


1 - Identification

Product identifier	SoluJET®2770K
Other means of identification	Not available.
Synonym(s)	SoluJET®2770K black solvent- based ink
Recommended use	Inkjet Printing
Recommended restrictions	None Known.
Issue date	22-Aug-2018
Company identification	MYLAN GROUP Long Duc Industrial Park Tra Vinh City, Tra Vinh Province, Vietnam Tel. +84-294-3846-997 Fax +84-294-3846-998

2 - Hazard(s) identification

Physical hazards	Flammable liquids. Category 2
Health hazards	Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Skin irritation (Category 2), H315 Serious eye damage (Category 1), H318 Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336 Specific target organ toxicity - single exposure (Category 1), H370
Label elements	
Signal word	Danger
Hazard statement	H225- Highly flammable liquid and vapor. H301+H311+H331- Toxic if swallowed, in contact with skin or if inhaled. H370+H336- Causes damage to the central nervous system and optic nerve. May cause drowsiness or dizziness. H315- Causes skin irritation. H318- Causes serious eye damage.

Precautionary statement

Prevention

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
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.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P264 - Wash thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P370+P378- In case of fire: for small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam to extinguish. For large fires, use water spray, fog, or alcohol-resistant foam to extinguish. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water.

Response

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Storage

P403 + P235 - Store in a well-ventilated place. Keep cool.

Disposal

P501- Dispose of contents/container in accordance with local/regional/national/international regulations.

Environmental hazards

Not available

3 - Composition/information on ingredients

Mixtures	CAS Number	%
Ethanol	64-17-5	>50
Methanol	67-56-1	<20
n-butanol	71-36-3	<5
1-methoxy-2-propanol	107-98-2	<5
Cyclohexanone	108-94-1	<5
Acetone	67-64-1	<5
Black dye mixture	Proprietary	<10

4. First-aid measures

Inhalation

Move person to fresh air immediately.
If symptoms persist, get immediate medical attention.

Skin contact	In case of contact, immediately remove contaminated clothing and flush skin with copious amounts of water. Wash clothing separately before reuse. Get medical attention, if needed.
Eye contact	In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately.
Ingestion	Rinse mouth out with water. If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Most important symptoms/ effects, acute and delayed	See section 8.
5. Fire-fighting measures	
FLASH POINT:	13°C (closed-cup).
Suitable extinguishing media	Suitable extinguishing media: sand, carbon dioxide (CO ₂) or dry chemical.
Unsuitable extinguishing media	Not available.
Specific hazards arising from the chemical	Not applicable.
Special protective equipment and precautions for firefighters	Firefighters should wear full protective clothing including self-contained breathing apparatus. Avoid run off into storm sewers and ditches which lead to waterways.
Fire-fighting equipment/instructions	Move containers from fire area if you can do it without risk.
6. Accidental release measures	
Personal precautions, protective equipment and emergency procedures	Avoid contact with skin. Avoid inhalation of vapors or mists. Do not touch or walk through spilled material. Ensure adequate ventilation. Remove all sources of ignition. Use personal protective equipment to minimize exposure to skin and eye. In the case of vapor formation use a respirator with an approved filter.
Environmental precautions	Do not flush into surface water or sanitary sewer system.
Methods and materials for containment and cleaning up	Not available.

7. Handling and storage

Precautions for safe handling Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists of this product.
Use with adequate ventilation.

Wear personal protective equipment.

Conditions for safe storage, including any incompatibilities Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR1910.1000)

Components	Type	Value
Ethanol (CAS 64-17-5)	PEL	1900 mg/m ³ 1000 ppm
Methanol (CAS 67-56-1)	PEL	260mg/m ³ 200ppm
n-Butanol (CAS 71-36-3)	TWA	300 mg/m ³ 100 ppm
Cyclohexanone (CAS 108-94-1)	PEL	200mg/m ³ 50ppm
Acetone (CAS 67-64-1)	PEL	2400mg/m ³ 1000ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Ethanol (CAS 64-17-5)	STEL	1000 ppm
Methanol (CAS 67-56-1)	STEL	250ppm
n-Butanol (CAS 71-36-3)	TWA	20ppm
1-methoxy-2-propanol (CAS 107-98-2)	STEL	150ppm
Cyclohexanone (CAS 108-94-1)	STEL	50ppm
Acetone (CAS 67-64-1)	STEL	750ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Ethanol (CAS 64-17-5)	TWA	1900 mg/m ³ 1000 ppm
Methanol (CAS 67-56-1)	TWA	260mg/m ³ 200ppm
n-Butanol (CAS 71-36-3)	REL	50ppm 150mg/m ³
1-methoxy-2-propanol (CAS 107-98-2)	TWA	360mg/m ³ 150ppm
Cyclohexanone (CAS 108-94-1)	TWA	100mg/m ³ 25ppm
Acetone (CAS 67-64-1)	TWA	590mg/m ³ 250ppm
Biological limit values	No biological exposure limits noted for the ingredient(s).	
Appropriate engineering Controls	Not available.	
Individual protection measures, such as personal protective equipment		
Eye/face protection	Wear safety glasses; chemical goggles (if splashing is possible). Eye wash fountain and emergency showers are recommended.	
Skin protection		
Hand protection	Not available.	
Other	Wear appropriate chemical resistant clothing. Wear appropriate chemical resistant gloves.	
Respiratory protection	Provide adequate ventilation. In case of insufficient ventilation wear suitable respiratory equipment.	
Thermal hazards	Not available.	
General hygiene considerations	Do not get this material in contact with skin. Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Launder contaminated clothing before reuse.	
9. Physical and chemical properties		
Appearance	Black liquid	
Odor	Vinous odor	
Odor threshold	Not available.	

