SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifiers:
  Product trade name: Phthalo Blue VRS
  Company product number: 5C24A311
  REACH registration number: Mixture.
  Other means of identification: Not Available

1.2. Relevant identified uses of the substance or mixture and uses advised against:
  Uses: Coating applications
  Uses advised against: None identified

1.3. Details of the supplier of the safety data sheet:
  Manufacturer/Supplier: DyStar L.P.
  Pine Brook III
  9844 Southern Pine Blvd
  Charlotte, NC 28273, USA
  Telephone: (800) 439-7827
  FAX: (704) 561-3098

  For further information about this SDS:
  Email: MSDS@DyStar.com

1.4. Emergency telephone number:

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture:
  Product classification according to Regulation (EC) 1272/2008 (CLP) as amended:
  - Flammable Liquid, category 3, H226
  - Aspiration Hazard, category 1, H304
  - Skin Irritation, category 2, H315
  - Skin Sensitizer, category 1, H317
  - Eye Irritation, category 2, H319
  - STOT, single exposure, category 3, NE, H336
  - Carcinogenicity, category 2, H351
  - Hazardous to the aquatic environment, Chronic, category 2, H411

2.2. Label elements:
  Product labeling according to Regulation (EC) 1272/2008 (CLP) as amended:
  CLP label - Contains: 2-Butanone oxime (MEKO), Naphtha (petroleum)
  Hazard pictogram(s):
  ![Hazard Pictograms]
  Signal word: Danger
  Hazard statements:
  H226 Flammable liquid and vapour.
  H304 May be fatal if swallowed and enters airways.
SDS Name: Phthalo Blue VRS

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H411 Toxic to aquatic life with long lasting effects.

**Precautionary statements:**

- P201 Obtain special instructions before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P240 Ground/bond container and receiving equipment.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P331 Do NOT induce vomiting.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P362+P364 Take off contaminated clothing and wash it before reuse.
- P370+P378 In case of fire: Use carbon dioxide, dry chemical, foam to extinguish.
- P391 Collect spillage.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.

**Supplemental information:** No Additional Information

Precautionary statements are listed according to the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Annex III and ECHA Guidance on Labelling and Packaging. Regulations in individual countries/regions may determine which statements are required on the product label. See product label for specifics.

2.3. Other hazards:

- **PBT/vPvB criteria:** Not Available
- **Other hazards:** Skin may discolor due to contact with pigment.

See Section 11 for toxicological information.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixture:

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Chemical Name</th>
<th>Weight%</th>
<th>Classification</th>
<th>H Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proprietary</td>
<td>Naphtha (petroleum)</td>
<td>25-35</td>
<td>Aquatic Chronic 2- Asp. Tox. 1- Eye Irrit. 2- Flam. Liq. 3- Skin Irrit. 2- STOT SE 3 NE</td>
<td>H226-304-315-319-336-411</td>
</tr>
<tr>
<td>0000147-14-8</td>
<td>C.I. Pigment blue 15 (Copper phthalocyanine pigment)</td>
<td>20-25</td>
<td>Not classified</td>
<td></td>
</tr>
<tr>
<td>0000096-29-7</td>
<td>2-Butanone oxime (MEKO)</td>
<td>0.5-1.5</td>
<td>Acute Tox. 4 Dermal- Carc. 2- Eye Dam. 1- Skin Sens. 1</td>
<td>H312-317-318-351</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Chemical Name</th>
<th>Weight%</th>
<th>REACH Registration No.</th>
<th>EC Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proprietary</td>
<td>Naphtha (petroleum)</td>
<td>25-35</td>
<td>Not Available</td>
<td>265-067-2</td>
</tr>
<tr>
<td>0000147-14-8</td>
<td>C.I. Pigment blue 15 (Copper phthalocyanine pigment)</td>
<td>20-25</td>
<td>Not Available</td>
<td>205-685-1</td>
</tr>
<tr>
<td>0000096-29-7</td>
<td>2-Butanone oxime (MEKO)</td>
<td>0.5-1.5</td>
<td>Not Available</td>
<td>202-496-6</td>
</tr>
</tbody>
</table>

See Section 16 for full text of H (Hazard) statements (EC 1272/2008).

