MATERIAL SAFETY DATA SHEET COVER SHEET
VIVITONE #8013 YELLOW OXIDE COLORANT

TELEPHONE NUMBER: 216-631-5309

This product is re-packaged by Homestead Finishing Products. See following MSDS for other emergency contact numbers and manufacturer's material safety data sheet.

DISCLAIMER: J.B. Jewitt Co., Inc., Homestead Finishing Products believes all the information and data given is accurate as of the date of preparation and is offered in good faith, but without warranty or representation. Since conditions of use are beyond our control we disclaim all liability for the use or handling of this product. This information is offered solely for your consideration, investigation, and verification.
1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product information

Trade name : 896-1801 AQUA-CHEM®YELLOW IRON OXIDE
Use of the Substance / Preparation : Aqueous industrial colorant
Company : Degussa Corporation
           379 Interpace Parkway
           Parsippany, NJ 07054
           USA
Telephone : 973-541-8000
Telefax : 973-541-8040
US: CHEMTREC EMERGENCY NUMBER : 800-424-9300
CANADA: CANUTEC EMERGENCY NUMBER : 613-996-6666
Product Regulatory Services : 973-541-8060

2. COMPOSITION/INFORMATION ON INGREDIENTS

Information on ingredients / Hazardous components

<table>
<thead>
<tr>
<th>C.I. Pigment Yellow 42 (Iron oxide)</th>
<th>CAS-No.</th>
<th>Percent (Wt./ Wt.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether</td>
<td>51274-00-1</td>
<td>30 - 60 %</td>
</tr>
<tr>
<td>2-butoxyethanol; ethylene glycol monobutyl ether</td>
<td>111-76-2</td>
<td>1 - 5 %</td>
</tr>
<tr>
<td>NJTSR No.56705700001-5020P</td>
<td>Trade Secret</td>
<td>1 - 5 %</td>
</tr>
</tbody>
</table>

Other information

This material is classified as hazardous under OSHA regulations.

3. HAZARDS IDENTIFICATION

*** EMERGENCY OVERVIEW ***

Form: paste  Color: yellow  Odor: Mild acrylic odor.
May cause eye, skin and respiratory tract irritation.
May be harmful if swallowed.

POTENTIAL HEALTH EFFECTS

Eye contact
A mild irritant according to test results on AQUA-CHEM base mixtures. Can cause tearing and reddening.

Skin Contact
A mild irritant according to test results on AQUA-CHEM base mixtures. Repeated exposure may cause drying of the skin.

Inhalation
Possibly irritating.
If misted, causes irritation of mucous membranes, nose, eyes, and throat. May cause coughing and difficulty in breathing.

Ingestion
May cause gastrointestinal irritation, nausea, vomiting, and diarrhea.
Diethylene glycol monomethyl ether has been shown to cause toxic effects on the thymus and the spleen in tests on laboratory animals.
Diethylene glycol monomethyl ether has been shown to cause fetotoxicity and teratogenicity via oral route in tests on laboratory animals.
May be harmful if swallowed.

Chronic Health Hazard
The NJTSR No. 567057000001-5020P, is moderately toxic and may be harmful if swallowed, inhaled or absorbed through the skin. This material may also stimulate the central nervous system, possibly resulting in restlessness, uncoordination, tremors and convulsions. Oral doses of Diethylene glycol monomethyl ether that were high enough to cause maternal toxicity in pregnant laboratory test animals also produced birth defects in their offspring. When applied continuously to the skin of laboratory test animals during pregnancy, this material has been suggested as a cause of the following effects in laboratory animals, and may aggravate pre-existing disorders of these organs in humans: kidney damage, liver abnormalities, testis damage.

Prolonged inhalation of iron oxide dust is known to produce a condition known as siderosis. On X-rays it appears to be a benign pneumoconiosis and is not associated with pulmonary fibrosis or disability unless there is concurrent exposure to other fibrosis producing materials such as silica. Because this product is a free-flowing liquid or paste, dust inhalation is not an expected route of exposure.

