

SDS – LIQUID DYNE SOLUTIONS (PENS AND BOTTLES) LEVELS 30 - 50

Safety Data Sheet

SECTION 1: Identification

1.1 Product identifier

Product name	Dyne Solutions 30-50
Applicable product numbers	N001-002 set 30 – 44, N001-010 set 36 – 48, N001-011- (30 - 50 in 100cc bottles), N001-012- (30 - 50 in individual liquid pens), N001-013- (30 - 50 in individual liquid pens), N001-015 set 46 - *60 (*this SDS applicable for levels 46 - 50 only)

1.4 Supplier's details

Name	UV Process Supply, Inc
Address	1229 W. Cortland Street Chicago, IL 60614-4805 USA
Telephone	773-248-0099
Fax	773-880-6647
Email	info@uvps.com

1.5 Emergency phone number(s)

800-424-9300 (CHEMTREC)

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

- Flammable liquids (chapter 2.6), Cat. 3
- Acute toxicity, inhalation (chapter 3.1), Cat. 4
- Acute toxicity, oral (chapter 3.1), Cat. 4
- Toxic to reproduction (chapter 3.7), Cat. 1A

2.2 GHS label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H226	Flammable liquid and vapor
H302	Harmful if swallowed
H332	Harmful if inhaled
H360	May damage fertility or the unborn child

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.

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P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER, doctor if you feel unwell,
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER doctor if you feel unwell.
P330	Rinse mouth.
P370+P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P403+P235	Store in a well ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with specified local, regional, national or international regulations

2.3 Other hazards which do not result in classification

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Formula	Dyne solutions vary in concentration, lower number dyes have a greater percentage of Glycol Ether EE to Formamide, as the dyne increases in its number, the percentage of Formamide increases, while the Glycol Ether EE percentage drops.
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Hazardous components

1. Formamide

Concentration	$\geq 0 - \leq 92$ % (Volume)
EC no.	200-842-0
CAS no.	75-12-7
Index no.	616-052-00-8

2. Glycol Ether EE

Concentration	$\geq 7 - \leq 100$ % (Volume)
EC no.	203-804-1
CAS no.	110-80-5

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

If inhaled	Seek prompt medical attention. Remove victim to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.
In case of skin contact	Remove contaminated clothing and shoes. Wash affected areas with plenty of running water, preferably under a shower. Seek prompt medical attention
In case of eye contact	Immediately flush with plenty of running water for at least 15 minutes, keeping eyelids open. Remove contact lenses if easy to do. Seek prompt medical attention.
If swallowed	Seek prompt medical attention. Do not induce vomiting. Vomiting should only be induced by medical personnel. If vomiting occurs, keep the head lower than chest to avoid aspiration into the lungs. Never give anything by mouth to an unconscious or convulsing person

4.2 Most important symptoms/effects, acute and delayed

Ingestion- It is toxic to the blood, kidneys, lungs and liver. May cause: Dizziness. Nausea. Vomiting. Loss of consciousness. May affect the central nervous system. Symptoms: Muscle spasms. Pulmonary edema. Cyanosis.

Inhalation- Dangerous concentrations can be achieved in air by evaporation of the product even at room temperature. Irritating to the respiratory tract. Repeated and/or prolonged exposure, without adequate protection, to vapors or mists of the product may cause: Narcotic effect. Others similar effects caused by ingestion. Chronic exposure may cause: Damage to the kidneys and liver. In animals exposed to the product for long periods were observed changes in the reproductive system and teratogenic effects.

Skin- Repeated and/or prolonged exposure can lead to the removal of fats from the skin, causing irritation and dermatitis. It can be absorbed through the skin.

Eyes- It can cause immediate pain, irritation of the conjunctive, of the cornea and production of tears. These effects can continue up to 24 hours.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

There is not known any specific antidote. Direct the treatment in accordance with the symptoms and clinical conditions of the patient

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

In case of fire, use: Alcohol resistant foam. Water spray. Carbon dioxide (CO₂). Dry chemical powder.

