

Material Safety Data Sheet

Revision date: Sep. 20th, 2012

Version: E

MSDS number: 10045296

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY

Product Name: LIQUID DOT #371 for PW2000/PW2400/PW4200
Product Code: 29905, 29953, 39112, 39114
Manufacturer: Glunz & Jensen A/S
 Selandia Park 1
 DK - 4100 Ringsted
 Denmark
Phone: +45 5768 8181
Fax: +45 5768 8340

<u>HMIS codes</u> Health – 1 Flammability – 3 Reactivity – 0 PPE – X
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Emergency

phone number: For Chemical Emergency Spill Leak Fire Exposure or Accident Call
 CHEMTOX-TROTTERS day or night:
 International call: 0045 4011 4300, +45 4011 4300, or 011 45 4011 4300 (US and Canada).

2. COMPOSITION / INFORMATION ON HAZARDOUS INGREDIENT

Chemical name CAS Number	Percent by weight	Occupational ACGIH TLV	Exposure limits OSHA PEL	Vapor pressure in mmHg	Notes
Propyleneglycolmethyl ether CAS #: 107-98-2	90-95	100ppm STEL: 150ppm	100ppm STEL: 150ppm	8.0 @ 20C	
Pigmenr mixture CAS#: n.a.	<5	10mg/m3	15mg/m3	N/A	
Diaacetone alcoho 4-hydroxy-4-methyl-2- pentanone CAS #: 7732-18-5	<2	50ppm	50ppm	1.0 @ 20C	(1)

1)The above ACGIH TLV exposure limit of 10mg/m3 is for inhalalble fraction. See section 8 Exposure Controls. Personal Protection – Exposure Guidelines for more information on exposure limits.

The recommended permissible exposure limits (PEL) indicated above reflects the level adopted by OSHA in 1989.

3. HAZARDOUS IDENTIFICATION

General health effects:

The following information has been developed based upon using the product as intended by manufacturer. The potential health effects of this product are based on the hazards of its components. The use of this product in combination with other products may produce synergistic (additive) health effects. Cautionary labeling and material safety data sheets of all materials used with this product should reviewed before use.

Eyes:

Eye contact with liquid, vapors or mists may cause irritation, including burning, tearing, redness or swelling.

Skin:

Skin contact may cause irritation. Symptoms may include dryness, chapping and redness. Skin absorption is possible and may contribute to symptoms of overexposure.

Inhalation:

Inhalation may cause respiratory tract irritation. Symptoms may include central nervous system disorders such as headaches, dizziness, weakness or fatigue.

Ingestion:

Ingestion may cause moderate gastrointestinal tract irritation. Symptoms may include headaches, nausea and vomiting.

Chronic effects/target organs:

Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Animal studies:

Propylene glycol methyl ether has been suggested to cause liver abnormalities and kidney damage in lab animals. Diacetone alcohol has been found to cause kidney and liver injury and blood disorders in lab animals. For animal studies reference TSCA Section 4 Test Rule Results or contact the manufacturer for further details.

Medical conditions aggravated by expose:

Pregnant women and persons with pre-existing health disorders should consult their physician before using this product. Repeated and prolonged overexposure and/or individual sensitivity may increase the potential for and degree of adverse health effects. See section 3 "Hazards identifications" for effects of certain hazardous ingredients.

Routes of exposure:

Primary exposure routes: Inhalation-Dermal (contact/absorption)-Ingestion.

4. FIRST AID

Eyes:

After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If irritation persists have eyes examined and tested by medical personnel.

Skin:

In case of contact, immediately wash skin with a mild soap and plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Cool water is initially suggested to prevent the pores of the skin from opening. This will minimize both the area and time of skin contact. Lukewarm water may then be used to ensure all contaminants are removed. Skin should be monitored for reddening or chemical burns. Mild soap is suggested to help prevent abrading the skin of rubbing the chemicals into pores during cleansing. Get medical attention if irritation persists or significant contact has occurred. Wash thoroughly (or discard) clothing and shoes before reuse.

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention if breathing difficulty is experienced.

Ingestion:

If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Other comments:

No adapt available.