**Notes:** C.I. PIGMENT BLUE 15 (COPPER PHTHALOCYANINE PIGMENT): Listed due to exposure limits.

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or
SECTION 4: First aid measures

4.1. Description of first aid measures:

**General:** If irritation or other symptoms occur or persist from any route of exposure, remove the affected individual from the area: see a physician/get medical attention.

**Eye contact:** Immediately flush eyes with plenty of clean water for an extended time, not less than fifteen (15) minutes. Flush longer if there is any indication of residual chemical in the eye. Ensure adequate flushing of the eyes by separating the eyelids with fingers and roll eyes in a circular motion. If eye irritation persists: Get medical advice/attention.

**Skin contact:** Immediately remove contaminated clothing and shoes. Wash the affected area with plenty of soap and water until no evidence of the chemical remains (at least 15-20 minutes). Launder clothing before reuse. If skin irritation occurs: Get medical advice/attention.

**Inhalation:** If affected, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a POISON CENTER or doctor/physician if you feel unwell.

**Ingestion:** Do not induce vomiting. Extreme care must be taken to prevent aspiration. If victim is unconscious and breathing, position the person on their side to prevent aspiration. Never give anything by mouth to an unconscious person. Rinse out the mouth with water. Get medical attention immediately.

**Protection of first aid responders:** Wear proper personal protective clothing and equipment.

4.2. Most important symptoms and effects, both acute and delayed:

Dizziness, Drowsiness, Headache, Irritation, Nausea, Skin contact may discolor skin due to pigment. Pre-existing skin problems may be aggravated by prolonged or repeated contact. See section 11 for additional information.

4.3. Indication of any immediate medical attention and special treatment needed:

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media:

**Suitable:** Use water spray, ABC dry chemical, "alcohol" foam or CO2. Use water to keep fire-exposed containers cool. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect emergency responders attempting to stop a leak. Water spray may be used to flush spills away from exposures and to dilute spills to nonflammable mixtures.

**Unsuitable:** Treat as an oil fire. Do NOT use water.

5.2. Special hazards arising from substance or mixture:

**Unusual fire/explosion hazards:** Issue warning: combustible liquid. Eliminate all ignition sources. Ventilate the area. If spill is large, be prepared to isolate the hazard area. Deny access to the spill area to persons who are not involved in the cleanup and/or who have not been properly trained in spill management of hazardous/flammable liquids. Vapors may explode if ignited in an enclosed area. Run off to sewer may cause a fire or explosion hazard. Protect product from flames of any kind; maintain proper clearance when using heat devices, etc. Closed container may rupture (due to build up in pressure) when exposed to extreme heat. Product may burn if an ignition source is present. Gives off volatile vapors that are heavier than air and may travel along the ground or may be moved by ventilation and ignited by flame, sparks, heaters, or other ignition sources at distant locations (flashback potential).

**Hazardous combustion products:** Irritating or toxic substances may be emitted upon burning, combustion or decomposition. See section 10 (10.6 Hazardous decomposition products) for additional information.

5.3. Advice for firefighters:

Use water/water spray to keep fire-exposed containers cool. Water spray may be used to flush spills away from exposures and to dilute spills to non-combustible mixtures. Do not flush combustible liquids into sewer as a fire or vapor explosion hazard may result. Never direct a hose stream directly onto a burning flammable/combustible liquid. Solid or straight hose stream will cause fire to spread if directed onto a burning spill or into an open container of burning liquid. Wear self-contained breathing apparatus (SCBA) equipped with a full facepiece and operated in a pressure-demand mode (or other positive pressure mode) and approved protective clothing. Personnel without suitable respiratory protection must leave the area to prevent significant exposure to hazardous gases from combustion, burning or decomposition. In an enclosed or poorly
ventilated area, wear SCBA during cleanup immediately after a fire as well as during the attack phase of firefighting operations. See section 9 for additional information.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

See Section 8 for recommendations on the use of personal protective equipment. Eliminate ignition sources. Ventilate areas of spill. Personal Protective Equipment must be worn.