5.2 Specific hazards arising from the chemical

In case of combustion, it may generate carbon monoxide, besides CO₂. May form explosive mixtures with air above the flash point. In case of combustion may generate toxic and/or irritant fumes containing: Nitrogen oxides. Carbon monoxide. Nitrous gases. Persons who may have inhaled nitrous gases are to be laid down and kept rested. Call a doctor immediately.

5.3 Special protective actions for fire-fighters

Water jets should not be used directly on igniting products because it may disperse the material and intensify the fire. Self-contained breathing apparatus and protective clothing are required. Cool the intact fire-exposed containers with water spray and remove them.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Isolate and signalize area. Keep heat and/or ignition sources away. Use personal protection equipment as indicated in Section 8, in order to avoid contact with spilled product.

6.2 Environmental precautions

Prevent product from entering into soil and waterways. Notify the competent authorities if the product has run into drainage systems or watercourse or has contaminated the ground or vegetation.

6.3 Methods and materials for containment and cleaning up

Stop if possible. Contain and dike spilled product with earth or sand. Eliminate ignition or heat sources. Transfer to proper container.

Collect remnants with an appropriate absorbent material. Wash the contaminated surface with water, which should be collected for disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use in a well-ventilated area. Avoid inhalation and contact with eyes, skin or clothing through proper protection. If occurs accidental contact, exposed area should be washed immediately. Emergency eyewashes and showers shall be located in accessible locations. Wash hands and face thoroughly after handling. Wash contaminated clothing before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Store in a covered and well-ventilated area, away from sunlight and sources of heat or open flames. Ensure that the storage location has adequate moisture, pressure and temperature. Keep containers tightly closed when not in use. Tanks should be kept in an inert atmosphere.

Provide proper grounding to prevent static electricity buildup.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Glycol Ether EE (CAS: 110-80-5)

TLV® (Dermal): 5 ppm (ACGIH)

2. Glycol Ether EE (CAS: 110-80-5 EC: 203-804-1)

PEL-TWA (Dermal): 200ppm (OSHA)

3. Glycol Ether EE (CAS: 110-80-5 EC: 203-804-1)

TLV®: Not established (ACGIH)

4. Glycol Ether EE (CAS: 110-80-5 EC: 203-804-1)

LT (NR15) 78ppm/290mg/m³

5. Glycol Ether EE (CAS: 110-80-5 EC: 203-804-1)

Odor Threshold 1,22 ppm

6. Glycol Ether EE (CAS: 110-80-5 EC: 203-804-1)

IDLH 6000ppm

7. Formamide (CAS: 75-12-7 EC: 200-842-0)

Not listed

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8.2 Appropriate engineering controls

In closed environments, this product should be handled keeping proper exhaust (general diluter or local exhauster).

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Side shields or wide vision safety goggles.

Skin protection

PVC apron. It is recommended to adopt safety boots/shoes.

Body protection

Gloves made of: Butyl rubber

Respiratory protection

In case of emergency or contact with high concentrations of the product, wear an air supplied mask or self contained breathing apparatus. It is recommended to wear face mask with organic vapors cartridge in case of exposure to vapors/aerosols.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form	Blue or Red liquid
Odor	Solvent type
Odor threshold	N/A
pH	N/A
Melting point/freezing point	N/A
Initial boiling point and boiling range	111 to 135.6 deg C
Flash point	108 deg F to 175 deg F
Evaporation rate	Butyl Acetate = 1, 0.41
Flammability (solid, gas)	N/A
Upper/lower flammability limits	LEL: 1.7%, UEL: 19%, by volume
Upper/lower explosive limits	N/A
Vapor pressure	0.8 - 4 mmHg @ 20 deg. C
Vapor density	3.1
Relative density	N/A
Solubility(ies)	Water: 5% to 100%
Partition coefficient: n-octanol/water	N/A
Auto-ignition temperature	N/A
Decomposition temperature	N/A
Viscosity	N/A
Explosive properties	N/A
Oxidizing properties	N/A

Other safety information

The above information will vary with the dyne number, dyne 30 is 100% Glycol Ether EE, the dynes above 30 are a mixture of Glycol Ether EE and formamide.