pH	Not available.
Melting point/freezing point;	Not available.
Initial boiling point and boiling range	>70°C
Flash point	13°C (closed-cup)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper(%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Soluble in ethanol
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity (cPs)	Not available
10. Stability and reactivity	
Reactivity	Not available.
Chemical stability	Stable at normal conditions.

Possibility of hazardous reactions	None known.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Not available.
Hazardous decomposition products	Not available.

11. Toxicological information

Symptoms related to the physical, chemical and toxicological characteristics Not available.

Information on toxicological effects

Acute toxicity value

Components	Species	Test results
Ethanol (CAS 64-17-5)		
Acute		
Inhalation		
LC50	Mouse Rat	39 mg/l, 4 Hours 20000 mg/l, 10 Hours
Oral		
LD50	Dog Guinea pig Mouse Rat	5.5 g/kg 5.6 g/kg Mouse 3450 mg/kg Rat 7060 mg/kg 6.2 g/kg
Methanol (CAS 67-56-1)		
Acute		
Inhalation		
LC50	Rat	128.2mg/l, 4 Hours 87.6mg/l, 6 Hours
Oral		
LD50	Rat	1.187 - 2.769 mg/kg
LDLO	Human	143mg/kg
n-Butanol (CAS 71-36-3)		
Acute		
Inhalation		
LC50	Rat	8000 mg/l, 4 Hours

Dermal		
LD50	Rabbit	3,400mg/kg
Oral		
LD50	Rat	790mg/kg
1-methoxy-2-propanol (CAS 107-98-2)		
Acute		
Inhalation		
LC50	Rat	10,000 mg/l, 5 Hour
Oral		
LD50	Mouse	11,700mg/kg
Dermal		
LC50	Rabbit	13,000mg/kg
Cyclohexanone (CAS 108-94-1)		
Acute		
Inhalation		
LC50	Rat	> 6.2 mg/l, 4 Hours
Dermal		
LD50	rabbit	3,160 mg/kg
Oral		
LD50	Rat	1,534 mg/kg
Acetone (CAS 67-64-1)		
Acute		
Inhalation		
LC50	Rat	50.100 mg/m3
Oral		
LD50	Rat	5.800 mg/kg
Dermal		
LD50	Guinea pig	7.426 mg/kg
Skin corrosion/irritation	Skin Contact: May cause skin irritation. Skin Absorption: May be harmful if absorbed through the skin.	
Serious eye damage/eye irritation	Eye Contact: May cause eye irritation. Inhalation: May be harmful if inhaled. Material may be irritating to mucous	

		membranes and upper respiratory tract. Ingestion: Harmful if swallowed.
Respiratory sensitization		Based on available data, the classification criteria are not met.
Skin sensitization		Based on available data, the classification criteria are not met.
Germ cell mutagenicity		Based on available data, the classification criteria are not met.
Carcinogenicity		Based on available data, the classification criteria are not met.
Specific target organ toxicity - single exposure		Based on available data, the classification criteria are not met.
Specific target organ toxicity - repeated exposure		Based on available data, the classification criteria are not met.
Aspiration hazard		Based on available data, the classification criteria are not met.
12. Ecological information		
Aquatic toxicity		
Eco toxicity		
Components	Species	Test Results
Ethanol (CAS 64-17-5)		
Aquatic		
Crustacea	EC50 Water flea (<i>Daphnia magna</i>)	7.7 - 11.2 mg/l, 48 hours
Fish	LC50 Fathead minnow (<i>Pimephales promelas</i>)	> 100 mg/l, 96 hours
Methanol (CAS 67-56-1)		
Fish	LC50 <i>Lepomis macrochirus</i> (Bluegill) NOEC <i>Oryzias latipes</i>	15.400,0 mg/l - 96 h 7.900 mg/l - 200 h
Crustacea	EC50 Water flea (<i>Daphnia magna</i>)	10.000,00 mg/l - 48 h
n-Butanol (CAS 71-36-3)		
Fish	LC50 Fathead minnow (<i>Pimephales promelas</i>)	1,840 mg/l, 96 hours
Daphnia and other aquatic invertebrates	EC50 <i>Daphnia magna</i> (Water flea)	1,983 mg/l - 48 h
Cyclohexanone (CAS 108-94-1)		

