NAME USED ON LABEL: LOTADER 6600

Section III - Fire and Explosion Data (cont.)

Hazardous Combustion Products:
Irritating and/or toxic gases due to decomposition of the product may be generated during a fire.

Unusual Fire and Explosion Hazards:
Pellets present no special fire or explosion hazard; however, dust generated during handling or storage can create explosive mixtures in the air.

Section IV - Reactivity Data

Stability:
Compound is stable
Conditions to avoid:
Decomposition of material during thermal processing.
Incompatability (Materials to avoid):
Acids and strong oxidizing agents
Hazardous Polymerization:
Does not occur
Hazardous Decomposition Products:
Oxides of carbon.

Section V - Environmental Information

Spill Response:
Sweep "inert" organic pellets, and dispose of properly. Avoid the generation of dust in the area.

Recommended Disposal:
Dispose of as solid waste observing all local, state, and federal regulations.

Section VI - Health Hazard Data

PRIMARY ROUTES OF ENTRY:
no - EYE yes - SKIN no - INGESTION yes - INHALATION

Eye Contact:
Dust or vapors that contact the eye may be irritating or cause mechanical injury.
Skin Contact:
May cause slight skin irritation. Molten material will produce thermal burns.
Ingestion:
It is reasonable to anticipate ingestion of pellets would be irritating to the GI tract.

NE - Not Established N/A - Not Applicable * - See Misc. (Section IX)

Section VI - Health Hazard Data (cont.)

Inhalation:
Dust or vapors may be irritating to the respiratory tract and cause coughing or sneezing.

Chronic Toxicity:
No effects from chronic exposure are known.

Medical Conditions Prone to Aggravation By Exposure:
As with any organic compound that is heated to vaporization, exposure may aggravate pre-existing conditions such as colds, allergies, asthma, emphysema and psoriasis.

Toxicology:
Carcinogenicity: no - NTP no - IARC

Section VII - First Aid Measures

Eyes:
Immediately flush eyes with flowing water for at least 15 minutes. See a physician if the irritation persists.

Skin:
Wash throughly with soap and water. See a physician if an irritation develops and continues to persist.

Ingestion:
No harmful effects are anticipated if the pellets are swallowed. See a physician if an irritation develops and persists.

Inhalation:
No harmful effects are anticipated from breathing dust or a low concentration of vapors. If a problem develops, remove the person to the fresh air and supply oxygen if necessary.

Section VIII - Special Protection Information

Ventilation:
Provide local exhaust ventilation where heat can cause polymer breakdown, e.g. extrusion, molding and where there is a need to draw dusts and fumes from worker breathing zones. The following publication offers ventilation guidelines and techniques: "INDUSTRIAL VENTILATION, A MANUAL OF RECOMMENDED PRACTICE." available from ACGIH.

Respiratory Protection:
For conditions where exposure to dust and fumes is apparent, a NIOSH approved respirator for dust mists and fumes appropriate to the airborne concentration may be worn. Where vapors are generated, a NIOSH approved organic respirator suitable to the airborne concentrations is recommended.

NE - Not Established N/A - Not Applicable * - See Misc. (Section IX)

NAME USED ON LABEL: LOTADER 6600

Section VIII - Special Protection Information (cont.)

Eye and Face Protection:
Safety glasses with side shields are recommended for any type of handling. Dust-tight goggles are recommended for dusty operations of areas where vapors accumulate.

Other Clothing and Equipment:
Wear clean body covering and gloves impervious to dust or vapor to minimize skin contact.

Storage and Handling:
Store in a dry, protected location. Storage temperature should not exceed 40 C/104 F. Avoid static charge problems in pouring the pellets into a metallic container proof, bonded, and grounded to prevent static charge build-up. Maintain good housekeeping standads to prevent accumulation of dust. Refer to NFPA pamphlet #654, "PREVENTION OF FIRE AND DUST EXPLOSION IN THE CHEMICAL, DYE, PHARMACEUTICAL AND PLASTICS INDUSTRY."

Section IX - Miscellaneous

HMIS: Health - 0 Fire - 0 Reactivity - 0 Protection - X

DOT Proper Shipping Name: Synthetic Resin, flakes, powders
DOT Hazard Class: N/A
DOT Label: N/A
DOT ID #: 156200

The workplace exposure recommendation for Norsocryl is 0.05 mg/cubic meter.

During the thermal processing of this product vapors may be evolved. These vapors may be flammable. Vapors may contain maleic anhydride (PEL/TLV: 0.25 ppm (TWA)) and acrylic ester (PEL/TLV: 10 ppm (TWA)).

Additional Health Hazard Data:
Overexposure to thermal processing fumes may cause lacrimation, coughing, chest tightness, burning sensation in throat, headache, nausea and vomiting. High concentrations may cause pulmonary edema.

During thermal processing, an acrylic ester and other hazardous materials maybe evolved. The acrylic ester is considered to be a probable human carcinogen by IARC and NTP. Thermal processing equipment should be properly ventilated to control exposure to gases/vapors.

NE - Not Established N/A - Not Applicable * - See Misc. (Section IX)

NAME USED ON LABEL: LOTADER 6600

Section IX - Miscellaneous (cont.)

SARA Hazard Classification
Immediate (Acute) Health: no
Delayed (Chronic) Health: no
Sudden Release of Pressure: no
Reactive: no
Fire: no

TSCA Inventory Status:
This product is listed on the TSCA Inventory.

SARA Title III, Section 302:
This product does not contain any chemicals currently on the Extremely Hazardous Substance List, Section 302, SARA Title III.

SARA Title III, Section 313:
This product does not contain any chemicals currently on the Toxic Chemical List, Section 313, SARA Title III.

California Propostion 65:
This product does not contain any chemicals currently on the California List of known Carcinogens and Reproductive Toxins.

Pennsylvania Right-to-Know
Hazardous Substance List
This product does not contain any chemicals currently on the Pennsylvania Hazardous Substance List.

Environmental Hazardous Substance List
This product does not contain any chemicals currently on the Pennsylvania Environmental Hazardous Substance List.

Hazardous Substance List
This product does not contain any chemicals currently on the Pennsylvania Special Hazardous Substance List.

NE - Not Established N/A - Not Applicable * - See Misc. (Section IX)

NAME USED ON LABEL: LOTADER 6600

Section IX - Miscellaneous (cont.)
WHMIS Classification:
Not Controlled

Prepared by the Safety &
Environmental Affairs Committee

Issued: 03/07/94 Rev: 0
Supersedes: 08/06/92

The information set forth herein has been gathered from standard reference materials and/or ELF ATOCHEM test data and is to the best knowledge and belief of ELF ATOCHEM accurate and reliable. Such information is offered solely for your consideration, investigation and verification, and it is not suggested or guaranteed that the hazard precautions or procedures mentioned are the only ones which exist. ELF ATOCHEM makes no warranties, expressed or implied, with respect to the use of such information or the use of the specific material identified herein in combination with any other material or process, and assumes no responsibility therefore.

→ JAY Gordy.

Flint Ink CORPORATION

Received St. Flint 50% New Albany

MATERIAL SAFETY DATA SHEET

SGg

SECTION 1 GENERAL INFORMATION

Manufacturer

Flint Ink Corporation
25111 Glendale
Detroit, MI 48239
1-313-458-7500

Supplier

Flint Ink Corporation
800 Industrial Blvd
New Albany, IN 47150
1-812-948-1586

Applicable Products

02-60513

24 hr. Medical Emergency Numbers

1-800-228-5365
1-612-221-3999 (Minneapolis/St. Paul only)

Technical Information

1-313-995-3100

MSDS Information

1-812-948-1586

Preparation Date: 06/18/92

Product Identification

Type: Solvent Based Ink
Class: Publication or Packaging - General
System: Gravure

SECTION II INGREDIENTS

		8 Hour Exposure Limit	
Name	%	OSHA PEL	ACGIH TVL
Toluene	50%	100 ppm	100 ppm
Xylene	2%	100 ppm	100 ppm
M&P Naphtha (Roto Solv)	48%	300 ppm	300 ppm

SECTION III PHYSICAL PROPERTIES

Boiling Point: 200-380°F

Vapor Pressure: > 10 mm Hg

Vapor Density: > 1.0
(air = 1)

Solubility in Water: Low

Appearance & Odor: Colored Liquid, hydrocarbon odor

VOC (weight %): 100.0
(Method: __24, __24A, __30, _X_calculated)

Density: 6.65 lb/gal

Evaporation Rate: <1.0
(butyl acetate = 1)

SECTION IV FIRE AND EXPLOSION HAZARD INFORMATION

Lowest Flash Point: 20°F T.C.C.

Flammable Limits (LEL): 1.3%

Extinguishing Media: Foam, Carbon Dioxide, or dry chemical

Special Fire Fighting Procedures: Use water fog to cool containers to prevent pressure build up. Use self contained breathing apparatus where appropriate to fight fire. Wear protective clothing, fight fire from safe distance.

Unusual Fire and Explosion Hazards: Material may explode at temperatures above 150°F. Vapors are heavier than air, may form explosive mixture with air, may travel and ignite or flash back. Explosion-proof equipment should be used. Material is a class 1, flammable liquid (flashpoint less than 100°F) as defined by the National Fire Protection Association (NFPA) criteria and sited in 29 CFR 1910.106(19).