6.2. Environmental precautions:

Do not flush liquid into public sewer, water systems or surface waters.

6.3. Methods and material for containment and cleaning up:

Contain by diking with sand, earth or other non-combustible material. Wear proper personal protective clothing and equipment. Absorb spill with an inert material. Place into labeled, closed container; store in safe location to await disposal. Change contaminated clothing and launder before reuse.

6.4. References to other sections:

See Section 8 for recommendations on the use of personal protection and Section 13 for waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling:

As with any chemical product, use good laboratory/workplace procedures. Do not cut, puncture, or weld on or near the container. Do not breathe vapor, aerosol, mist or gas. Do not ingest, taste, or swallow. Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities. Use under well-ventilated conditions. Avoid eye and skin contact. Wash contaminated clothing before reuse. Provide eyewash fountains and safety showers in the work area. Bond and ground all containers when transferring chemical. Eliminate ignition sources (e.g., sparks, static buildup, excessive heat, etc.). Use spark-proof tools and equipment. Vapors may travel to distant ignition sources.

7.2. Conditions for safe storage, including any incompatibilities:

Store in combustible storage area and away from heat and open flame. Keep away from heat, sparks and open flames. Store under well-ventilated conditions. Keep container upright, when not in use, to prevent leakage. Avoid storing containers in direct sunlight as vapors may accumulate in the head space creating pressure. Store this material away from incompatible substances (see section 10). Do not store in open, unlabeled or mislabeled containers. Keep container closed when not in use. Emptied container may contain residual vapors or liquid which may ignite or explode. Do not reuse empty container without commercial cleaning or reconditioning. Bond and ground all containers when transferring chemical.

7.3. Specific end use(s):

No Additional Information

SECTION 8: Exposure controls / personal protection

8.1. Control parameters:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EU OELV</th>
<th>EU IOELV</th>
<th>ACGIH - TWA/Ceiling</th>
<th>ACGIH - STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum)</td>
<td>N/E</td>
<td>N/E</td>
<td>5 mg/m3 TWA (inhalable particulate matter)</td>
<td>N/E</td>
</tr>
<tr>
<td>C.I. Pigment blue 15 (Copper phthalocyanine pigment)</td>
<td>N/E</td>
<td>N/E</td>
<td>1 mg/m3 TWA (dust and mist)(as Cu)</td>
<td>N/E</td>
</tr>
<tr>
<td>2-Butanone oxime (MEKO)</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
</tr>
<tr>
<td>Naphtha (petroleum)</td>
<td>N/E</td>
<td>N/E</td>
<td>3 ppm TWA, 10 ppm STEL</td>
<td></td>
</tr>
<tr>
<td>C.I. Pigment blue 15 (Copper phthalocyanine pigment)</td>
<td>N/E</td>
<td>N/E</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-Butanone oxime (MEKO)</td>
<td>N/E</td>
<td>N/E</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N/E=Not established (no exposure limits established for the listed substances for listed country/region/organization).

Contains mineral oil. Under conditions which may generate mists, observe the ACGIH 5 mg/m3 TWA (inhalable fraction).
SDS Name: Phthalo Blue VRS

**Derived No Effect Levels (DNELs) - Workers:**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Inhalation-Acute (local)</th>
<th>Inhalation-Acute (systemic)</th>
<th>Inhalation-Long Term (local)</th>
<th>Inhalation-Long Term (systemic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum)</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
</tr>
<tr>
<td>C.I. Pigment blue 15 (Copper phthalocyanine pigment)</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
</tr>
<tr>
<td>2-Butanone oxime (MEKO)</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Dermal-Acute (local)</th>
<th>Dermal-Acute (systemic)</th>
<th>Dermal-Long Term (local)</th>
<th>Dermal-Long Term (systemic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum)</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
</tr>
<tr>
<td>C.I. Pigment blue 15 (Copper phthalocyanine pigment)</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
</tr>
<tr>
<td>2-Butanone oxime (MEKO)</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
</tr>
</tbody>
</table>