SECTION 10: Stability and reactivity

10.2 Chemical stability

Stable under normal conditions of use and storage

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10.3 Possibility of hazardous reactions

Possibility of violent reaction or explosion with all incompatible substances

10.4 Conditions to avoid

High temperatures, ignition sources and prolonged exposure to the air.

10.5 Incompatible materials

Avoid contact with: Strong bases. Strong oxidizing agents. Compounds with high affinity for hydroxyl groups.

10.6 Hazardous decomposition products

In case of combustion, it may generate carbon monoxide, besides CO₂. In case of combustion may generate toxic and/or irritant fumes containing: Nitrous gases. Persons who may have inhaled nitrous gases are to be laid down and kept rested. Call a doctor immediately.

Carbon monoxide. Oxides of nitrogen.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Glycol Ether EE

Acute Toxicity Oral

LD50, rat: 2125 mg/kg. LD50, mouse: 2451 mg/kg. LD50, rabbit: 1275 mg/kg. Moderately toxic.

Inhalation

CL50, 7h, rat: 2000 mg/L. CL50, 7h, mouse: 1820 ppm. Moderately toxic.

Formamide:

Based on available data, the classification criteria are not met

Skin corrosion/irritation

Glycol Ether EE

May be absorbed through the skin. LD50, rabbit: 3300 mg/kg. LD50, rat: 3900 mg/kg.

Serious eye damage/irritation

Slightly to moderately irritating. Slight to moderate irritation

Respiratory or skin sensitization

Not available.

Germ cell mutagenicity

Not available.

Carcinogenicity

Mutagen Test (E.coli) OECD 472: negative.

Repeated exposures of rats, rabbits and guinea pigs to the inhalation of the product in concentrations above 400 ppm showed effects on the respiratory system, blood and urinary system of these animals; administered orally in elevated doses and for up to 13 weeks, showed effect on the blood, endocrine system and the weight of animals of the same species. Other effects observed were alteration in the female menstrual cycle and in the weight of the male testicles. The product did not show mutagenic in the Ames' tests. However, at high concentrations (above 860 ppm) and in elevated doses (23400 mg/kg) showed some mutagenic activity on hamsters and rats. Administered to rats, rabbits and mice through inhalation, in concentrations above 100 ppm, or orally in doses above 500 mg/kg,

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showed effects on the reproductive system including reduction of female fertility, male sperm morphology, increase of mortality of embryos and delay in the growth of offsprings. There are no records of carcinogenic activity of the product. It is recommended that exposure to the product be minimized, principally at elevated concentrations.

Reproductive toxicity

Not available.

STOT-single exposure

Not available.

STOT-repeated exposure

Not available.

Aspiration hazard

Not available.

SECTION 12: Ecological information

Toxicity

It has low toxicity to aquatic life. The smell and taste of the product may attract animals with consequent consumption of the released product.

Algae: EC₀, *Desmodesmus subspicatus*: >1.000 mg/L.

Invertebrates:

EC₅₀, 48h, Crustacea: 1905 mg/L (EPA/600/4-90/02F). EC₅₀, 48h, *Daphnia magna*: > 10.000 mg/L (DIN 38412 - 11).

Fish:

LC₀, *Leuciscus idus*: > 10.000 mg/L.

LC₅₀, 24h, *Carassius auratus*: > 5000 mg/L (APHA 231). LC₅₀, 48h, *Lepomis macrochirus*: >10.000 mg/L.

Persistence and degradability

Slowly biodegradable. OECD 301: 100% in 14 days. BOD₅: 65% 24 hours (adapted environment).

Bioaccumulative potential

It is not expected to bioaccumulate in the environment.

Mobility in soil

The product is highly soluble in water. It is expected to have high mobility in soil. It is poorly absorbed from the soil or sediment. Volatization coming from dry ground surface is expected.