NFPA and HMIS Rating: Health - 2* Flammability - 3 Reactivity - 0

FLINT INK CORPORATION SGg

SECTION V REACTIVITY DATA

Stability: Unstable _____
Stable X

Materials to Avoid: Strong oxidizing agents, strong acids

Conditions to Avoid: Extreme heat, open flames or sparks

Decomposition byproducts: Acrid Smoke
Oxides of Carbon (Carbon Monoxide, Carbon Dioxide)
Oxides of Nitrogen (Nitrogen Dioxide)

Polymerization Reactions: May Occur _____
Will Not Occur X

SECTION VI HEALTH HAZARD DATA

Primary Routes of Entry: Inhalation, eye contact, skin contact

Effects of Exposure (Acute and chronic):

Skin:	Direct contact with liquid may cause irritation. Material may be absorbed through skin. Prolonged contact with liquid may lead to dermatitis and systemic effects similar to inhalation overexposure.
Eyes:	Direct contact with liquid will cause irritation. Vapors may irritate eyes.
Ingestion:	May produce digestive tract irritation, nausea, vomiting, and systemic illness.
Inhalation:	Inhalation of high concentrations of vapors may cause respiratory tract irritation and narcotic effects. Prolonged exposure may cause liver and kidney damage.

Medical Conditions to Avoid: None known.

Emergency and First Aid Procedures:

Skin:	Wash skin with soap and water. Remove contaminated clothing. Contact physician if redness or irritation occurs.
Eyes:	Flush eyes with water for 15 minutes. Contact physician if irritation persists.
Ingestion:	Seek medical attention. Do NOT induce vomiting. Call 24 hr. emergency phone number on page 1 for treatment information.
Inhalation:	Remove to fresh air. Contact a physician.

*Carcinogenicity:	NTP	IARC Monograph	OSHA Regulated
	No	No	No

*Refers to components

FLINT INK CORPORATION

SGg

SECTION VII SAFE HANDLING PRACTICES

Information in this section is based on the ink only. If the ink has been mixed or contaminated with other material, consult the material safety data sheet for those material for additional safe handling information.

Spill Procedure: Remove all sources of ignition. Absorb or contain with sand or an absorbent material, and dispose of in approved manner. Do not allow spill to enter sewer or water courses. Wear appropriate protective equipment which includes gloves, safety glasses or goggles, and apron. Respiratory protection is not normally required with adequate ventilation.

Waste Disposal: Dispose in accordance with Federal, State, or local regulations. Material may be compatible with industrial waste incineration or inclusion in a fuel–blending program. This characterization is subject to approval by your waste management contractor. Material should be recycled if possible.

Handling and Storage: Protect container from freezing. Avoid high temperatures. Do not stack 55 gallon containers more than 2 high. Handle 55 gallon containers with appropriate equipment. Keep containers closed when not in use. For industrial use only.

SECTION VIII CONTROL MEASURES

Respiratory Protection: Not normally required with adequate ventilation. Use MSHA/NIOSH approved respirator in accordance with 29 CFR 1910.134, when adequate ventilation is not available.

Eye Protection: Splashproof safety goggles.

Skin Protection: Chemical resistant gloves; clothing which covers other exposed areas of arms, legs, and torso.

Ventilation: Good general ventilation should be adequate.

Other Protective Equipment: Convenient eye wash stations should be provided in the workplace.

SECTION IX REGULATORY INFORMATION

SARA Title III, Section 313*

Compound Name	CAS #	% by Weight
Toluene	108–88–3	50%
Xylene	1330–20–7	2%

For reporting of base metal the following percentages should be used: Zinc Compound contains 3% zinc.

* Compounds listed in this section have been listed by the U.S. EPA under Section 313, the Toxic Chemical Release Inventory.

MATERIAL SAFETY DATA SHEET

FOR PRINTING INK AND RELATED MATERIALS

INFORMATION ON THIS FORM IS PROPRIETARY INFORMATION AND FURNISHED SOLELY FOR THE USE OF OUR CUSTOMERS

DATE OF PREP. 10/11/87 PREPARED BY Richard Lawless

HAZARD RATINGS
Minimal 0
Slight 1
Moderate 2
Serious 3
Severe 4

HEALTH	2
FLAMMABILITY	3
REACTIVITY	0

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Section I

MANUFACTURER'S NAME: MAXWELL COMMUNICATIONS CORP., INC.
TRADE NAME: SOLVENT 6257
PRODUCT CLASS: Solvent Blend

STREET ADDRESS: 7400 IMPALA DRIVE
CITY, STATE AND ZIP CODE: RICHMOND, VIRGINIA 23228
EMERGENCY TELEPHONE NUMBERS: (804) 264-3800 or (804) 264-3839

MANUFACTURER'S CODE IDENTIFICATION: SP6257

Recovered Solvent Blast

Section II - HAZARDOUS INGREDIENTS

Ingredient		Wt.%	CAS No.	Hazard Data: ACGIH/TLV	OSHA/PEL
Toluene	*	62.0	108-88-3	100ppm	100ppm
Xylene	*	7.0	1330-20-7	100ppm	100ppm
Aliphatic-Hydrocarbons C6-C8 Containing:		30.0-35.0			
Cyclohexane	*		110-82-7	300ppm	300ppm
N-Heptane			142-82-5	400ppm	400ppm
Methyl Cyclohexane			108-87-2	400ppm	400ppm

Amt = Percent of ingredient in total formula
* denotes items listed in SARA

Section III - PHYSICAL DATA

BOILING RANGE °F	VAPOR DENSITY: HEAVIER ☒ vs. air LIGHTER ☐	LIQUID DENSITY: HEAVIER ☐ vs. water LIGHTER ☒	PERCENT VOLATILE WT.
196-278			100.0
APPEARANCE: Clear Liquid	EVAPORATION RATE FASTER ☒ vs. Butyl Acetate SLOWER ☐	TYPE OF ODOR: Aromatic Hydrocarbon	

Section IV - FIRE & EXPLOSION DATA

FLAMMABILITY CLASSIFICATION	FLASH POINT RANGE °F (Method Used)	LOWEST LEL
OSHA I B DOT Flammable	25-90 PMCC	1.1 Vol.%

EXTINGUISHING MEDIA:
☒ FOAM ☐ "ALCOHOL" FOAM ☒ CO_2 ☒ DRY CHEMICAL ☐ WATER FOG ☐ OTHER

UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors may ignite explosively, exposure of closed container to excessive heat during fire may cause disruptive pressure

SPECIAL FIREFIGHTING PROCEDURES:
Self contained breathing apparatus
Use water to cool exposed containers.

Section V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: EYE CUTANEOUS, LUNG HAZARD

Eye contact will cause burning and irritation. Skin contact will cause irritation which may lead to dermatitis. Inhalation will result in irritation of nose and throat. Prolonged breathing of vapors in excess of TLV may result in drowsiness, nausea, intoxication & possible kidney damage or liver abnormalities. Aspiration of material in lungs can cause chemical pneumonitis which can be fatal.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: SKIN DISEASE, RESPIRATORY DISORDERS.

PRIMARY ROUTE(S) OF ENTRY: ☒ DERMAL ☒ INHALATION

EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT-Flush with water for 15 minutes, if irritation persists get medical attention. SKIN CONTAT-Wash well with soap and water, use a suitable skin cream, clean contaminated clothing before resue. INGESTION-Do not induce vomiting. Keep warm & quiet. Seek medical aid. INHALATION-Remove to fresh air, give artifical respiration or oxygen if necessary.

Section VI - REACTIVITY DATA

PRODUCT STABILITY: ☒ STABLE ☐ UNSTABLE

CONDITIONS TO AVOID: Do not store with strong acids or bases, alkalai or oxidizing agents. Avoid excessive heat.

Section VII - SPILL OR LEAK PROCEDURES

PROCEDURE WHEN MATERIAL SPILLED OR RELEASED: Eliminate all sources of vapor ignition. Ventilate area. Use foam to prevent spread of flammable vapors. Dike area to prevent spreading, scoop up or pump to salvage tank or suitable container. Remove balance with inert absorbing material.

WASTE DISPOSAL METHOD: Incinerate or distill spilled material under controlled conditions in accordance with applicable local, state and federal regulations.

Section VIII - SPECIAL PROTECTION INFORMATION

VENTILATION: Local and general ventilation with a minimum of not less than (1) CFM per square foot of solid floor area or cavities where flammable vapors may collect.

PROTECTIVE GLOVES: Impervious gloves or apron should be worn where prolonged contact may occur.

EYE PROTECTION: Safety glasses, splash goggles or faceshield.

RESPIRATORY PROTECTION: NIOSH approved for organic vapors - TC.23C cannister.

OTHER PROTECTIVE EQUIPMENT: Protective clothing to prevent body contact. Spark proof equipment. Eye bath and safety shower.

Section IX - SPECIAL PRECAUTIONS

HANDLING AND STORING: Use with adequate ventilation. Keep containers closed when not in use. Keep away from open flame or excessive heat. Ground and bond containers when transferring flammable liquids.

