</td>
</tr>
<tr>
<td>122-99-6</td>
<td></td>
</tr>
</tbody>
</table>

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.

14. Transport information

DOT
Not regulated

IATA
Not regulated

Proper Shipping Name
Not regulated

IMDG
Not regulated

ADR
Not regulated

15. Regulatory information

International Inventories
TSCA
Complies

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.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol monophenyl ether - 122-99-6</td>
<td>1.0</td>
</tr>
<tr>
<td>Diethylene glycol monophenyl ether - 104-68-7</td>
<td>1.0</td>
</tr>
</tbody>
</table>

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. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.
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.

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals:

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde - 50-00-0</td>
<td>Carcinogen</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations

US State Regulations

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol monophenyl ether 122-99-6</td>
<td>X</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>Diethylene glycol monophenyl ether 104-68-7</td>
<td>X</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>Phenol 108-95-7</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Formaldehyde 50-00-0</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

U.S. EPA Label Information

EPA Pesticide Registration Number  Not applicable

16. Other information

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) (AÉGL(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 High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

Issuing Date
19-Aug-2019

No information available.

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