**Predicted No Effect Concentration (PNECs):**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Freshwater</th>
<th>Marine water</th>
<th>Intermittent releases</th>
<th>Soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum)</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
</tr>
<tr>
<td>C.I. Pigment blue 15 (Copper phthalocyanine pigment)</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
</tr>
<tr>
<td>2-Butanone oxime (MEKO)</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Sediment (freshwater)</th>
<th>Sediment (marine)</th>
<th>STP</th>
<th>Oral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum)</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
</tr>
<tr>
<td>C.I. Pigment blue 15 (Copper phthalocyanine pigment)</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
</tr>
<tr>
<td>2-Butanone oxime (MEKO)</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
</tr>
</tbody>
</table>

N/E=Not established; N/A=Not applicable (not required); bw=body weight; dw=dry weight; ww=wet weight.

8.2. Exposure controls:

**Appropriate engineering controls:** Always provide effective general and, when necessary, local exhaust ventilation to draw spray, aerosol, fume, mist and vapor away from workers to prevent routine inhalation. Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the SDS. Eliminate ignition sources (e.g., sparks, static buildup, excessive heat, etc.).

**Individual protection measures, such as personal protective equipment:**

- **Eye/face protection:** Safety glasses or goggles required.
- **Hand protection:** Avoid skin contact when mixing or handling the material by wearing impervious and chemical resistant gloves. In case of prolonged immersion or frequently repeated contact, gloves with breakthrough times greater than 480 minutes (protection class 6) are recommended. For brief contact or splash applications, gloves with breakthrough times of 30 minutes or greater are recommended (protection class 2 or greater). Suggested materials for protective gloves: Neoprene. The protective gloves to be used must comply with the specifications of the EC directive 89/686/EEC and the resultant standard EN 374. Suitability and durability of a glove is dependent on usage (e.g. frequency and duration of contact, other chemicals which may be handled, chemical resistance of glove material and dexterity). Always seek advice of the glove supplier as to the most suitable glove material.
- **Skin and body protection:** Use good laboratory/workplace procedures including personal protective clothing: labcoat, safety glasses and protective gloves.
- **Respiratory protection:** In case of insufficient ventilation, wear suitable respiratory equipment. Wear an approved respirator (e.g., an organic vapor respirator, a full face air purifying respirator for organic vapors, or a self-contained breathing apparatus) whenever exposure to aerosol, mist, spray, fume or vapor exceed the applicable exposure limit(s) of any chemical substance listed in this SDS.

**Further information:** Eyewash fountains and safety showers are recommended in the work area.

**Environmental exposure controls:** See Sections 6 and 12.

### SECTION 9: Physical and chemical properties

**9.1. Information on basic physical and chemical properties:**

<table>
<thead>
<tr>
<th>Form</th>
<th>Appearance</th>
<th>Odour</th>
<th>Odour threshold</th>
<th>Solubility in water</th>
<th>pH</th>
<th>Relative density</th>
<th>Partition coefficient (n-octanol/water)</th>
<th>% Volatile by weight</th>
<th>VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid</td>
<td>Blue</td>
<td>Aliphatic solvent</td>
<td>Not Available</td>
<td>Insoluble</td>
<td>Not Available</td>
<td>0.98</td>
<td>Not Available</td>
<td>32.2%</td>
<td>2.6 lb/gal</td>
</tr>
</tbody>
</table>
SECTION 10: Stability and reactivity

10.1. Reactivity:
None known.

10.2. Chemical stability:
This product is stable.

10.3. Possibility of hazardous reactions:
Hazardous polymerization will not occur.

10.4. Conditions to avoid:
Excessive heat and ignition sources.

10.5. Incompatible materials:
Avoid strong acids, bases, and oxidizing agents. Avoid contact with reducing agents.

10.6. Hazardous decomposition products:
Oxides of carbon, oxides of nitrogen, oxides of copper. Hydrocarbons.

SECTION 11: Toxicological information

11.1. Information on toxicological effects:

Information on likely routes of exposure:

General: Caution must be exercised through the prudent use of protective equipment and handling procedures to minimize exposure. Aspiration into the lungs may cause mild to severe pulmonary injury.

Eyes: Causes serious eye irritation.

Skin: May cause allergic skin reaction. Causes skin irritation.