OTHER PRECAUTIONS

Basic Description: Flammable Liquid N.O.S. U.N. 1993

Technical Name(s): Solvent Mix

Toluene (Approx 55%) Xylene (5%) Aliphatics (40%)

EMERGENCY RESPONSE GUIDE FORM 27

24 hr. Emergency Contact Tel. No.: 804-264-3800 or 3833

D.O.T. EMERGENCY RESPONSE GUIDE 27

POTENTIAL HAZARDS

FIRE OR EXPLOSION

Flammable/combustible material; may be ignited by heat, sparks or flames.
Vapors may travel to a source of ignition and flash back.
Container may explode in heat of fire.
Vapor explosion hazard indoors, outdoors or in sewers.
Runoff to sewer may create fire or explosion hazard.

HEALTH HAZARDS

May be poisonous if inhaled or absorbed through skin.
Vapors may cause dizziness or suffocation.
Contact may irritate or burn skin and eyes.
Fire may produce irritating or poisonous gases.
Runoff from fire control or dilution water may cause pollution.

EMERGENCY ACTION

Keep unnecessary people away; isolate hazard area and deny entry.
Stay upwind; keep out of low areas.
Positive pressure self contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide limited protection.
Isolate for 1/2 mile in all directions if tank, rail car or tank truck is involved in fire.
CALL CHEMTREC AT 1-800-424-9300 FOR EMERGENCY ASSISTANCE.
If water pollution occurs, notify the appropriate authorities.

FIRE

Small Fires: Dry chemical, CO_2, water spray or regular foam.
Large Fires: Water spray, fog or regular foam.
Move container from fire area if you can do it without risk.
Apply cooling water to sides of containers that are exposed to flames until well after fire is out. Stay away from ends of tanks.
For massive fire in cargo area, use unmanned hose holder or monitor nozzles; if this is impossible, withdraw from area and let fire burn.
Withdraw immediately in case of rising sound from venting safety device or any discoloration of tank due to fire.

SPILL OR LEAK

Shut off ignition sources; no flares, smoking or flames in hazard area.
Stop leak if you can do it without risk.
Water spray may reduce vapor; but it may not prevent ignition in closed spaces.
Small Spills: Take up with sand or other noncombustible absorbent material and place into containers for later disposal.
Large Spills: Dike far ahead of liquid spill for later disposal.

FIRST AID

Move victim to fresh air and call emergency medical care; if not breathing, give artificial respiration; if breathing is difficult, give oxygen.
In case of contact with material, immediately flush eyes with running water for at least 15 minutes. Wash skin with soap and water.
Remove and isolate contaminated clothing and shoes at the site.

Information on this Guide Page is from the 1990 Emergency Response Guidebook Dot P 5800.5. It applies only to the basic Description and Technical Name entered by the shipper at the top of this form.

Check to see whether the shipper commodity (Basic description entered at the top of this form) is listed by I.D.# and NAME OF THE MATERIAL in the Table of Initial Isolation and Protective Action Distances. This Table is partially reproduced on the back of this Guide Page to reflect only commodities assigned to this Guide Number. Use this information from the table in addition to the Guide Page IF THERE IS NO FIRE.

READ AND CHECK THE NAMES AND NUMBERS CAREFULLY BECAUSE COMPLETELY DIFFERENT HAZARDOUS MATERIALS CAN HAVE NAMES AND/OR NUMBERS WHICH ARE ALMOST THE SAME!

ERF 27 Printed by LABELMASTER, Div. of AMERICAN LABELMARK CO., CHICAGO, IL 60648 (800) 621 5808

the hazardous materials shown, IF THE LISTED MATERIAL IS NOT ON FIRE is on fire, refer to the 2-digit Guide.

Those materials were selected because their vapors have the potential to produce poisonous effects. The table is useful for no more than the first 30 minutes of an incident involving these materials. There are several good reasons for suggesting that the use of the table be limited specifically to the initial phase of a no-fire spill incident during transport.

D.O.T. EMERGENCY RESPONSE GUIDE 27

TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

USE THIS TABLE WHEN THE MATERIAL IS NOT ON FIRE.

ID No.	NAME OF MATERIAL	SMALL SPILLS (Leak or spill from a small package or small leak from a large package.) First ISOLATE in all directions- (Feet)	SMALL SPILLS Then, PROTECT those persons in the DOWNWIND direction- (Miles)	LARGE SPILLS (Leak or spill from a large package or spill from many small packages.) First, ISOLATE in all directions- (Feet)	LARGE SPILLS Then, PROTECT those persons in the DOWNWIND direction- (Miles)

No chemicals appear in Table of Isolation and Protective Action Distances which are assigned to this Guide number.

If the chemical name and ID Number the shipper entered on the front of this form match a name from this list, and NO FIRE exists, you must:

determine if the incident involves a small or large spill; look up the isolation distance; (Direct all person to move in a crosswind direction, away from the spill, to that distance.) look up the initial PROTECTIVE ACTION DISTANCE in the table. (For practical purposes, the Protective Action Zone is a square whose length and width are the same as the downwind distance shown in the table.)

WHEN APPROACHING THE SCENE OF AN ACCIDENT INVOLVING ANY CARGO (NOT ONLY REGULATED HAZARDOUS MATERIALS):

- APPROACH INCIDENT FROM AN UPWIND DIRECTION, IF POSSIBLE
- MOVE AND KEEP PEOPLE AWAY FROM INCIDENT SCENE
- DO NOT WALK INTO OR TOUCH ANY SPILLED MATERIAL
- AVOID INHALING FUMES, SMOKE AND VAPORS EVEN IF NO HAZARDOUS MATERIALS ARE INVOLVED
- DO NOT ASSUME THAT GASES OR VAPORS ARE HARMLESS BECAUSE OF LACK OF SMELL—ODORLESS GASES OR VAPORS MAY BE HARMFUL

As a first responder at the scene of a hazardous materials incident, seek additional and more specific information about any material in question as soon as possible. This Guide Page is not intended for use during the cleanup phase for spilled materials, nor should it be used to determine compliance with any regulations. This information on this Emergency Response Form should be augmented by expert technical advice as soon as you have assessed the situation and have seen to the immediate needs of the people involved.

FOR FURTHER INFORMATION REFER TO DOT P 5800.5 (EMERGENCY RESPONSE GUIDEBOOK) AND TITLE 49 CODE OF FEDERAL REGULATIONS.

MATERIAL SAFETY DATA SHEET

00-231

SunChemical Corporation
General Printing Ink Division
631 Central Avenue
Carlstadt, N.J. 07072
Telephone (201) 933-4500

1. PRODUCT IDENTIFICATION

Product Name	300-231
Product Description	Recovered Solvent
Product Category	Publication Gravure Solvent
MSDS Date	09/25/92

HMIS

Health	2
Flammability	3
Reactivity	0

2. COMPOSITION (Hazardous Components)

The Components listed below are identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Chemical Name	CAS Number	Concentration
Toluene	108-88-3	70.02 %
Lactol Spirits (Aliphatic Portion)	64742-89-8	27.10 %
Xylene (Mixed Isomers)	1330-20-7	1.73 %

3. HAZARDS IDENTIFICATION

Emergency Overview

Flammable Liquid
Eye Irritant
Skin Irritant
May Cause Nervous System Depression
Aspiration Hazard

Potential Health Effects

Inhalation and dermal contact are the primary routes of occupational exposure. This formulation may cause skin and eye irritations. The following adverse health effects are attributable to the hazardous ingredients listed in Section II.

Eye

This material may cause eye irritation. Direct contact with the liquid or exposure to its vapors or mists may cause stinging, tearing, redness and swelling.

Skin

This material may cause skin irritation. Prolonged or repeated exposure to this material may cause redness, burning, drying and cracking of the skin. Direct contact may result in skin absorption of toluene, but symptoms of toxicity are not expected by this route.

Continued...

3. HAZARDS IDENTIFICATION (continued)

Inhalation

Inhalation of vapors or mists may cause irritation of the mucous membranes and the upper respiratory tract and signs of nervous system depression (e.g. drowsiness, dizziness, loss of coordination and fatigue).
Exposure to high concentrations of toluene may cause cardiac arrhythmias.

Ingestion

Ingestion of excessive quantities may cause irritation of the digestive tract and signs of nervous system depression.

Chronic Effects

Chronic overexposure may result in liver and kidney abnormalities as well as brain and nervous system damage. Pre-existing respiratory and skin disorders may be aggravated by exposure to this material.

4. FIRST AID MEASURES

Eye Contact

If irritation or redness from exposure to vapors develops or persists consult a physician. In case of direct contact, flush eyes with clean water for at least 15 minutes and seek medical attention.

Skin Contact

Remove contaminated clothing. Wash affected area thoroughly with soap and water. Seek medical attention if irritation or redness develops and persists.

Inhalation

Remove affected person away from source of exposure and into fresh air. If breathing difficulties develop, oxygen should be administered by qualified personnel. If breathing has stopped give artificial respiration. Seek immediate medical attention.

Ingestion

Do not induce vomiting. Aspiration of liquid into the lungs can cause chemical pneumonitis and pulmonary edema / hemorrhage which can be fatal. Seek immediate medical attention. If victim is drowsy or unconscious, place on the left side with head down and do not give anything by mouth. If vomiting occurs keep head below hips to prevent aspiration of liquid into lungs.

