

M A T E R I A L S A F E T Y D A T A S H E E T

1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : UV AQUALESS NPG Series
 Use : Printing Ink (UV curable ink)
 Supplier's Name : TOYO INK AMERICA LLC.
 Supplier's Address : 710W. Belden Ave., Addison, IL 60101 USA
 telephone No : 630-930-5100

Emergency phone No : (CHEMTREC) 800-424-9300

2: COMPOSITION / INFORMATION ON INGREDIENT

Simple substance Mixed substance

MAIN INGREDIENTS	CONTENT (%)
Pigment	10 ~ 25
Allyl resin	10 ~ 20
Oligo acrylate	45 ~ 60
Photo-initiator	1 ~ 10
Additives	1 ~ 15

All ingredients are listed on the TSCA Inventory.

HAZARDOUS INGREDIENTS	CAS No.	CONTENT(%)	OSHA(PEL)	ACGIH
Carbon black	1333-86-4	0 ~ 15	3.5 mg/m ³	3.5 mg/m ³
Talc	14807-96-6	1 ~ 5	20.0mppcf	2.0 mg/m ³

LIMIT VALUE TIME WEIGHTED OVER 8 HOURS ¹⁾

SECTION 313 SUPPLIER NOTIFICATION

This product does not contain the toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and 40 CFR 372.

3: HAZARDOUS IDENTIFICATION

CLASS NAME OF HAZARDOUS CHEMICALS: Not classified as hazardous preparation.

HAZARD RATINGS:

Minimal 0
 Slight 1
 Moderate 2
 Serious 3
 Severe 4

HEALTH	1
FLAMMABILITY	1
REACTIVITY	0

4: FIRST AID MEASURES

EYE CONTACT : Immediately wash eyes with running water for 15 minutes
If irritation develops, get medical attention.
SKIN CONTACT : Wash affected areas with soap and water
If irritation develops, get medical attention.
INHALATION : Move to fresh air area.
Get medical attention if ill effects occur.
INGESTION : If swallowed, seek medical advice immediately.
FURTHER MEDICAL TREATMENT : None

5: FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT : > 160

FLAMMABLE LIMITS : No data available

SUITABLE EXTINGUISHING MEDIA : CO₂, Foam, Dry Powder

HAZARDOUS DECOMPOSITION PRODUCTS : Burning in insufficient air supply may
produce toxic fume of carbon monoxide.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS :

Protective clothing and self-contained breathing apparatus
should be worn in chemical fires.

MISCELLANEOUS : None

6: ACCIDENTAL RELEASE MEASURES

Wear appropriate protective equipment and wipe up spilled materials with disposal towels.
For large spills, scoop into disposal container.

7: HANDLING AND STORAGE

HANDLING : Avoid direct sunlight and fire.
Avoid contact with skin and eyes.
Do not handle or store near an open flame, sources of heat or sources of
ignition.
STORAGE : Avoid excessive heat.
Keep out of direct sunlight.
Store closed containers at temperatures between 10 and 25 .

8: EXPOSUR CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS : We recommend you to use ventilation.
RESPIRATORY PROTECTION : Wear suitable respiratory protective equipment
if exposures to high level of mists are likely.
HAND PROTECTION : Wear synthetic rubber gloves.
EYE PROTECTION : Use safety glasses or goggles.
SKIN PROTECTION : Desirable, Avoid contact with skin.

9: PHYSICAL AND CHEMICAL PROPERTIES

FORM	:	Paste	
COLOUR	:	Refer to page 4	
ODOR	:	Mild odor	
pH	:	Not applicable	
RELATIVE DENSITY	:	1.0 ~ 1.2	at 25
SOLUBILITY IN WATER	:	Insoluble	
BOILING POINT/BOILING RANGE	:	No data available	
EVAPORATION RATE	:	No data available	
PERCENT VOLATILE	:	Refer to page 4	
DECOMPOSITION TEMPERATURE	:	No data available	
VAPOUR PRESSURE	:	No data available	

10: STABILITY AND REACTIVITY

CONDITIONS TO AVOID	:	Strong U.V.light and extremely high temperatures.
MATERIALS TO AVOID	:	Strong oxidizers, peroxides.
HAZARDOUS REACTIONS	:	Undesirable polymerization will occur with strong U.V.light or at extremely high temperatures.
HAZARDOUS DECOMPOSITION PRODUCTS	:	None

11: TOXICOLOGICAL INFORMATION

EYE CONTACT	:	Contact with eyes may result in irritation.
SKIN CONTACT	:	Prolonged skin contact may cause slight skin irritation.
INHALATION	:	Inhalation of mists or aerosols may cause irritation to respiratory tract.
INGESTION	:	Ingestion may result in gastric disturbances.
LONG TERM EXPOSURE	:	This product is not considered as a known human carcinogen.

12: ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE AND DISTRIBUTION	:	This product is essentially insoluble in water. Treat using the best available techniques to avoid environmental contamination.
TOXICITY	:	May cause long-term adverse effects in the aquatic environment.
EFFECT ON EFFLUENT TREATMENT	:	No Data

13: DISPOSAL CONSIDERATIONS

Dispose in accordance with local, state and federal regulations.

14: TRANSPORT INFORMATION

Not classified as hazardous for transport.
Follow all regulations in your country.

15: REGULATORY INFORMATION

Not classified as hazardous preparation.
Follow all regulations in your country.

16: OTHER INFORMATION

Reference:

- 1) 「Threshold Limit Values(TLVs) for Chemical Substances and Physical Agents and Biological Exposure Indices (BEIs)」(2003) American Conference of Governmental Industrial Hygienists

We recommend you to use the under-mentioned printing ink in accordance with your local, state and national regulations on foods and medicines, because the printing application to packaging which foods and drugs contact directly to the ink film is not desirable.

UV AQUALESS NPG Series

No.	INK NAME	V.O.C VALUE	
		(g/L)	(lb/gal)
1	UV AQUALESS NPG YELLOW M	6	0.05
2	UV AQUALESS NPG MAGENTA M	7	0.06
3	UV AQUALESS NPG CYAN M	10	0.08
4	UV AQUALESS NPG BLACK M	11	0.08

MANUFACTURER'S COMPANY : TOYO INK MFG.Co.,LTD. RC SYSTEM DIVISION
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