

SAFETY DATA SHEET

4-8010 series

Section 1. Identification

GHS product identifier	: MARK ANDY PRINT PRODUCTS PEARL DRY PLATE CLEANER
Product type	: Liquid.
SDS #	: 4-8010, 4-8010-QT, 4-8010-5

Relevant identified uses of the substance or mixture and uses advised against

Identified uses	
Speciality cleaner for use in Direct Image lithographic printing Plates	
Uses advised against Not applicable.	Reason

Supplier's details	: Mark Andy Print Products 201 W Oakton Ave DesPlaines, IL 60018 United States

Emergency telephone	For Health and Safety Questions during business hours call 1-800-225-4835	
number (with hours of	24 Hour Emergency Spill Contact call	1-800-424-9300 Chemtrec (US/Canada)
operation)		

Section 2. Hazards identification

OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	: FLAMMABLE LIQUIDS - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1

Hazard pictograms



Signal word	: Danger
Hazard statements	: Highly flammable liquid and vapor.
	Causes eye irritation.
	May be fatal if swallowed and enters airways.
	May cause drowsiness and dizziness.

Precautionary statements

Section 2. Hazards identification

Prevention	: Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling.
Response	: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
Storage	: Store locked up. Store in a well-ventilated place. Keep cool.
Disposal	: Dispose of contents and container in accordance with all local, regional, national and
Hazards not otherwise	international regulations.
classified	: None known.

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

Ingredient name	%	CAS number
propan-2-ol	60 - 100	67-63-0
Aliphatic Petroleum Distillate	5 - 10	64742-47-8A
solvent naphtha (petroleum), light arom.	1 - 5	64742-95-6
1,2,4-trimethylbenzene	1 - 5	95-63-6

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	 Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	 Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Version :1

Section 4. First aid measures

Ingestion	: Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects	
Eye contact	: Causes eye irritation.
Inhalation	: Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.
Skin contact	: No known significant effects or critical hazards.
Ingestion	: Can cause central nervous system (CNS) depression. May be fatal if swallowed and

Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. May be irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact	: Adverse symptoms may include the following: irritation watering redness
Inhalation	: Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	: No specific data.
Ingestion	: Adverse symptoms may include the following: nausea or vomiting

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

Notes to physician	 Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

3/12

Section 5. Fire-fighting measures

Extinguishing media	
Suitable extinguishing media	: Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: Do not use water jet.
Specific hazards arising from the chemical	: Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide
Special protective actions for fire-fighters	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protect	Personal precautions, protective equipment and emergency procedures			
For non-emergency personnel	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.			
For emergency responders	: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".			
Environmental precautions	: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).			
Methods and materials for co	ntainment and cleaning up			
Small spill	: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.			
Large spill	: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.			

Section 7. Handling and storage

Precautions for safe handling	
Protective measures	: Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name			Exposure limits		
propan-2-ol		ACGIH TLV (United States, 3/2012). STEL: 400 ppm 15 minutes. TWA: 200 ppm 8 hours. NIOSH REL (United States, 6/2009). STEL: 1225 mg/m ³ 15 minutes. STEL: 500 ppm 15 minutes. TWA: 980 mg/m ³ 10 hours. TWA: 400 ppm 10 hours. OSHA PEL (United States, 6/2010). TWA: 980 mg/m ³ 8 hours. TWA: 400 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). STEL: 1225 mg/m ³ 15 minutes. STEL: 500 ppm 15 minutes. TWA: 980 mg/m ³ 8 hours. TWA: 980 mg/m ³ 8 hours. TWA: 980 mg/m ³ 8 hours.			
1,2,4-trimethylbenzene			ACGIH TLV (United States, 3/2012). TWA: 123 mg/m ³ 8 hours. TWA: 25 ppm 8 hours. NIOSH REL (United States, 6/2009). TWA: 125 mg/m ³ 10 hours. TWA: 25 ppm 10 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 125 mg/m ³ 8 hours.		
ate of issue/Date of revision	: 11.06.2015.	Date of previous issue	I WA: 125 mg/m [°] 8 hours. : No previous validation. Version :1 5/1		

Section 8. Exposure controls/personal protection

TWA: 25 ppm 8 hours.

Appropriate engineering controls	: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
Individual protection meas	sures
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
Skin protection	
Hand protection	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Body protection	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
Other skin protection	 Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
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Section 9. Physical and chemical properties

Appearance	
Physical state	: Liquid.
Color	: Not available.
Odor	: Not available.
Odor threshold	: Not available.
рН	: Not available.
Melt point/Freeze point	: Not available.
Boiling point	: Not available.
Flash point Evaporation	: Between -18°C (0°F) and 23°C (73°F).
rate Flammability (solid,	: Not available.
gas)	: Not available.