5. FIRE FIGHTING MEASURES

Flash Point 20.0 F

Flash Point Method Tag Closed Cup

Flash Point Category (OSHA / NFPA) IB

Lower Flammability Limit in Air (% by Vol) 1.0

Continued...

FIRE FIGHTING MEASURES (continued)

Extinguishing Media
Extinguish with dry chemical,carbon dioxide, or other universal type foam.

Fire Fighting Instructions
The use of SCBA is recommended for fire fighters. Water spray may be used to cool containers exposed to heat and flame. Avoid spreading burning liquid with water used for cooling purposes.

Fire and Explosion Hazards
This material is flammable and may be ignited by heat, sparks, flame or static electricity. Vapors are heavier than air and may travel along the ground and may be moved by ventilation; flashback along vapor trail may occur.

6. ACCIDENTAL RELEASE MEASURES

Eliminate all sources of ignition. If spill is indoors, ventilate area of spill; use appropriate respiratory protection.
For large spills, a universal type foam may be used to suppress vapors. Contain the spill by diking with sand or other inert material. Keep out of drains, sewers, or waterways. Do not flush area with water. If necessary, contact fire authorities and appropriate federal, state or local agencies.
For small spills, do not flush with water; use absorbent pads.

7. HANDLING AND STORAGE

Keep containers tightly closed. Keep containers cool, dry and away from sources of ignition. Use and store this product with adequate ventilation. Avoid inhalation of vapors and personal contact with the product. Use good personal hygiene practices.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Provide NEC / NFPA approved explosion proof mechanical ventilation to maintain airborne concentrations below the established exposure limits.
It is suggested that a source of clean water be available in work area for flushing eyes and skin.

Personal Protective Equipment

Eye / Face Protection
Chemical splash goggles or safety glasses in compliance with OSHA regulations are advised.

Skin Protection
The use of impermeable, solvent resistant gloves is advised to prevent skin contact, possible irritation and absorption.

Continued...

EXPOSURE CONTROLS / PERSONAL PROTECTION (continued)

Respiratory Protection
Use NIOSH / OSHA approved cartridge respirators or a supplied air respirator depending upon airborne concentrations.

Exposure Guidelines

Chemical Name	ACGIH TWA	ACGIH STEL	OSHA TWA	OSHA STEL
Toluene	100	150 ppm	100	150 ppm
Lactol Spirits (Aliphatic Portion)	400	500 ppm	400	500 ppm
Xylene (Mixed Isomers)	100	150 ppm	100	150 ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Range 201.0 F - 231.8 F

Density (lbs/gal) 6.80

Vapor Density (vs. air) Heavier

Evaporation Rate (vs. Butyl Acetate) Faster

Appearance Clear Liquid

Percent Volatile (wt.) 100.00

10. STABILITY AND REACTIVITY

Stability
Stable; hazardous polymerization will not occur.

Conditions to Avoid
Keep product away from heat, sparks, pilot lights, static electricity and open flames.

Incompatibility
This product is incompatible with strong acids or bases and oxidizing agents.

11. DISPOSAL CONSIDERATIONS

Reuse recoyered material or dispose of product in accordance with local, county, state and federal environmental regulations.

REGULATORY INFORMATION

Toxic Substances Control Act (TSCA)

The chemical components of this product are contained on the Section 8(B) Chemical Substance Inventory List (40 CFR 710).

SARA Title III Information

This product contains the following substance(s) which are defined as toxic chemical(s) under, and subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (40 CFR Part 372).

Chemical Name / Category	CAS #	Concentration
Toluene	108-88-3	70.02 %
Xylene (mixed isomers)	1330-20-7	1.73 %

13. ADDITIONAL COMMENTS

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and / or solid), all hazard precautions given on the data sheets must be observed.

SunChemical Corporation
General Printing Ink Division
631 Central Avenue
Carlstadt, N.J. 07072
Telephone (201) 933-4500

PRODUCT IDENTIFICATION

Product Name	300-231WP
Product Description	Williamsport Recovered Solvent, Williamsport
Product Category	Publication Gravure Ink
MSDS Date	06/12/92

CUSTOMER IDENTIFICATION

Sun Chemical Corporation
Industrial and Grumbacker
Williamsport,, MD 21795

Mr. John O'Brien

6800000000 S1

MATERIAL SAFETY DATA SHEET

SunChemical Corporation
General Printing Ink Division
631 Central Avenue
Carlstadt, N.J. 07072
Telephone (201) 933-4500

00-231WP

1. PRODUCT IDENTIFICATION

Product Name	300-231WP
Product Description	Williamsport Recovered Solvent
Product Category	Publication Gravure Ink
MSDS Date	06/12/92

HMIS

Health	2
Flammability	3
Reactivity	0

2. COMPOSITION (Hazardous Components)

The Components listed below are identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Chemical Name	CAS Number	Concentration
Toluene	108-88-3	63.03 %
Xylene (Mixed Isomers)	1330-20-7	3.46 %
actol Spirits (Aliphatic Portion)	64742-89-8	32.10 %

3. HAZARDS IDENTIFICATION

Emergency Overview

Flammable Liquid
Eye Irritant
Skin Irritant
May Cause Nervous System Depression
Aspiration Hazard

Potential Health Effects

Inhalation and dermal contact are the primary routes of occupational exposure. This formulation may cause skin and eye irritations. The following adverse health effects are attributable to the hazardous ingredients listed in Section II.

Eye

This material may cause eye irritation. Direct contact with the liquid or exposure to its vapors or mists may cause stinging, tearing, redness and swelling.

Skin

This material may cause skin irritation. Prolonged or repeated exposure to this material may cause redness, burning, drying and cracking of the skin. Direct contact may result in skin absorption of toluene, but symptoms of toxicity are not expected by this route.

Continued...

3. HAZARDS IDENTIFICATION (continued)

Inhalation

Inhalation of vapors or mists may cause irritation of the mucous membranes and the upper respiratory tract and signs of nervous system depression (e.g. drowsiness, dizziness, loss of coordination and fatigue).
Exposure to high concentrations of toluene may cause cardiac arrhythmias.

Ingestion

Ingestion of excessive quantities may cause irritation of the digestive tract and signs of nervous system depression.

Chronic Effects

Chronic overexposure may result in liver and kidney abnormalities as well as brain and nervous system damage. Pre-existing respiratory and skin disorders may be aggravated by exposure to this material.

4. FIRST AID MEASURES

Eye Contact

If irritation or redness from exposure to vapors develops or persists consult a physician. In case of direct contact, flush eyes with clean water for at least 15 minutes and seek medical attention.

Skin Contact

Remove contaminated clothing. Wash affected area thoroughly with soap and water. Seek medical attention if irritation or redness develops and persists.

Inhalation

Remove affected person away from source of exposure and into fresh air. If breathing difficulties develop, oxygen should be administered by qualified personnel. If breathing has stopped give artificial respiration. Seek immediate medical attention.

Ingestion

Do not induce vomiting. Aspiration of liquid into the lungs can cause chemical pneumonitis and pulmonary edema / hemorrhage which can be fatal. Seek immediate medical attention. If victim is drowsy or unconscious, place on the left side with head down and do not give anything by mouth. If vomiting occurs keep head below hips to prevent aspiration of liquid into lungs.

5. FIRE FIGHTING MEASURES

Flash Point 20.0 F

Flash Point Method Tag Closed Cup

Flash Point Category (OSHA / NFPA) IB

Lower Flammability Limit in Air (% by Vol) 1.0

Continued...

5. FIRE FIGHTING MEASURES (continued)

Extinguishing Media
Extinguish with dry chemical,carbon dioxide, or other universal type foam.

Fire Fighting Instructions
The use of SCBA is recommended for fire fighters. Water spray may be used to cool containers exposed to heat and flame. Avoid spreading burning liquid with water used for cooling purposes.

Fire and Explosion Hazards
This material is flammable and may be ignited by heat, sparks, flame or static electricity. Vapors are heavier than air and may travel along the ground and may be moved by ventilation; flashback along vapor trail may occur.

6. ACCIDENTAL RELEASE MEASURES

Eliminate all sources of ignition. If spill is indoors, ventilate area of spill; use appropriate respiratory protection.
For large spills, a universal type foam may be used to suppress vapors. Contain the spill by diking with sand or other inert material. Keep out of drains, sewers, or waterways. Do not flush area with water. If necessary, contact fire authorities and appropriate federal, state or local agencies.
For small spills, do not flush with water; use absorbent pads.

7. HANDLING AND STORAGE

Keep containers tightly closed. Keep containers cool, dry and away from sources of ignition. Use and store this product with adequate ventilation. Avoid inhalation of vapors and personal contact with the product. Use good personal hygiene practices.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Provide NEC / NFPA approved explosion proof mechanical ventilation to maintain airborne concentrations below the established exposure limits.
It is suggested that a source of clean water be available in work area for flushing eyes and skin.

Personal Protective Equipment

Eye / Face Protection
Chemical splash goggles or safety glasses in compliance with OSHA regulations are advised.

Skin Protection
The use of impermeable, solvent resistant gloves is advised to prevent skin contact, possible irritation and absorption.

Continued...

EXPOSURE CONTROLS / PERSONAL PROTECTION (continued)

Respiratory Protection
Use NIOSH / OSHA approved cartridge respirators or a supplied air respirator depending upon airborne concentrations.

