SAFETY DATA SHEET
Vat Dye Reddish Navy VD041

PRINT DATE: 10/17/14

1. PRODUCT IDENTIFICATION
PRODUCT NAME: VAT DYE REDDISH NAVY VD041
CHEMICAL FAMILY: ANTHRAQUINONE VAT DYE
T.S.C.A. STATUS: IN COMPLIANCE
PRIMARY PRODUCT USE: TEXTILE MANUFACTURING
SUPPLIED BY: PRO CHEMICAL & DYE
126 SHOVE STREET
FALL RIVER, MA 02724

EMERGENCY PHONE NUMBERS:
800-255-3924 ChemTel. (United States)
+ 1 01 813-248-0585 (Outside the United States)

2. HAZARDS IDENTIFICATION
This product does not contain any categorized hazards.

PRIMARY ROUTE OF EXPOSURE

INHALATION: NO
SKIN CONTACT: YES
SKIN ABSORPTION: NO
INGESTION: NO

CARCINOGEN STATUS
YES
EYE CONTACT: YES

IARC: NO
HMIS: 1 0 0 E
OSHA: NO
NTP: NO
ACGIH: NO

CHRONIC EFFECTS OF OVEREXPOSURE
None.

SIGNS AND SYMPTOMS OF OVEREXPOSURE
May cause eye, skin, and irritation of the respiratory tract.

MEDICAL CONDITIONS AGGRAVATED
Persons with any pre-existing skin, eye or respiratory condition may be more susceptible to the effects of this product.

3. HAZARDOUS INGREDIENTS
NO HAZARDOUS MATERIALS ARE CONTAINED IN THIS PRODUCT
The exact ingredient percentages and composition has been withhold as a trade secret

4. EMERGENCY AND FIRST AID PROCEDURES
GENERAL INFORMATION: IMMEDIATELY REMOVE ALL CONTAMINATED CLOTHING

EYE CONTACT: Wash immediately with large amounts of water for 15 minutes, lifting the upper and lower lids until no evidence of product remain. Get medical attention immediately. Do not wear contact lenses while handling.
SKIN CONTACT: Remove all contaminated clothing immediately. Wash immediately with soap and plenty of water. If a temporary skin reaction occurs, it should be treated as allergic contact dermatitis. Launder contaminated clothing before reuse.

INGESTION: Dilute with water. Get medical attention. Never give fluids or induce vomiting if patient is unconscious or has convulsions.

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. If breathing is difficult, give oxygen. Call a physician.

5. FIRE AND EXPLOSION DATA

FLASH POINT Not Applicable

EXTINGUISHING MEDIA Water, Dry Chemical, Foam

SPECIAL FIRE FIGHTING PROCEDURES UNUSUAL FIRE OR EXPLOSION HAZARDS: Firefighters should be equipped with protective clothing & self-contained breathing apparatus to protect against potentially toxic & irritating fumes. In case of fire or explosion, keep unnecessary people away. Isolate hazard area & any entry. Stay upwind, out of low areas, and ventilate closed spaces before entering.

ADDITIONAL INFORMATION Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

6. SPILL OR LEAK PROCEDURES

IN CASE MATERIAL IS RELEASED/SPILLED:
Avoid formation and deposition of dust. Do not empty into drains or waters. Do not touch or walk through the spilled material: stop leak if you can do it without risk. Take up with sand or other non-combustible absorbent material or suitable vacuum and place into labeled sealable containers.

7. SPECIAL PRECAUTIONS AND STORAGE DATA

SAFE HANDLING: Store in dry place, away from excessive heat, in original or similar waterproof container. Reseal container immediately after use. Avoid unnecessary contact. Observe the usual precautionary measures required for chemicals with dust-explosive properties. Observe national regulations. In filling operations take precautionary measures against static discharges.

8. EMPLOYEE PROTECTION RECOMMENDATIONS

GENERAL PROTECTIVE MEASURES:
Do not breathe dust. Avoid contact with eyes and skin. Immediately remove all contaminated clothing.

EYE PROTECTION: Employees should wear protective eye-goggles with side protection shield.

SKIN PROTECTION: Employees should avoid skin contact by wearing protective clothing. Long sleeve shirts, pants, gloves e.g. of PVC or nitrile rubber, and boots are recommended. Additional protections such as impervious suits are recommended when the potential for dermal contact is significant. Employees should wash their hands and face before eating and drinking and shower thoroughly before leaving work. Keep away from food and drink stuffs.