Inhalation: Inhalation may cause irritation of the respiratory tract and mucous membranes. May cause drowsiness or dizziness.

Ingestion: May be fatal if swallowed and enters airways.

Acute toxicity information: Not classified (based on available data, the classification criteria are not met). No toxicity studies have been conducted on this product. ATEmix (oral): >5000 mg/kg. ATEmix (dermal): >5000 mg/kg. ATEmix (inhal.): >5 mg/L, 4 hours.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Species</th>
<th>Oral LD50</th>
<th>Species</th>
<th>Dermal LD50</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum)</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
</tr>
<tr>
<td>C.I. Pigment blue 15 (Copper phthalocyanine pigment)</td>
<td>N/E</td>
<td>&gt;2000 mg/kg</td>
<td>N/E</td>
<td>&gt;2000 mg/kg</td>
<td>N/E</td>
</tr>
<tr>
<td>2-Butanone oxime (MEKO)</td>
<td>N/E</td>
<td>&gt;5000 mg/kg</td>
<td>N/E</td>
<td>&gt;5000 mg/kg</td>
<td>N/E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2326 mg/kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Causes skin irritation - Category 2.
**Chemical Name**: Phthalo Blue VRS

### Serious eye damage/irritation:
Causes serious eye irritation - Category 2.

### Eye irritation

**Chemical Name**: Naphtha (petroleum)  
**Species**: Rabbit/ adult  
**Irritant**

**Chemical Name**: C.I. Pigment blue 15 (Copper phthalocyanine pigment)  
**Species**: Rabbit/ adult  
**Non-irritant**

**Chemical Name**: 2-Butanone oxime (MEKO)  
**Species**: Rabbit/ adult  
**Slight to moderate irritant**

### Skin irritation:

**Chemical Name**: Naphtha (petroleum)  
**Species**: Rabbit/ adult  
**Irritant**

**Chemical Name**: C.I. Pigment blue 15 (Copper phthalocyanine pigment)  
**Species**: Rabbit/ adult  
**Non-irritant**

**Chemical Name**: 2-Butanone oxime (MEKO)  
**Species**: Rabbit/ adult  
**Slight to moderate irritant**

### Skin sensitisation:

**Chemical Name**: Naphtha (petroleum)  
**Species**: Guinea Pig/ adult  
**Non-sensitizer**

**Chemical Name**: C.I. Pigment blue 15 (Copper phthalocyanine pigment)  
**Species**: Human  
**Non-sensitizer**

**Chemical Name**: 2-Butanone oxime (MEKO)  
**Species**: Guinea Pig/ adult  
**Sensitizer**

### Respiratory or skin sensitization:
Skin sensitization - Category 1.

### Carcinogenicity:
Suspected of causing cancer - Category 2.

**2-BUTANONE OXIME (MEKO):** Liver carcinomas were observed in a lifetime inhalation study in which mice and rats were exposed to MEKO 6 hrs/day, 5 days/week for 18 months and 26 months, respectively. These carcinomas were statistically increased in males at a MEKO concentration of 375 ppm. In addition, degenerative effects on the olfactory epithelium of the nasal passages occurred in a concentration related manner in males and females of both species at MEKO concentrations of 15, 75, and 375 ppm.

### Germ cell mutagenicity:
Not classified.

**2-BUTANONE OXIME (MEKO):** MEKO is not considered mutagenic based on several in vitro and in vivo studies.

### Reproductive toxicity:
Not classified.

### Specific target organ toxicity (STOT) - single exposure:
May cause drowsiness or dizziness - Category 3.

### Specific target organ toxicity (STOT) - repeated exposure:
Not classified.

**2-BUTANONE OXIME (MEKO):** In a subchronic oral toxicity animal study, MEKO produced an adverse effect upon red blood cells (anemia). This was found for all dose levels tested. In an acute dermal animal study, 200 mg/kg caused mild hematologic (blood) effects. No effects were seen at 20 mg/kg.

### Aspiration hazard:
Not classified (based on available data, the classification criteria are not met). May be fatal if swallowed and enters airways - Category 1.