Exposure Guidelines

Chemical Name	ACGIH TWA	ACGIH STEL	OSHA TWA	OSHA STEL
Toluene	100	150 ppm	100	150 ppm
Xylene (Mixed Isomers)	100	150 ppm	100	150 ppm
Lactol Spirits (Aliphatic Portion)	400	500 ppm	400	500 ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Range 201.0 F - 291.0 F

Density (lbs/gal) 6.75

Vapor Density (vs. air) Heavier

Evaporation Rate (vs. Butyl Acetate) Faster

Appearance Clear liquid

Percent Volatile (wt.) 100.00

10. STABILITY AND REACTIVITY

Stability
Stable; hazardous polymerization will not occur.

Conditions to Avoid
Keep product away from heat, sparks, pilot lights, static electricity and open flames.

Incompatibility
This product is incompatible with strong acids or bases and oxidizing agents.

11. DISPOSAL CONSIDERATIONS

Reuse recovered material or dispose of product in accordance with local, county, state and federal environmental regulations.

REGULATORY INFORMATION

Toxic Substances Control Act (TSCA)

The chemical components of this product are contained on the Section 8(B) Chemical Substance Inventory List (40 CFR 710).

SARA Title III Information

This product contains the following substance(s) which are defined as toxic chemical(s) under, and subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (40 CFR Part 372).

Chemical Name / Category	CAS #	Concentration
Toluene	108-88-3	63.03 %
Xylene (mixed isomers)	1330-20-7	3.46 %

13. ADDITIONAL COMMENTS

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and / or solid), all hazard precautions given the data sheets must be observed.

MATERIAL SAFETY DATA SHEET

SunChemical Corporation
General Printing Ink Division
631 Central Avenue
Carlstadt, N.J. 07072
Telephone (201) 933-4500

0-237

1. PRODUCT IDENTIFICATION

Product Name	300-237
Product Description	Recovered Solvent
Product Category	Publication Gravure Solvent
MSDS Date	09/25/92

HMIS

Health	2
Flammability	3
Reactivity	0

2. COMPOSITION (Hazardous Components)

The Components listed below are identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Chemical Name	CAS Number	Concentration
Toluene	108-88-3	96.08 %
Rotosolve (Aliphatic Portion)	64742-89-8	2.90 %

HAZARDS IDENTIFICATION

Emergency Overview

Flammable Liquid
Eye Irritant
Skin Irritant
May Cause Nervous System Depression
Aspiration Hazard

Potential Health Effects

Inhalation and dermal contact are the primary routes of occupational exposure. This formulation may cause skin and eye irritations. The following adverse health effects are attributable to the hazardous ingredients listed in Section II.

Eye

This material may cause eye irritation. Direct contact with the liquid or exposure to its vapors or mists may cause stinging, tearing, redness and swelling.

Skin

This material may cause skin irritation. Prolonged or repeated exposure to this material may cause redness, burning, drying and cracking of the skin. Direct contact may result in skin absorption of toluene, but symptoms of toxicity are not expected by this route.

Continued...

3. HAZARDS IDENTIFICATION (continued)

Inhalation

Inhalation of vapors or mists may cause irritation of the mucous membranes and the upper respiratory tract and signs of nervous system depression (e.g. drowsiness, dizziness, loss of coordination and fatigue).
Exposure to high concentrations of toluene may cause cardiac arrhythmias.

Ingestion

Ingestion of excessive quantities may cause irritation of the digestive tract and signs of nervous system depression.

Chronic Effects

Chronic overexposure may result in liver and kidney abnormalities as well as brain and nervous system damage. Pre-existing respiratory and skin disorders may be aggravated by exposure to this material.

4. FIRST AID MEASURES

Eye Contact

If irritation or redness from exposure to vapors develops or persists consult a physician. In case of direct contact, flush eyes with clean water for at least 15 minutes and seek medical attention.

Skin Contact

Remove contaminated clothing. Wash affected area thoroughly with soap and water. Seek medical attention if irritation or redness develops and persists.

Inhalation

Remove affected person away from source of exposure and into fresh air. If breathing difficulties develop, oxygen should be administered by qualified personnel. If breathing has stopped give artificial respiration. Seek immediate medical attention.

Ingestion

Do not induce vomiting. Aspiration of liquid into the lungs can cause chemical pneumonitis and pulmonary edema / hemorrhage which can be fatal. Seek immediate medical attention. If victim is drowsy or unconscious, place on the left side with head down and do not give anything by mouth. If vomiting occurs keep head below hips to prevent aspiration of liquid into lungs.

5. FIRE FIGHTING MEASURES

Flash Point 45.0 F

Flash Point Method Tag Closed Cup

Flash Point Category (OSHA / NFPA) IB

Lower Flammability Limit in Air (% by Vol) 1.0

Continued...

FIRE FIGHTING MEASURES (continued)

Extinguishing Media
Extinguish with dry chemical,carbon dioxide, or other universal type foam.

Fire Fighting Instructions
The use of SCBA is recommended for fire fighters. Water spray may be used to cool containers exposed to heat and flame. Avoid spreading burning liquid with water used for cooling purposes.

Fire and Explosion Hazards
This material is flammable and may be ignited by heat, sparks, flame or static electricity. Vapors are heavier than air and may travel along the ground and may be moved by ventilation; flashback along vapor trail may occur.

6. ACCIDENTAL RELEASE MEASURES

Eliminate all sources of ignition. If spill is indoors, ventilate area of spill; use appropriate respiratory protection.
For large spills, a universal type foam may be used to suppress vapors. Contain the spill by diking with sand or other inert material. Keep out of drains, sewers, or waterways. Do not flush area with water. If necessary, contact fire authorities and appropriate federal, state or local agencies.
For small spills, do not flush with water; use absorbent pads.

7. HANDLING AND STORAGE

Keep containers tightly closed. Keep containers cool, dry and away from sources of ignition. Use and store this product with adequate ventilation. Avoid inhalation of vapors and personal contact with the product. Use good personal hygiene practices.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Provide NEC / NFPA approved explosion proof mechanical ventilation to maintain airborne concentrations below the established exposure limits.
It is suggested that a source of clean water be available in work area for flushing eyes and skin.

Personal Protective Equipment

Eye / Face Protection
Chemical splash goggles or safety glasses in compliance with OSHA regulations are advised.

Skin Protection
The use of impermeable, solvent resistant gloves is advised to prevent skin contact, possible irritation and absorption.

Continued...

EXPOSURE CONTROLS / PERSONAL PROTECTION (continued)

Respiratory Protection
Use NIOSH / OSHA approved cartridge respirators or a supplied air respirator depending upon airborne concentrations.

Exposure Guidelines

Chemical Name	ACGIH TWA	ACGIH STEL	OSHA TWA	OSHA STEL
Toluene	100	150 ppm	100	150 ppm
Rotosolve (Aliphatic Portion)	300	375 ppm	300	375 ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Range 230.4 F - 250.0 F

Density (lbs/gal) 7.13

Vapor Density (vs. air) Heavier

Evaporation Rate (vs. Butyl Acetate) Faster

Appearance Clear Liquid

Percent Volatile (wt.) 100.00

10. STABILITY AND REACTIVITY

Stability
Stable; hazardous polymerization will not occur.

Conditions to Avoid
Keep product away from heat, sparks, pilot lights, static electricity and open flames.

Incompatibility
This product is incompatible with strong acids or bases and oxidizing agents.

11. DISPOSAL CONSIDERATIONS

Reuse recovered material or dispose of product in accordance with local, county, state and federal environmental regulations.

12. REGULATORY INFORMATION

Continued...

12. REGULATORY INFORMATION (continued)

Toxic Substances Control Act (TSCA)

The chemical components of this product are contained on the Section 8(B) Chemical Substance Inventory List (40 CFR 710).

SARA Title III Information

This product contains the following substance(s) which are defined as toxic chemical(s) under, and subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (40 CFR Part 372).

Chemical Name / Category	CAS #	Concentration
Toluene	108-88-3	96.08 %

13. ADDITIONAL COMMENTS

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and / or solid), all hazard precautions given in the data sheets must be observed.

MATERIAL SAFETY DATA SHEET

Master File - Do not Remove

300-239

SunChemical Corporation
General Printing Ink Division
631 Central Avenue
Carlstadt, N.J. 07072
Telephone (201) 933-4500

1. PRODUCT IDENTIFICATION

Product Name	300-239
Product Description	Recovered Solvent
Product Category	Publication Gravure Solvent
MSDS Date	09/25/92

HMIS

Health	2
Flammability	3
Reactivity	0

2. COMPOSITION (Hazardous Components)

The Components listed below are identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Chemical Name	CAS Number	Concentration
Rotosolve (Aliphatic Portion)	64742-89-8	41.00 %
Toluene	108-88-3	57.02 %
Xylene (Mixed Isomers)	1330-20-7	1.73 %

3. HAZARDS IDENTIFICATION

Emergency Overview

Flammable Liquid
Eye Irritant
Skin Irritant
May Cause Nervous System Depression
Aspiration Hazard

Potential Health Effects

Inhalation and dermal contact are the primary routes of occupational exposure. This formulation may cause skin and eye irritations. The following adverse health effects are attributable to the hazardous ingredients listed in Section II.

Eye

This material may cause eye irritation. Direct contact with the liquid or exposure to its vapors or mists may cause stinging, tearing, redness and swelling.