Daphnia and other aquatic invertebrates	LC50	Daphnia magna (Water flea)	820 mg/l - 24 h
Acetone (CAS 67-64-1)			
Fish	LC50	Oncorhynchus mykiss (rainbow trout)	5.540 mg/l - 96 h
Daphnia and other aquatic invertebrates	LC50	Daphnia magna (Water flea)	8.800 mg/l - 48 h
Persistence and degradability	Not available.		
Bioaccumulative potential	Not available.		
Partition coefficient n-octanol / water (log Kow)			
Ethanol (CAS 64-17-5)	-0.31		
Methanol (CAS 67-56-1)	-0.77		
n-Butanol (CAS 71-36-3)	0.88		
1-methoxy-2-propanol (CAS 107-98-2)	-0.49		
Cyclohexanone (CAS 108-94-1)	0.81		
Acetone (CAS 67-64-1)	-0.24		
Mobility in soil	Not available.		
Other adverse effects	Not available.		
13. Disposal considerations			
Disposal instructions	Do not dispose of together with general office waste. Do not allow this material to drain into sewers/water supplies. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. Ensure collection and disposal with an appropriately licensed waste contractor.		
Local disposal regulations	Not available.		
Hazardous waste code	Not regulated.		
Waste from residues / unused products	Not available.		

Contaminated packaging Not available

14. Transport information

DOT

UN number UN1210

UN proper shipping name Printing ink, flammable (Ethanol, Methanol, n-Butanol, 1-methoxy-2-propanol, Cyclohexanone, Acetone)

Transport hazard class(es) 3

Subsidiary class(es) Not available.

Packing group II

Special precautions for user
Passenger aircraft
Quantity limitation: 5 L
Cargo aircraft
Quantity limitation: 60 L

Labels required Not available.

IATA

UN number UN1210

UN proper shipping name Printing ink, flammable (Ethanol, Methanol, n-Butanol, 1-methoxy-2-propanol, Cyclohexanone, Acetone)

Transport hazard class(es) 3

Subsidiary class(es) -

Packaging group II

Environmental hazards No

Labels required Not available.

ERG Code Not available.

Special precautions for user
Passenger and Cargo Aircraft
Quantity limitation: 5 L
Cargo Aircraft Only
Quantity limitation: 60 L
Limited Quantities - Passenger Aircraft
Quantity limitation: 1 L.

IMDG

UN number	UN1210
UN proper shipping name	Printing ink, flammable (Ethanol, Methanol, n-Butanol, 1-methoxy-2-propanol, Cyclohexanone, Acetone)
Transport hazard class(es)	3
Subsidiary class(es)	-
Packaging group	II
Environmental hazards	
Marine pollutant	No
Labels required	Not available.
Ems	Not available.
Special precautions for user	Not available.

Section 15 - Regulatory Information

US federal regulations	US EPA TSCA Inventory: All chemical substances in this product comply with all rules or orders under TSCA.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	n-Butanol (CAS 71-36-3)
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not on regulatory list.
CERCLA Hazardous Substance List (40 CFR 302.4)	
Methanol (CAS 67-56-1)	Reportable quantity: 5000 lbs.
1-methoxy-2-propanol (CAS 107-98-2)	Reportable quantity: 5000 lbs
Cyclohexanone (CAS 108-94-1)	Reportable quantity: 5000 lbs.
Superfund Amendments and Reauthorization Act of 1986 (SARA)	
Hazard categories	Immediate Hazard - No Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - No

	Reactivity Hazard – No
SARA 302 Extremely hazardous substance	No
SARA 311/312 Hazardous chemical	No
US state regulations	
US. Massachusetts RTK - Substance List	Ethanol(CAS 64-17-5) Methanol (CAS 67-56-1) n-Butanol (CAS 71-36-3) 1-methoxy-2-propanol (CAS 107-98-2) Cyclohexanone (CAS 108-94-1)
US. New Jersey Worker and Community Right-to-Know Act	Methanol (CAS 67-56-1) n-Butanol (CAS 71-36-3) Cyclohexanone (CAS 108-94-1)
US. Pennsylvania RTK - Hazardous Substances	Ethanol (CAS 64-17-5) Methanol (CAS 67-56-1) n-Butanol (CAS 71-36-3) 1-methoxy-2-propanol (CAS 107-98-2) Cyclohexanone (CAS 108-94-1)
US. Rhode Island RTK	Ethanol (CAS 64-17-5) Cyclohexanone (CAS 108-94-1) Acetone (CAS 67-64-1)
US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance	Methanol (CAS 67-56-1)
Section 16 - Other Information	
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