5. FIRE FIGHTING MEASURES

Flash point:

Lowest flashing component 88 Degree Fahrenheit

OSHA Flammability classification (NFPA):

Class IC Flammable liquid

LEL – lower exposure limit/UEL – upper explosive limit:

1.5% volume air/no data available

Extinguishing media:

Foam-CO2-Dry chemical –Water spray

Fire and explosion hazards:

Isolate from heat, electrical equipment, sparks and open flames. Keep containers tightly closed. Vapors may be heavier than air and can travel to a source of ignition then flash back. Closed containers may explode when exposed to extreme heat.

Fire fighting equipment:

Full protective equipment including self-contained breathing apparatus (SCBA) is recommended to protect firefighters.

Special fire fighting procedures:

Water may be ineffective but may be used to cool containers. Fumes released on burning may be toxic and dangerous.

6. ACCIDENTAL RELEASE MEASURE

Release management measures:

Remove all sources of ignition (flames, hot surfaces and electrical, static or frictional sparks). Avoid contact or breathing vapors. Ventilate area. Contain release and remove with inert absorbent. Use non-sparking tools to place material in appropriate container for disposal. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

7. HANDLING AND STORAGE

Handling and storage methods:

Use in all ventilated area. Follow all MSDS/label precautions even after container is emptied: container may retain product residues. Store in closed containers in cool, dry and well ventilated area away from sources of ignition. Keep containers closed when not in use. Smoke in designated areas only. Avoid prolonged or repeated overexposure to this product. Keep out of reach of children. Follow label directions carefully. Do not take internally. Harmful or fatal if swallowed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory protection:

If concentrations of hazardous ingredients exceed exposure limits listed in section 2 an appropriate NIOSH (National Institute for Occupational Safety and health) approved respirator with an organic vapor cartridge should be used. If material is handled under mist, spray or dust from forming conditions a P100 (99,97% efficiency) filter should be used in addition to the organic vapor cartridge. Protection provided by air-purifying respirators is limited. If no exposure limits are listed in section 2 follow general safety guidelines in 29 CFR 1910.134 Respiratory Protection or other applicable respiratory.

Skin protection:

Use neoprene, nitrile or other gloves resistant to chemicals listed in section 2. Contact a reputable safety supply company for appropriate gloves. Solvent resistant aprons are recommended. Prevent prolonged skin contact with contaminated clothing.

Eye protection:

Use ANSI (American National Standards Institute) approved safety glasses, face shield or splash proof goggles to prevent eye contact. Contact a reputable safety supply company for appropriate eye protection. The availability of an eye wash is highly recommended.

Exposure guideline:

See section 2 "Composition, information on ingredients" for occupational exposure limits.

Hygienic Practices:

Wash with soap and water before eating, smoking or using toilet facilities. Separately wash or discard clothing and footwear before reuse. NEVER try to remove product from the skin by using solvent or thinner. Such action is likely to increase the possibility of undesirable effects. Remove contaminated clothing to prevent prolonged skin contact.

Engineering controls:

Use applicable engineering controls, work practices and personal protective equipment to ensure all concentrations are kept below the exposure limits listed in section 2. Adequate controls should be implemented to ensure employee safety from fine mists which may be produced under some printing conditions.

Other protection:

No available data.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: thin liquid	Freezing point: not available
Odor: characteristic	Solubility in water: not tested
Physical state: liquid	Evaporation rate: slower than ether
pH: not applicable	Viscosity: greater than water
Vapor pressure: see section 2 for individual ingredients	Percent volatile by volume: 96.00%
Vapor density: heavier than air	Weight per gallon: 7.77 lbs/gal
Boiling point: greater than 300 degree Fahrenheit	Photochemical reactive: no
VOC: 884.00 g/L – 7.37 lb/gal	

Percent volatile = Percent VOC

10. STABILITY AND REACTIVITY

Chemically stability: stable

Conditions to avoid: avoid excessive heat, ignition sources, sparks and open flame.

Incompatibility with other materials:

Strong acids/bases, oxidizing/reducing agents and reactive chemicals.

Hazardous decompositions product:

May produce hazardous fumes when heated to decomposition e.g. carbon monoxide, carbon dioxide and other noxious gases.