Skin

This material may cause skin irritation. Prolonged or repeated exposure to this material may cause redness, burning, drying and cracking of the skin. Direct contact may result in skin absorption of toluene, but symptoms of toxicity are not expected by this route.

Continued...

3. HAZARDS IDENTIFICATION (continued)

Inhalation

Inhalation of vapors or mists may cause irritation of the mucous membranes and the upper respiratory tract and signs of nervous system depression (e.g. drowsiness, dizziness, loss of coordination and fatigue).
Exposure to high concentrations of toluene may cause cardiac arrhythmias.

Ingestion

Ingestion of excessive quantities may cause irritation of the digestive tract and signs of nervous system depression.

Chronic Effects

Chronic overexposure may result in liver and kidney abnormalities as well as brain and nervous system damage. Pre-existing respiratory and skin disorders may be aggravated by exposure to this material.

4. FIRST AID MEASURES

Eye Contact

If irritation or redness from exposure to vapors develops or persists consult a physician. In case of direct contact, flush eyes with clean water for at least 15 minutes and seek medical attention.

Skin Contact

Remove contaminated clothing. Wash affected area thoroughly with soap and water. Seek medical attention if irritation or redness develops and persists.

Inhalation

Remove affected person away from source of exposure and into fresh air. If breathing difficulties develop, oxygen should be administered by qualified personnel. If breathing has stopped give artificial respiration. Seek immediate medical attention.

Ingestion

Do not induce vomiting. Aspiration of liquid into the lungs can cause chemical pneumonitis and pulmonary edema / hemorrhage which can be fatal. Seek immediate medical attention. If victim is drowsy or unconscious, place on the left side with head down and do not give anything by mouth. If vomiting occurs keep head below hips to prevent aspiration of liquid into lungs.

5. FIRE FIGHTING MEASURES

Flash Point 45.0 F

Flash Point Method Tag Closed Cup

Flash Point Category (OSHA / NFPA) IB

Lower Flammability Limit in Air (% by Vol) 1.0

Continued...

5. FIRE FIGHTING MEASURES (continued)

Extinguishing Media
Extinguish with dry chemical,carbon dioxide, or other universal type foam.

Fire Fighting Instructions
The use of SCBA is recommended for fire fighters. Water spray may be used to cool containers exposed to heat and flame. Avoid spreading burning liquid with water used for cooling purposes.

Fire and Explosion Hazards
This material is flammable and may be ignited by heat, sparks, flame or static electricity. Vapors are heavier than air and may travel along the ground and may be moved by ventilation; flashback along vapor trail may occur.

6. ACCIDENTAL RELEASE MEASURES

Eliminate all sources of ignition. If spill is indoors, ventilate area of spill; use appropriate respiratory protection.
For large spills, a universal type foam may be used to suppress vapors. Contain the spill by diking with sand or other inert material. Keep out of drains, sewers, or waterways. Do not flush area with water. If necessary, contact fire authorities and appropriate federal, state or local agencies.
For small spills, do not flush with water; use absorbent pads.

7. HANDLING AND STORAGE

Keep containers tightly closed. Keep containers cool, dry and away from sources of ignition. Use and store this product with adequate ventilation. Avoid inhalation of vapors and personal contact with the product. Use good personal hygiene practices.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Provide NEC / NFPA approved explosion proof mechanical ventilation to maintain airborne concentrations below the established exposure limits.
It is suggested that a source of clean water be available in work area for flushing eyes and skin.

Personal Protective Equipment

Eye / Face Protection
Chemical splash goggles or safety glasses in compliance with OSHA regulations are advised.

Skin Protection
The use of impermeable, solvent resistant gloves is advised to prevent skin contact, possible irritation and absorption.

Continued...

8. EXPOSURE CONTROLS / PERSONAL PROTECTION (continued)

Respiratory Protection
Use NIOSH / OSHA approved cartridge respirators or a supplied air respirator depending upon airborne concentrations.

Exposure Guidelines

Chemical Name	ACGIH TWA	ACGIH STEL	OSHA TWA	OSHA STEL
Rotosolve (Aliphatic Portion)	300	375 ppm	300	375 ppm
Toluene	100	150 ppm	100	150 ppm
Xylene (Mixed Isomers)	100	150 ppm	100	150 ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Range 230.4 F - 250.0 F

Density (lbs/gal) 6.05

Vapor Density (vs. air) Heavier

Evaporation Rate (vs. Butyl Acetate) Faster

Appearance Clear Liquid

Percent Volatile (wt.) 100.00

10. STABILITY AND REACTIVITY

Stability
Stable; hazardous polymerization will not occur.

Conditions to Avoid
Keep product away from heat, sparks, pilot lights, static electricity and open flames.

Incompatibility
This product is incompatible with strong acids or bases and oxidizing agents.

11. DISPOSAL CONSIDERATIONS

Reuse recovered material or dispose of product in accordance with local, county, state and federal environmental regulations.

12. REGULATORY INFORMATION

Toxic Substances Control Act (TSCA)

The chemical components of this product are contained on the Section 8(B) Chemical Substance Inventory List (40 CFR 710).

SARA Title III Information

This product contains the following substance(s) which are defined as toxic chemical(s) under, and subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (40 CFR Part 372).

Chemical Name / Category	CAS #	Concentration
Toluene	108-88-3	57.02 %
Xylene (mixed isomers)	1330-20-7	1.73 %

13. ADDITIONAL COMMENTS

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and / or solid), all hazard precautions given the data sheets must be observed.

MATERIAL SAFETY DATA SHEET

00-239B

SunChemical Corporation
General Printing Ink Division
631 Central Avenue
Carlstadt, N.J. 07072
Telephone (201) 933-4500

1. PRODUCT IDENTIFICATION

Product Name	300-239B
Product Description	Recovered Solvent
Product Category	Publication Gravure Solvent
MSDS Date	09/25/92

HMIS

Health	2
Flammability	3
Reactivity	0

2. COMPOSITION (Hazardous Components)

The Components listed below are identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Chemical Name	CAS Number	Concentration
Toluene	108-88-3	75.02 %
Rotosolve (Aliphatic Portion)	64742-89-8	23.00 %
Xylene (Mixed Isomers)	1330-20-7	1.73 %

3. HAZARDS IDENTIFICATION

Emergency Overview

Flammable Liquid
Eye Irritant
Skin Irritant
May Cause Nervous System Depression
Aspiration Hazard

Potential Health Effects

Inhalation and dermal contact are the primary routes of occupational exposure. This formulation may cause skin and eye irritations. The following adverse health effects are attributable to the hazardous ingredients listed in Section II.

Eye

This material may cause eye irritation. Direct contact with the liquid or exposure to its vapors or mists may cause stinging, tearing, redness and swelling.

Skin

This material may cause skin irritation. Prolonged or repeated exposure to this material may cause redness, burning, drying and cracking of the skin. Direct contact may result in skin absorption of toluene, but symptoms of toxicity are not expected by this route.

Continued...

HAZARDS IDENTIFICATION (continued)

Inhalation
Inhalation of vapors or mists may cause irritation of the mucous membranes and the upper respiratory tract and signs of nervous system depression (e.g. drowsiness, dizziness, loss of coordination and fatigue).
Exposure to high concentrations of toluene may cause cardiac arrhythmias.

Ingestion
Ingestion of excessive quantities may cause irritation of the digestive tract and signs of nervous system depression.

Chronic Effects
Chronic overexposure may result in liver and kidney abnormalities as well as brain and nervous system damage. Pre-existing respiratory and skin disorders may be aggravated by exposure to this material.

4. FIRST AID MEASURES

Eye Contact
If irritation or redness from exposure to vapors develops or persists consult a physician. In case of direct contact, flush eyes with clean water for at least 15 minutes and seek medical attention.

Skin Contact
Remove contaminated clothing. Wash affected area thoroughly with soap and water. Seek medical attention if irritation or redness develops and persists.

Inhalation
Remove affected person away from source of exposure and into fresh air. If breathing difficulties develop, oxygen should be administered by qualified personnel. If breathing has stopped give artificial respiration. Seek immediate medical attention.

Ingestion
Do not induce vomiting. Aspiration of liquid into the lungs can cause chemical pneumonitis and pulmonary edema / hemorrhage which can be fatal. Seek immediate medical attention. If victim is drowsy or unconscious, place on the left side with head down and do not give anything by mouth. If vomiting occurs keep head below hips to prevent aspiration of liquid into lungs.

5. FIRE FIGHTING MEASURES

Flash Point 45.0 F

Flash Point Method Tag Closed Cup

Flash Point Category (OSHA / NFPA) IB

Lower Flammability Limit in Air (% by Vol) 1.0

Continued...

5. FIRE FIGHTING MEASURES (continued)

Extinguishing Media
Extinguish with dry chemical,carbon dioxide, or other universal type foam.

Fire Fighting Instructions
The use of SCBA is recommended for fire fighters. Water spray may be used to cool containers exposed to heat and flame. Avoid spreading burning liquid with water used for cooling purposes.

Fire and Explosion Hazards
This material is flammable and may be ignited by heat, sparks, flame or static electricity. Vapors are heavier than air and may travel along the ground and may be moved by ventilation; flashback along vapor trail may occur.