Ethylene glycol monobutyl ether has caused red blood hemolysis in laboratory animals and secondary injury to the kidney and liver. However, humans appear to be resistant to this effect.
The glycol ether has caused red blood hemolysis in laboratory animals and secondary injury to the kidney and liver. However, humans appear to be resistant to this effect.
4. FIRST AID MEASURES

**Inhalation**
Remove to fresh air.
Cardiopulmonary reanimation if victim is unconscious, not breathing and heart has stopped beating (no audible heartbeat, no pulse).
Seek medical advice immediately.

**Skin contact**
Wash contaminated area with lukewarm gently flowing water for at least 20-30 minutes. Remove contaminated clothing, shoes and leather goods under running water. If symptoms develop or persist, obtain medical attention. Wash clothing before reuse.

**Eye contact**
In case of contact, immediately flush eyes with plenty of water for at least 30 minutes, while holding eyelids apart.
Do not allow contaminated water to contact the unaffected eye or face during irrigation of an affected eye.
Obtain medical attention.

**Ingestion**
Do not induce vomiting.
Should vomiting occur, be sure to keep victim’s head below hips to avoid aspiration of vomitus into the lungs.
Rinse out mouth with water. Consult a physician.
Never administer anything by mouth to an individual who rapidly losing conciousness, unconscious or convulsing.

5. FIRE-FIGHTING MEASURES

**Flash point**
not determined

**Suitable extinguishing media**
Use water spray or fog, foam, dry chemical or CO2.

**Specific hazards during fire fighting**
Burning will produce toxic fumes. Burning will produce hazardous compounds including oxides of: carbon, nitrogen.

**Further information**
Containers can build up pressure if exposed to heat (fire). Cool with water spray. As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear.
6. ACCIDENTAL RELEASE MEASURES

Additional advice
Absorb spill with inert material, then place in a chemical waste container. After removal, flush contaminated area with water and collect for disposal. Clean up spills immediately. Remove sources of ignition and ventilate area. Use a respirator and other protective equipment as outlined in Section 8. Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

7. HANDLING AND STORAGE

Handling
Safe handling advice
Wash thoroughly after handling.
Use with adequate ventilation.
Follow all MSDS/label precautions even after container is emptied because it may retain product residues.
Avoid contact with skin and eyes.

Storage
Requirements for storage areas and containers
Keep away from heat. Keep away from sparks, flame and other sources of ignition.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component occupational exposure guidelines

- 2-butoxyethanol; ethylene glycol monobutyl ether

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Time Weighted Average (TWA): (ACGIH)</th>
<th>Permissible Exposure Limit (PEL): (OSHA Z1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>111-76-2</td>
<td>20 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>50 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>240 mg/m3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Can be absorbed through the skin.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time Weighted Average (TWA) (PEL): (US CA OEL)</th>
<th>Skin designation: (OSHA Z1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 ppm</td>
<td>Can be absorbed through the skin.</td>
</tr>
<tr>
<td>120 mg/m3</td>
<td>Can be absorbed through the skin.</td>
</tr>
</tbody>
</table>

Engineering measures
Local exhaust and mechanical ventilation recommended.
Personal protective equipment

Respiratory protection
A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

Hand protection
Use impermeable gloves.

Eye protection
Use chemical splash goggles or face shield.

Skin and body protection
To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product. A safety shower and eye wash fountain should be readily available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
- Form: paste
- Color: yellow
- Odor: Mild acrylic odor.

Safety data
- pH: 8.0 - 9.0
- Boiling point/range: > 100 °C
- Flash point: not determined
- Relative density: 1.7
- Solubility/qualitative: Solubility in water: Appreciable.
- Viscosity, dynamic: 80 - 100 KU (25 °C)
- Relative vapor density: Heavier than air
- Solvents and Volatiles Data: % VOC (gm/l) 275.89
- Evaporation rate: Slower than butyl acetate

10. STABILITY AND REACTIVITY

Materials to avoid oxidizing substances
Hazardous reactions

Product will not undergo hazardous polymerization.

Further information

This product is stable under normal storage conditions.