Hazardous polymerization:

Not anticipated during normal printing and storage conditions.

11. TOXICOLOGICAL INFORMATION

Experimental toxicity data:

Refer to section 3 Hazards Identification for additional toxicological data. Experimentally toxicity data on propylene glycol methyl ether has given the following results: Oral LD50 Rat: 6.6 ml/kg; Dermal LD50 Rabbit: 12 ml/kg

Experimental toxicity data on Diacetone alcohol has given the following results: Intraperitoneal LD50 Mouse: 993 mg/kg Oral LD50 Rat: 4 g/kg, Dermal LD50 Rabbit: 13,6 g/kg.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Because this product may be a mixture of chemicals, some of which may be ecologically toxic, it is strongly suggested that it not be disposed of into the environment, i.e. soil, water courses, lakes, landfills, sewers etc.

13. DISPOSAL CONSIDERATIONS

Disposal methods:

This product is considered hazardous for disposal purposes by the U.S. Environmental Protection Agency Resource Conservation and Recovery Act (RCRA). Refer to the regulations located in 40 CFR Part 261 for additional waste disposal information, including appropriate hazardous waste codes. It is the responsibility of the user to determine if local, county, state or provincial regulations may also apply to the disposal of this product and /or container. Empty containers may retain hazardous properties and should be disposed of in the environmentally safe manner in accordance with applicable regulations.

14. TRANSPORT INFORMATION

Proper shipping name: Printing Ink Related Material.

RID/ADR:

UN: 1210

Hazard class: 3

Packing group: III

IMDG:

UN: 1210

Hazard class: 3

Packing group: III

IATA/ICAO:

UN: 1210

Hazard class: 3

Packing group: III

15. REGULATORY INFORMATION

SARA title information III 313 information:

See section 2 "composition, information on ingredients" for applicable chemicals.

Toxic substances control act status:

All ingredients in Section 2 are listed in the U.S. environmental Protection Agency's Toxic Substances Control act (TSCA) Inventory and the Canadian Domestic Substances List.

Other regulatory information:

OCCUPATIONAL SAFETY and HEALTH ADMINISTRATION (OSHA) – MSDS is compliant with Occupational Safety and Health administration Hazard Communication Standard – 29 CFR 1910.1200. AMERICAN NATIONAL STANDARD INSTITUTE. This MSDS follows the ANSI Z400.1.-1998 format. WORKPLACE HAZARDOUS MATERIAL INFORMATION SYSTEM (WHMIS). This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASIFICACION (CANADA):

B2_Flammable Liquids: D2B_Materials causing other toxic effects, toxic material;

16. OTHER INFORMATION

Disclosure:

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind express or implied is made with respect to the information contained herein. The data in this MSDS relates only to the specific material designated herein and does not apply to use in combination with any other material or process.

Definitions:

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

CEILING: (TLV-Ceiling and PEL Ceiling Limit). The ceiling exposure limit or concentration not to be exceeded for even brief times.

DOT: Department of Transportation

HMIS: The Hazardous Materials Identification system (HMIS) developed by the National Paint and Coating Association (NPCA) to provide information in the acute health hazards, reactivity and flammability of products encountered in the workplace at room temperature.

HMIS codes assigned for this product are only suggested ratings based on anticipated normal screen printing applications. The employer has the ultimate responsibility for signing these rating and should fully evaluate the MSDS work practices and environmental conditions prior to assigning the appropriate ratings.

HMIS rating involves data interpretations that may vary from company to company.

HMIS Personal Protection Index of "X-Ask your supervisor" is given on this MSDS due to varying work conditions which may dictate different levels of protection. Please review this MSDS before determining appropriate protective equipment and beginning work.

IARC: International Agency for Research on Cancer

NFPA: National Fire Protection Association

NTP: National Toxicology Program

STEL: Short-Term Exposure Limit: ACGIH terminology for the short-term exposure limit or maximum concentration for a continuous exposure period of 15 minutes.

TLV: Threshold Limit Value. A term ACGIH uses to express the airborne concentration of a material to which workers can be exposed during a normal daily and weekly schedule without adverse effects.

TWA: Time-Weighted Average

VOC: Volatile Organic Compound