6. ACCIDENTAL RELEASE MEASURES

Eliminate all sources of ignition. If spill is indoors, ventilate area of spill; use appropriate respiratory protection.
For large spills, a universal type foam may be used to suppress vapors. Contain the spill by diking with sand or other inert material. Keep out of drains, sewers, or waterways. Do not flush area with water. If necessary, contact fire authorities and appropriate federal, state or local agencies.
For small spills, do not flush with water; use absorbent pads.

7. HANDLING AND STORAGE

Keep containers tightly closed. Keep containers cool, dry and away from sources of ignition. Use and store this product with adequate ventilation. Avoid inhalation of vapors and personal contact with the product. Use good personal hygiene practices.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Provide NEC / NFPA approved explosion proof mechanical ventilation to maintain airborne concentrations below the established exposure limits.
It is suggested that a source of clean water be available in work area for flushing eyes and skin.

Personal Protective Equipment

Eye / Face Protection
Chemical splash goggles or safety glasses in compliance with OSHA regulations are advised.

Skin Protection
The use of impermeable, solvent resistant gloves is advised to prevent skin contact, possible irritation and absorption.

Continued...

EXPOSURE CONTROLS / PERSONAL PROTECTION (continued)

Respiratory Protection
Use NIOSH / OSHA approved cartridge respirators or a supplied air respirator depending upon airborne concentrations.

Exposure Guidelines

Chemical Name	ACGIH TWA	ACGIH STEL	OSHA TWA	OSHA STEL
Toluene	100	150 ppm	100	150 ppm
Rotosolve (Aliphatic Portion)	300	375 ppm	300	375 ppm
Xylene (Mixed Isomers)	100	150 ppm	100	150 ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Range 230.4 F - 250.0 F

Density (lbs/gal) 6.90

Vapor Density (vs. air) Heavier

Evaporation Rate (vs. Butyl Acetate) Faster

Appearance Clear Liquid

Percent Volatile (wt.) 100.00

10. STABILITY AND REACTIVITY

Stability
Stable; hazardous polymerization will not occur.

Conditions to Avoid
Keep product away from heat, sparks, pilot lights, static electricity and open flames.

Incompatibility
This product is incompatible with strong acids or bases and oxidizing agents.

11. DISPOSAL CONSIDERATIONS

Reuse recovered material or dispose of product in accordance with local, county, state and federal environmental regulations.

12. REGULATORY INFORMATION

Toxic Substances Control Act (TSCA)

The chemical components of this product are contained on the Section 8(B) Chemical Substance Inventory List (40 CFR 710).

SARA Title III Information

This product contains the following substance(s) which are defined as toxic chemical(s) under, and subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (40 CFR Part 372).

Chemical Name / Category	CAS #	Concentration
Toluene	108-88-3	75.02 %
Xylene (mixed isomers)	1330-20-7	1.73 %

13. ADDITIONAL COMMENTS

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and / or solid), all hazard precautions given on the data sheets must be observed.

1 → Safety MSDS 8-16-52

MATERIAL SAFETY DATA SHEET

SGg

SECTION 1 GENERAL INFORMATION

Manufacturer

Flint Ink Corporation
25111 Glendale
Detroit, MI 48239
1-313-458-7500

Supplier

Flint Ink Corporation
800 Industrial Blvd
New Albany, IN 47150
1-812-948-1586

Applicable Products

02-60470

Low Solvent

24 hr. Medical Emergency Numbers

1-800-228-5365
1-612-221-3999 (Minneapolis/St. Paul only)

Technical Information

1-313-995-3100

MSDS Information

1-812-948-1586

Preparation Date: 08/11/92

Product Identification

Type: Solvent Based Ink
Class: Publication or Packaging - General
System: Gravure

SECTION II INGREDIENTS

Name	%	8 Hour Exposure Limit OSHA PEL	ACGIH TVL
Toluene	95%	100 ppm	100 ppm
Xylene	2%	100 ppm	100 ppm
VM&P Naphtha (Roto Solv)	3%	300 ppm	300 ppm

SECTION III PHYSICAL PROPERTIES

Boiling Point: 200-380°F

Vapor Pressure: > 10 mm Hg

Vapor Density: (air = 1) > 1.0

Solubility in Water: Low

Appearance & Odor: Colored Liquid, hydrocarbon odor

VOC (weight %): 45-55
(Method: __24, __24A, __30, _X_calculated)

Density: 7.17 lb/gal

Evaporation Rate: <1.0
(butyl acetate = 1)

SECTION IV FIRE AND EXPLOSION HAZARD INFORMATION

Lowest Flash Point: 20°F T.C.C.

Flammable Limits (LEL): 1.3%

Extinguishing Media: Foam, Carbon Dioxide, or dry chemical

Special Fire Fighting Procedures: Use water fog to cool containers to prevent pressure build up. Use self contained breathing apparatus where appropriate to fight fire. Wear protective clothing, fight fire from safe distance.

Unusual Fire and Explosion Hazards: Material may explode at temperatures above 150°F. Vapors are heavier than air, may form explosive mixture with air, may travel and ignite or flash back. Explosion-proof equipment should be used. Material is a class 1, flammable liquid (flashpoint less than 100°F) as defined by the National Fire Protection Association (NFPA) criteria and sited in 29 CFR 1910.106(19).

NFPA and HMIS Rating: Health - 2* Flammability - 3 Reactivity - 0

FLINT INK CORPORATION SGg

SECTION V REACTIVITY DATA

Stability: Unstable _____
Stable X

Materials to Avoid: Strong oxidizing agents, strong acids

Conditions to Avoid: Extreme heat, open flames or sparks

Decomposition byproducts: Acrid Smoke
Oxides of Carbon (Carbon Monoxide, Carbon Dioxide)
Oxides of Nitrogen (Nitrogen Dioxide)

Polymerization Reactions: May Occur _____
Will Not Occur X

SECTION VI HEALTH HAZARD DATA

Primary Routes of Entry: Inhalation, eye contact, skin contact

Effects of Exposure (Acute and chronic):

Skin:	Direct contact with liquid may cause irritation. Material may be absorbed through skin. Prolonged contact with liquid may lead to dermatitis and systemic effects similar to inhalation overexposure.
Eyes:	Direct contact with liquid will cause irritation. Vapors may irritate eyes.
Ingestion:	May produce digestive tract irritation, nausea, vomiting, and systemic illness.
Inhalation:	Inhalation of high concentrations of vapors may cause respiratory tract irritation and narcotic effects. Prolonged exposure may cause liver and kidney damage.

Medical Conditions to Avoid: None known.

Emergency and First Aid Procedures:

Skin:	Wash skin with soap and water. Remove contaminated clothing. Contact physician if redness or irritation occurs.
Eyes:	Flush eyes with water for 15 minutes. Contact physician if irritation persists.
Ingestion:	Seek medical attention. Do NOT induce vomiting. Call 24 hr. emergency phone number on page 1 for treatment information.
Inhalation:	Remove to fresh air. Contact a physician.

*Carcinogenicity:	NTP	IARC Monograph	OSHA Regulated
	No	No	No

*Refers to components

FLINT INK CORPORATION **SGg**

SECTION VII SAFE HANDLING PRACTICES

Information in this section is based on the ink only. If the ink has been mixed or contaminated with other material, consult the material safety data sheet for those material for additional safe handling information.

Spill Procedure: Remove all sources of ignition. Absorb or contain with sand or an absorbent material, and dispose of in approved manner. Do not allow spill to enter sewer or water courses. Wear appropriate protective equipment which includes gloves, safety glasses or goggles, and apron. Respiratory protection is not normally required with adequate ventilation.

Waste Disposal: Dispose in accordance with Federal, State, or local regulations. Material may be compatible with industrial waste incineration or inclusion in a fuel–blending program. This characterization is subject to approval by your waste management contractor. Material should be recycled if possible.

Handling and Storage: Protect container from freezing. Avoid high temperatures. Do not stack 55 gallon containers more than 2 high. Handle 55 gallon containers with appropriate equipment. Keep containers closed when not in use. For industrial use only.

SECTION VIII CONTROL MEASURES

Respiratory Protection: Not normally required with adequate ventilation. Use MSHA/NIOSH approved respirator in accordance with 29 CFR 1910.134, when adequate ventilation is not available.

Eye Protection: Splashproof safety goggles.

Skin Protection: Chemical resistant gloves; clothing which covers other exposed areas of arms, legs, and torso.

Ventilation: Good general ventilation should be adequate.

Other Protective Equipment: Convenient eye wash stations should be provided in the workplace.

SECTION IX REGULATORY INFORMATION

SARA Title III, Section 313*

Compound Name	CAS #	% by Weight
Toluene	108–88–3	95%
Xylene	1330–20–7	2%

For reporting of base metal the following percentages should be used: Zinc Compound contains 3% zinc.

* Compounds listed in this section have been listed by the U.S. EPA under Section 313, the Toxic Chemical Release Inventory.