11. TOXICOLOGICAL INFORMATION

Product Acute oral toxicity
LD50 Rat: min. 2000 mg/kg

Product Acute inhalation toxicity
LC50 Rat: min. 2.53 mg/l / 4 h

Product Acute dermal toxicity
LD50 Rabbit: min. 2000 mg/kg

Component Skin irritation
2-butoxyethanol; ethylene glycol monobutyl ether 111-76-2
Rabbit / 24 h
Irritating to skin.
Severe skin irritation
Method: Draize Test
irritating

Component Eye irritation
2-butoxyethanol; ethylene glycol monobutyl ether 111-76-2
Rabbit
Irritating to eyes.
Severe eye damage must be expected.
Severe eye irritation
NJTSR No.56705700001-5020P
Trade Secret corrosive

Component Repeated dose toxicity
C.I. Pigment Yellow 42 (Iron oxide) 51274-00-1
Prolonged inhalation of iron oxide dust is known to produce a condition known as siderosis. On X-rays it appears to be a benign pneumoconiosis and is not associated with pulmonary fibrosis or disability unless there is concurrent exposure to other fibrosis producing materials such as silica.

2-butoxyethanol; ethylene glycol monobutyl ether 111-76-2
inhalative mouse
Testing period: 730 d
LOAEL: 0.6025 mg/l
target organ/effect: Lungs, Liver

Component Genotoxicity in vitro
2-butoxyethanol; ethylene glycol monobutyl ether 111-76-2
In vitro tests involving bacteria, human and other mammalian cells have indicated that ethylene glycol monobutyl ether may cause weak mutagenic effects. However, it is not possible to conclude that this substance is liable to cause mutagenic effects as the relevance of these tests is questionable.
Component carcinogenicity assessment
2-butoxyethanol; ethylene glycol monobutyl ether 111-76-2
Ethylene glycol monobutyl ether has caused malignant and benign tumors in animal experiments.

Component teratogenicity assessment
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether 111-77-3
Diethylene glycol monomethyl ether has been shown to cause fetotoxicity and teratogenicity via oral route in tests on laboratory animals.

2-butoxyethanol; ethylene glycol monobutyl ether 111-76-2
Oral and inhalation exposure to ethylene glycol monobutyl ether has been shown in animal experiments to cause dose-related fetotoxic effects. Developmental effects, including malformation of the fetus, have been observed at doses that were maternally toxic and marginally reduced fetal weight has been observed at doses that were not maternally toxic in rats.

Product General Toxicity Information
The toxicological properties of this product were based on data from an analogous product.

12. ECOLOGICAL INFORMATION
General Ecological Information
No ecotoxicological studies are available.

13. DISPOSAL CONSIDERATIONS
WASTE DISPOSAL
Advice on disposal
Waste must be disposed of in accordance with federal, state, provincial and local regulations.

14. TRANSPORT INFORMATION
Transport/further information
Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION
US Federal Regulations
OSHA
If listed below, chemical specific standards apply to the product or components:
• None listed

Clean Air Act Section (112)
If listed below, components present at or above the de minimus level are hazardous air pollutants:

• 2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether
  CAS-No. 111-77-3

CERCLA Reportable Quantities
If listed below, a reportable quantity (RQ) applies to the product based on the percent of the named component:

• None listed

SARA Title III Section 311/312 Hazard Categories
The product meets the criteria only for the listed hazard classes:

• Acute Health Hazard
• Chronic Health Hazard

SARA Title III Section 313 Reportable Substances
If listed below, components are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

• 2-butoxyethanol; ethylene glycol monobutyl ether
  CAS-No. 111-76-2

• 2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether
  CAS-No. 111-77-3

Toxic Substances Control Act (TSCA)
If listed below, non-proprietary substances are subject to export notification under Section 12 (b) of TSCA:

• None listed

State Regulations

California Proposition 65
A warning under the California Drinking Water Act is required only if listed below:

• None listed
International Chemical Inventory Status

Unless otherwise noted, this product is in compliance with the inventory listing of the countries shown below. For information on listing for countries not shown, contact Degussa Corporation Product Regulatory Department:

- Europe (EINECS/ELINCS) Listed/registered
- USA (TSCA) Listed/registered
- Canada (DSL) Not listed/Not registered
- Australia (AICS) Not listed/Not registered
- Japan (MITI) Not listed/Not registered
- Korea (TCCL) Not listed/Not registered
- Philippines (PICCS) Not listed/Not registered
- China Not listed/Not registered

16. OTHER INFORMATION

HMIS Ratings

Health : 2*
Flammability : 1
Physical Hazard : 0

Further information

Changes since the last version are highlighted in the margin. This version replaces all previous versions. 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.