Other adverse effects

This product is expected to exist exclusively as vapor in the atmospheric environment. Vapor phase is degraded in the atmosphere through the reaction with photochemicals

SECTION 13: Disposal considerations

Disposal of the product

The preferred options for disposal include reuse, recycling, co-processing, finding a use for a by-product, incineration or other thermal destruction process at licensed facilities. All procedures must follow specific operation standards in order to reduce health, safety and environmental risks. Perform co-processing, incineration or other thermal destruction process at facilities capable of minimizing or reducing air pollution emissions.

The disposal must comply with federal, state, and local laws and regulations in accordance with the environmental agencies.

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Disposal of contaminated packaging

Do not cut or pierce the packaging, nor do hot work near them. Do not remove labels until the product has been fully removed and the packaging cleaned. The preferred options for disposal include reuse, recycling or reclamation at licensed facilities. All procedures must follow specific operation standards in order to reduce health, safety and environmental risks. The disposal must comply with local legislation and in accordance with standards from local environmental agencies.

SECTION 14: Transport information

DOT (US)

UN Number: This product is considered a combustible liquid, DOT regulation 172.150 states a flammable liquid with a flash point at or above 38 deg C (100 deg F) that does not meet the definition of any other hazard class maybe re classed as a combustible liquid. The requirements do not apply to a material classed as a combustible liquid in a non-bulk packaging. Not a DOT Hazardous Material in Non-Bulk packaging (Packaging of 119 gals. or less)

Class: N/A

Packing Group: N/A

Proper Shipping Name: N/A

Reportable quantity (RQ): N/A

Marine pollutant: N/A

Poison inhalation hazard: N/A

IMDG

UN Number: N/A

Class: N/A

Packing Group: N/A

EMS Number: N/A

Proper Shipping Name: N/A

IATA

UN Number: N/A

Class: N/A

Packing Group: N/A

Proper Shipping Name: N/A

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

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

Ensure all national/local regulations are observed.

REACH Restrictions - Annex XVII

With the exception of those listed below: The components of this product are not subject to restrictions. Annex XVII

REACH Authorisation - Annex XIV

The components of this product are not subject to authorization

TSCA Inventory

Glycol Ether EE, All ingredients are listed on the TSCA inventory

DSCL (EEC)

Glycol Ether EE, All ingredients are listed on the DSCL inventory

SARA 302 Components

Not listed

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SARA 304 Components: Not listed

SARA 311/312 Hazards: 2-Ethoxyethanol

SARA 313 Components: Listed; 2-Ethoxyethanol

WHMIS Canada

Glycol Ether EE CLASS B-3: Combustible liquid with a flash point between 37.8 deg C (100 degF) and 93.3 deg C (200 deg. F) CLASS D-2A, Material causing other toxic effect (VERY TOXIC)

15.2 Chemical Safety Assessment

It has not been carried out.

Caution: HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks although HMIS ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS ratings are to be used with a fully implemented HMIS program. HMIS is a registered mark of the National Paint and Coatings Association (NPCA).

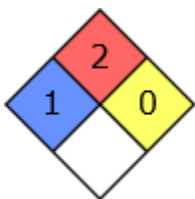
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HMIS Rating

Dyne Solutions 30-50	
HEALTH	1
FLAMMABILITY	2
PHYSICAL HAZARD	0
PERSONAL PROTECTION	H

NFPA Rating



SECTION 16: Other information

16.1 Further information/disclaimer

The data contained herein is drawn from recognized sources and believed to be accurate as the date of issue. This information is intended for use by persons who have or should obtain professional knowledge and experience in the subjects discussed, and is presented only for your evaluation of the suitability of this product for your use, and for compliance with Federal and State regulations. The manufacturer makes no warranty, express or implied, and disclaims all liability for the accuracy, completeness, and reliability of any information contained herein.

16.2 Preparation information

Edited by: Steve Arndt

Date: 09/17/2015