RESPIRATORY PROTECTION: Inhalation of dust and aerosols must be absolutely prevented by the use of a NIOSH approved dust respirator.

VENTILATION: Use local ventilation.
OTHER: Emergency showers and eye wash stations should be available. People with chronic respiratory problems should not work with reactive dyestuff powders. If symptoms such as tightness in the chest or asthma occur while handling reactive dyestuff powders, a physician should be consulted as soon as possible. If hypersensitivity is confirmed, all contact with reactive dyestuff powders must cease immediately.

9. PHYSICAL DATA

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td>Appearance</td>
<td>Powder</td>
</tr>
<tr>
<td>Color</td>
<td>Blue</td>
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<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>Odor threshold</td>
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</tr>
<tr>
<td>Solubility in water</td>
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<tr>
<td>Bulk density</td>
<td>400 - 600 kg/m³</td>
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<tr>
<td>Viscosity</td>
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<tr>
<td>pH</td>
<td>9.0 - 10.0 @ 10.0 g/l 20°C</td>
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<tr>
<td>Melting point/freezing point</td>
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<tr>
<td>Partition coefficient: N-Octanol/Water</td>
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</tr>
<tr>
<td>Boiling point</td>
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<tr>
<td>Vapor pressure</td>
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<td>Vapor density</td>
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<tr>
<td>Flash point</td>
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<tr>
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</tr>
<tr>
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</tr>
<tr>
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<tr>
<td>LEL</td>
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<tr>
<td>% Volatile</td>
<td>Valve: ND</td>
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<td>Comment</td>
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</table>

10. REACTIVITY DATA

THERMAL DECOMPOSITION: No thermal decomposition when stored and handled correctly.
HAZARDOUS REACTIONS: None expected
CHEMICAL STABILITY: Stable
INCOMPATIBLE MATERIALS: None
HAZARDOUS DECOMPOSITION PRODUCTS: CO2, CO, SULFUR OXIDES, NITROGEN OXIDES
CONDITIONS TO AVOID: Avoid dusting conditions and sparks/flame.
HAZARDOUS POLYMERIZATION: Will not occur

11. TOXICOLOGICAL DATA

ANIMAL TOXICITY ORAL - LD50 (INGESTION) > 10,000 mg/kg (RAT)
FISH, LC50 > 100 mg/l (poecilia reticulata)
EYE EFFECTS NON-IRRITANT (RABBIT)
SKIN EFFECTS NON-IRRITANT (RABBIT)
SENSITIZATION NOT EXPECTED

12. ECOLOGICAL DATA

BIODEGRADABILITY: < 10.0%
BACTERIA TOXICITY IC 50: ND
AOX: > 10.0 %
COD: 1472 mg/g
13. DISPOSAL CONSIDERATIONS
PRODUCT: If utilization or recycling of the product is not possible, it should be disposed of in accordance with existing federal, state and local environmental regulations, e.g. by incineration in a suitable plant.
UNCLEANED PACKAGING: Soiled, empty containers are to be treated in the same way as the contents.

14. SHIPPING DATA
PROPER SHIPPING NAME: NON-HAZARDOUS INK MATERIAL
D.O.T. HAZARD CLASSIFICATION: NOT REGULATED
FRT. CLASS PACKAGE: 55
IATA: NON-REGULATED
IMDG: NON-REGULATED

15. REGULATORY DATA
US REGULATIONS:
TSCA: The components of this product are listed on the TSCA Inventory
SARA 313: This product is not subject to SARA Title III Section 313 reporting requirements under 40 CFR 372.
SARA 312:
Immediate (acute) health hazard Yes
Delayed (chronic) health hazard No
Fire hazard No
Sudden Release of Pressure No
Reactivity No

OTHER REGULATIONS: Labeling is not required in accordance with the EEC directives:
This product is not subject to the German Ordinance that bans certain azo dyes or the 19th Amendment of the Council Directive 76/769/EEC.
CALIFORNIA PROPOSITION 65: This product does not contain any components currently on the California List of Known Carcinogens and reproductive Toxins

16. OTHER INFORMATION
This company warrants that this product conforms to the chemical description on the label and is reasonably fit for the specific purposes referred to in its directions for use, subject to the inherent risks referred to in the material safety data sheet for this product. This company makes no other expressed or implied warranty of fitness or merchantability or any other expressed or implied warranty. In no case shall this company be liable for consequential, special, or indirect damages resulting from the use or handling of this product.

MSDS Created: March 21, 2012
MSDS Revised: October 17, 2014