### Other toxicity information:
2-BUTANONE OXIME (MEKO) absorption through the skin, inhalation or ingestion may produce blood effects, reducing the blood's ability to transport oxygen (methemoglobinemia and anemia). Male rats and mice exposed to MEKO throughout their lifetimes developed liver tumors.

### SECTION 12: Ecological information

#### 12.1. Toxicity:
No ecological testing has been conducted on this product.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Fish 96 hour LC50</th>
<th>Fish 96 hour LC50</th>
<th>Fish Chronic NOEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum)</td>
<td>10 mg/L (LL50)</td>
<td>N/E</td>
<td>N/E</td>
</tr>
<tr>
<td>C.I. Pigment blue 15 (Copper phthalocyanine pigment)</td>
<td>&gt;100 mg/L</td>
<td>760 mg/L</td>
<td>100 mg/L (14 days, mortality)</td>
</tr>
<tr>
<td>2-Butanone oxime (MEKO)</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Invertebrates 48 hour EC50</th>
<th>Invertebrates 24 hour EC50</th>
<th>Invertebrates Chronic NOEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum)</td>
<td>4.5 mg/L (EL50)</td>
<td>N/E</td>
<td>N/E</td>
</tr>
<tr>
<td>C.I. Pigment blue 15 (Copper phthalocyanine pigment)</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
</tr>
<tr>
<td>2-Butanone oxime (MEKO)</td>
<td>201 mg/L</td>
<td>N/E</td>
<td>N/E</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae 96 hour EC50</th>
<th>Algae 72 hour EC50</th>
<th>Algae Chronic NOEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum)</td>
<td>N/E</td>
<td>3.1 mg/L (EL50)</td>
<td>N/E</td>
</tr>
<tr>
<td>C.I. Pigment blue 15 (Copper phthalocyanine pigment)</td>
<td>N/E</td>
<td>N/E</td>
<td>N/E</td>
</tr>
<tr>
<td>2-Butanone oxime (MEKO)</td>
<td>83 mg/L</td>
<td>11.8 mg/L</td>
<td>2.56 mg/L (72 hours, growth rate)</td>
</tr>
</tbody>
</table>

#### 12.2. Persistence and degradability:

No ecological testing has been conducted on this product.
SDS Name: Phthalo Blue VRS

No specific information available.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Biodegradation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum)</td>
<td>Readily biodegradable</td>
</tr>
<tr>
<td>C.I. Pigment blue 15 (Copper phthalocyanine pigment)</td>
<td>Not readily biodegradable</td>
</tr>
<tr>
<td>2-Butanone oxime (MEKO)</td>
<td>Inherently biodegradable (OECD 302B)</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential:

No specific information available.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Bioconcentration Factor (BCF)</th>
<th>Log Kow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum)</td>
<td>N/E</td>
<td>3.3-5.3</td>
</tr>
<tr>
<td>C.I. Pigment blue 15 (Copper phthalocyanine pigment)</td>
<td>0.33-11 (OECD 305C)</td>
<td>6.6 (calculated)</td>
</tr>
<tr>
<td>2-Butanone oxime (MEKO)</td>
<td>0.5-0.6 (OECD305C)</td>
<td>0.63</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil:

No specific information available.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Mobility in soil (Koc/Kow)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum)</td>
<td>N/E</td>
</tr>
<tr>
<td>C.I. Pigment blue 15 (Copper phthalocyanine pigment)</td>
<td>67</td>
</tr>
<tr>
<td>2-Butanone oxime (MEKO)</td>
<td>N/E</td>
</tr>
</tbody>
</table>

12.5. Results of PBT and vPvB assessment:

Not Available

12.6. Other adverse effects:

No additional information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods:

Dispose of unused contents (incineration) in accordance with national and local regulations. Dispose of container in accordance with national and local regulations. Ensure the use of properly authorized waste management companies, where appropriate.

See Section 8 for recommendations on the use of personal protective equipment.

SECTION 14: Transport information

The information below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions.

14.1. UN number: UN1268

14.2. UN proper shipping name:

Petroleum Distillates, N.O.S.