Date of issue/Date of revision

Section 9. Physical and chemical properties

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Lower and upper explosive	:	Not available.
(flammable) limits		
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Relative density Solubility	:	Not available.
Partition coefficient: n-	:	Not available.
octanol/water	:	Not available.
Auto-ignition temperature		
	:	Not available.
Decomposition temperature	:	Not available.
Viscosity	:	Kinematic (40°C (104°F)): <0,2 cm ² /s (<20 cSt)
Density	:	790 g/l / 6,5926 lbs/gal
VOC data		
94,9 % by weight 75 % by volume		

75 % by volume 750 g/l / 6,3 lbs/gal 750 g/l / 6,3 lbs/gal [With volume exclusion [water excluded]]

Section 10. Stability and reactivity Reactivity : No specific test data related to reactivity available for this product or its ingredients. **Chemical stability** : The product is stable. : Under normal conditions of storage and use, hazardous reactions will not occur. Possibility of hazardous reactions Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials Hazardous decomposition : Under normal conditions of storage and use, hazardous decomposition products should products not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
propan-2-ol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5045 mg/kg	-
solvent naphtha (petroleum), light aromatic	LD50 Oral	Rat	8400 mg/kg	-
1,2,4-trimethylbenzene	LC50 Inhalation Vapor	Rat	18000 mg/m³	4 hours

Date of issue/Date of revision

7/12

Section 11. Toxicological information

Carcinogenicity Classification

Classification					
Product/ingredient name	OSHA	IARC	NTP		
propan-2-ol	-	3	-		

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
propan-2-ol solvent naphtha (petroleum), light aromatic 1,2,4-trimethylbenzene	Category 3 Category 3 Category 3	Not applicable. Not applicable. Not applicable.	Narcotic effects Narcotic effects Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Name	Result
	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1
solvent haphtha (peroleum), light alomatic	ASPIRATION HAZARD - Calegoly I

Information on the likely routes of exposure	:	Not available.
Potential acute health effects		
Eye contact	1	Causes eye irritation.
Inhalation	:	Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.
Skin contact	1	No known significant effects or critical hazards.
Ingestion	:	Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. May be irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

: Adverse symptoms may include the following: irritation watering redness
: Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
: No specific data.
: Adverse symptoms may include the following: nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure						
Potential immediate : Not a effects	available.					
Potential delayed effects	: Not available	e.				
Date of issue/Date of revision	: 11.06.2015.	Date of previous issue	: No previous validation.	Version	:1	8/12

Section 11. Toxicological information

Long term exposure		
Potential immediate effects	: Not available.	
Potential delayed effects	: Not available.	
Potential chronic health effe	ects	
Not available.		
General	: No known significant effects or critical	
Carcinogenicity	hazards. : No known significant effects or critical	
Mutagenicity	hazards. : No known significant effects or critical	
Teratogenicity	hazards. : No known significant effects or critical	
Developmental effects	hazards. : No known significant effects or critical	
Fertility effects	hazards. : No known significant effects or critical	
	hazards.	

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
propan-2-ol		Crustaceans - Crangon crangon Fish - Rasbora heteromorpha	48 hours 96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
propan-2-ol	0,05	-	low
1,2,4-trimethylbenzene	-	120,23	low

Mobility in soil

Soil/water partition : Not available. coefficient (K_{oc})

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues.

Date of issue/Date of revision	: 11.06.2015.	Date of previous issue	: No previous validation.	Version : 1	9/12
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Section 13. Disposal considerations

Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	ΙΑΤΑ
UN number	UN1210	UN1210	UN1210	UN1210
UN proper shipping name	Printing ink related material	PRINTING INK RELATED MATERIAL	PRINTING INK RELATED MATERIAL	Printing ink related material
Transport hazard class(es)	3	3	3	3
Packing group	Ш	Ш	11	П
Environmental hazards	No.	No.	No.	No.
Additional information	Reportable quantity 43251,7 lbs / 19636,3 kg [6566,3 gal / 24856, 1 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements. Limited quantity Yes. Packaging instruction Passenger aircraft Quantity limitation: 5 L Cargo aircraft Quantity limitation: 60 L Special provisions 149, IB2, T4, TP1, TP8	Explosive Limit and Limited Quantity Index 5 Passenger Carrying Road or Rail Index 5 Special provisions 59	Emergency schedules (EmS) F-E, S-D Special provisions 163	Passenger and Cargo Aircraft Quantity limitation: 5 L Packaging instructions: 353 Cargo Aircraft Only Quantity limitation: 60 L Packaging instructions: 364 Limited Quantities - Passenger Aircraft Quantity limitation: 1 L Packaging instructions: Y341 Special provisions A3, A72

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 14. Transport information

Section 15. Regulatory information

:

U.S. Federal regulations

United States inventory (TSCA 8b): All components are listed or exempted.

SARA 311/312

Classification

: Fire hazard Immediate (acute) health hazard

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements		67-63-0 95-63-6	75.977 2.4585
Supplier notification	1 1	67-63-0 95-63-6	75.977 2.4585

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

California Prop. 65

WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer. **WARNING:** This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Section 16. Other information

Date of issue/Date of revision	: 11.06.2015. Date of previous issue : No previous validation. Version : 1 11/12
	BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = International Air Transport Association IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships,
Key to abbreviations	: ATE = Acute Toxicity Estimate
Version	: 1
Date of previous issue	: No previous validation.
revision	. 11.00.2010.
Date of issue/Date of	• 11.06.2015.
Date of printing	: 11.06.2015.
History	

Section 16. Other information

1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

The information on this SDS was obtained from sources which we believe to be reliable. However, the information provided is without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the product itself. The information and recommendations are offered for the user's consideration and examination and should be used to make an independent determination of the methods to safeguard workers and the environment. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For these reasons Mark Andy Print Products, Mark Andy Inc. does not assume responsibility and expressly disclaim any liability for loss, damage, or expense arising out of or in any way connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS may not be applicable. It is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.