14.3. Transport hazard class(es):

- U.S. DOT hazard class: 3
- Canada TDG hazard class: 3
- Europe ADR/RID hazard class: 3
- IMDG Code (ocean) hazard class: 3
- ICAO/IATA (air) hazard class: 3

A "N/A" listing for the hazard class indicates the product is not regulated for transport by that regulation.

14.4. Packing group: III

14.5. Environmental hazards:

- Hazardous substance (USA): Not Applicable

14.6. Special precautions for user:
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code:  
Not Applicable

Notes: For surface shipment within the United States, flammable liquids with a flash point of 100-141 F (38-60 C) may be reclassified: In containers of 119 gallons capacity or less: NOT REGULATED. In containers of more than 119 gallons capacity: COMBUSTIBLE LIQUID.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Europe REACH (EC) 1907/2006: Not all applicable components are pre-registered or registered. REACh is only relevant to substances either manufactured or imported into the EU. REACh information regarding this product is provided for informational purposes only. Each Legal Entity may have differing REACh obligations, depending on their place in the supply chain. For material manufactured outside of the EU, the importer of record must understand and meet their specific obligations under the regulation.

EU Authorizations and/or restrictions on use: Not Applicable

Other EU Information: No Additional Information

National regulations: No Additional Information

Chemical inventories:

<table>
<thead>
<tr>
<th>Regulation</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Inventory of Chemical Substances (AICS):</td>
<td>Y</td>
</tr>
<tr>
<td>Canadian Domestic Substances List (DSL):</td>
<td>Y</td>
</tr>
<tr>
<td>Canadian Non-Domestic Substances List (NDSL):</td>
<td>N</td>
</tr>
<tr>
<td>China Inventory of Existing Chemical Substances (IECSC):</td>
<td>Y</td>
</tr>
<tr>
<td>European Inventory of Existing Chemical Substances (EINECS):</td>
<td>Y</td>
</tr>
<tr>
<td>European List of Notified Chemical Substances (ELINCS):</td>
<td>N</td>
</tr>
<tr>
<td>Japan Existing and New Chemical Substances (ENCS):</td>
<td>N</td>
</tr>
<tr>
<td>Japan Industrial Safety and Health Law (ISHL):</td>
<td>N</td>
</tr>
<tr>
<td>Korean Existing and Evaluated Chemical Substances (KECL):</td>
<td>Y</td>
</tr>
<tr>
<td>New Zealand Inventory of Chemicals (NZIoC):</td>
<td>Y</td>
</tr>
<tr>
<td>Philippines Inventory of Chemicals and Chemical Substances (PICCS):</td>
<td>Y</td>
</tr>
<tr>
<td>Taiwan Inventory of Existing Chemicals:</td>
<td>Y</td>
</tr>
<tr>
<td>U.S. Toxic Substances Control Act (TSCA):</td>
<td>Y</td>
</tr>
</tbody>
</table>

A "Y" listing indicates all intentionally added components are either listed or are otherwise compliant with the regulation. A "N" listing indicates that for one or more components: 1) there is no listing on the public inventory; 2) no information is available; or 3) the component has not been reviewed. A "Y" for New Zealand may mean that a qualified group standard may exist for the components in this product.

15.2. Chemical safety assessment:

Not Applicable

SECTION 16: Other information

Hazard (H) Statements in the Composition section (Section 3):

H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H411 Toxic to aquatic life with long lasting effects.

Reason for revision: Changes in Section(s): Not Applicable

Evaluation method for classification of mixtures: Calculation method
Legend:
* : Trademark owned by Dystar L.P.
ACGIH: American Conference of Governmental Industrial Hygienists
EU OELV: European Union Occupational Exposure Limit Value
EU IOELV: European Union Indicative Occupational Exposure Limit Value
N/A: Not Applicable
N/E: None Established
STEL: Short Term Exposure Limit
TWA: Time Weighted Average (exposure for 8-hour workday)

Users Responsibility/Disclaimer of Liability:
The information set forth herein is based on our current knowledge, and is intended to describe the product solely with respect to health, safety and the environment. As such, it must not be interpreted as a guarantee of any specific property of the product. As a result, the customer shall be solely responsible for deciding whether said information is suitable and beneficial.

Safety Data Sheet Preparer:
Product Compliance Department