Flint Ink Corporation

MATERIAL SAFETY DATA SHEET

SGg

SECTION 1 GENERAL INFORMATION

Manufacturer

Flint Ink Corporation
25111 Glendale
Detroit, MI 48239
1-313-458-7500

Supplier

Flint Ink Corporation
800 Industrial Blvd
New Albany, IN 47150
1-812-948-1586

Applicable Products

02-60513 Recovered Solvent

24 hr. Medical Emergency Numbers

1-800-228-5365
1-612-221-3999 (Minneapolis/St. Paul only)

Technical Information

1-313-995-3100

MSDS Information

1-812-948-1586

Preparation Date: 06/18/92

Product Identification

Type: Solvent Based Ink
Class: Publication or Packaging - General
System: Gravure

SECTION II INGREDIENTS

Name	%	8 Hour Exposure Limit OSHA PEL	ACGIH TVL
Toluene	50%	100 ppm	100 ppm
Xylene	2%	100 ppm	100 ppm
VM&P Naphtha (Roto Solv)	48%	300 ppm	300 ppm

SECTION III PHYSICAL PROPERTIES

Boiling Point:	200-380°F	Appearance & Odor:	Colored Liquid, hydrocarbon odor
Vapor Pressure:	> 10 mm Hg	VOC (weight %):	100.0 (Method: __24, __24A, __30, _X_calculated)
Vapor Density: (air = 1)	> 1.0	Density:	6.65 lb/gal
Solubility in Water:	Low	Evaporation Rate: (butyl acetate = 1)	<1.0

SECTION IV FIRE AND EXPLOSION HAZARD INFORMATION

Lowest Flash Point:	20°F T.C.C.	Flammable Limits (LEL):	1.3%
Extinguishing Media:	Foam, Carbon Dioxide, or dry chemical		
Special Fire Fighting Procedures:	Use water fog to cool containers to prevent pressure build up. Use self contained breathing apparatus where appropriate to fight fire. Wear protective clothing, fight fire from safe distance.		
Unusual Fire and Explosion Hazards:	Material may explode at temperatures above 150°F. Vapors are heavier than air, may form explosive mixture with air, may travel and ignite or flash back. Explosion-proof equipment should be used. Material is a class 1, flammable liquid (flashpoint less than 100°F) as defined by the National Fire Protection Association (NFPA) criteria and sited in 29 CFR 1910.106(19).		
NFPA and HMIS Rating:	Health - 2* Flammability - 3 Reactivity - 0		

FLINT INK CORPORATION SGg

SECTION V REACTIVITY DATA

Stability: Unstable _____
Stable X

Materials to Avoid: Strong oxidizing agents, strong acids

Conditions to Avoid: Extreme heat, open flames or sparks

Decomposition byproducts: Acrid Smoke
Oxides of Carbon (Carbon Monoxide, Carbon Dioxide)
Oxides of Nitrogen (Nitrogen Dioxide)

Polymerization Reactions: May Occur _____
Will Not Occur X

SECTION VI HEALTH HAZARD DATA

Primary Routes of Entry: Inhalation, eye contact, skin contact

Effects of Exposure (Acute and chronic):

Skin: Direct contact with liquid may cause irritation. Material may be absorbed through skin. Prolonged contact with liquid may lead to dermatitis and systemic effects similar to inhalation overexposure.

Eyes: Direct contact with liquid will cause irritation. Vapors may irritate eyes.

Ingestion: May produce digestive tract irritation, nausea, vomiting, and systemic illness.

Inhalation: Inhalation of high concentrations of vapors may cause respiratory tract irritation and narcotic effects. Prolonged exposure may cause liver and kidney damage.

Medical Conditions to Avoid: None known.

Emergency and First Aid Procedures:

Skin: Wash skin with soap and water. Remove contaminated clothing. Contact physician if redness or irritation occurs.

Eyes: Flush eyes with water for 15 minutes. Contact physician if irritation persists.

Ingestion: Seek medical attention. Do NOT induce vomiting. Call 24 hr. emergency phone number on page 1 for treatment information.

Inhalation: Remove to fresh air. Contact a physician.

*Carcinogenicity:

NTP	IARC Monograph	OSHA Regulated
No	No	No

*Refers to components

FLINT INK CORPORATION SGg

SECTION VII SAFE HANDLING PRACTICES

Information in this section is based on the ink only. If the ink has been mixed or contaminated with other material, consult the material safety data sheet for those material for additional safe handling information.

Spill Procedure: Remove all sources of ignition. Absorb or contain with sand or an absorbent material, and dispose of in approved manner. Do not allow spill to enter sewer or water courses. Wear appropriate protective equipment which includes gloves, safety glasses or goggles, and apron. Respiratory protection is not normally required with adequate ventilation.

Waste Disposal: Dispose in accordance with Federal, State, or local regulations. Material may be compatible with industrial waste incineration or inclusion in a fuel–blending program. This characterization is subject to approval by your waste management contractor. Material should be recycled if possible.

Handling and Storage: Protect container from freezing. Avoid high temperatures. Do not stack 55 gallon containers more than 2 high. Handle 55 gallon containers with appropriate equipment. Keep containers closed when not in use. For industrial use only.

SECTION VIII CONTROL MEASURES

Respiratory Protection: Not normally required with adequate ventilation. Use MSHA/NIOSH approved respirator in accordance with 29 CFR 1910.134, when adequate ventilation is not available.

Eye Protection: Splashproof safety goggles.

Skin Protection: Chemical resistant gloves; clothing which covers other exposed areas of arms, legs, and torso.

Ventilation: Good general ventilation should be adequate.

Other Protective Equipment: Convenient eye wash stations should be provided in the workplace.

SECTION IX REGULATORY INFORMATION

SARA Title III, Section 313*

Compound Name	CAS #	% by Weight
Toluene	108–88–3	50%
Xylene	1330–20–7	2%

For reporting of base metal the following percentages should be used: Zinc Compound contains 3% zinc.

* Compounds listed in this section have been listed by the U.S. EPA under Section 313, the Toxic Chemical Release Inventory.

Flint 60% - Chicago
02-9010

MANUFACTURE NAME. R. R. DONNELLEY & SONS COMPANY

MANUFACTURE INFO. 350 EAST CERMAK
CHICAGO, IL 60616

EMERGENCY PHONE.. (312) 326-8000

CHEMICAL NAME.... RECOVERED SOLVENT MIXTURE

TRADE NAME..... RECSOL

CHEMICAL FAMILY.. AROMATIC HYDROCARBON/
ALIPHATIC HYDROCARBON MIXTURE

CAS NUMBER.....	
108-88-3	TOLUENE
1330-20-7	XYLENE
108-87-2	METHYLCYCLOHEXANE
111-65-9	OCTANE
540-84-1	ISOOCTANE
142-82-5	HEPTANE

INGREDIENTS..... (INGREDIENT PERCENTAGES MAY VARY SLIGHTLY. CURRENT VALU
MAY BE OBTAINED BY CONTACTING ENVIRONMENTAL ENGINEERIN

TOLUENE.....60-90%
XYLENE.....1-3%
IF PRESENT, THE FOLLOWING INGREDIENTS WOULD NOT BE EXPECTED TO EXCEED THE FOLLOWING PERCENTAGES.
METHYLCYCLOHEXANE.....1-10%
OCTANE.....1-2%
ISOOCTANE.....1-5%
HEPTANE.....1-9%
MIXED ALKANES (C6-C8)...5-10%

(THIS PRODUCT CONTAINS LESS THAN .01% BENZENE)

THIS PRODUCT CONTAINS TOLUENE AND XXLENE WHICH ARE CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTRORIZATION ACT OF 1986 AND 40 CFR PART 372.

PHYSICAL DATA.... BOILING POINT (F) : 200 - 250 DEGREES
VAPOR PRESSURE (MM HG)* : @ 68 DEGREES F (20 C): 22.
VAPOR DENSITY (AIR=1)* : 3.2
SOLUBILITY IN WATER :NEGLIGIBLE
SPECIFIC GRAVITY (H2O = 1) : @ 60 DEGREES F: 0.8452
% VOLATILE BY VOLUME : 100%
EVAPORATION RATE (N-BUAC = 1)* : 2.0 - 2.5
APPEARANCE/ODOR : WATER WHITE LIQUID WITH AROMATIC ODO
*(ESTIMATED, ASSUMING TOLUENE THE MAJOR COMPONENT)

FIRE/EXPLOSION... FLASH POINT (METHOD) : 34 DEGREES F (TAG CLOSED CUP)
FLAMMABLE LIMITS* : LEL 1.2 UEL 7.0

(ESTIMATED, ASSUMING TOLUENE THE MAJOR COMPONENT)
EXTINGUISHING MEDIA : HANDLE AS FLAMMABLE LIQUID. USE FOAM,
CO2, STEAM, WATER-FOG, DRY CHEMICALS.
SPECIAL FIRE FIGHTING PROCEDURES : DO NOT USE WATER, EXCLUDE
AIR. USE WATER SPRAY TO COOL EXPOSED DRUMS. WEAR SELF-
CONTAINED BREATHING APPARATUS. CONSULT LOCAL FIRE MARSHAL.
UNUSUAL FIRE AND EXPLOSION HAZARDS : VAPORS ARE HEAVIER THAN
AIR AND MAY TRAVEL ALONG THE GROUND OR MAY BE MOVED BY
VENTILATION AND IGNITED BY PILOT LIGHTS, OTHER FLAMES,
SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS, STATIC DISCHARGE
OR OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM
MATERIAL HANDLING POINT. NEVER USE WELDING OR CUTTING TORCH
ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST
RESIDUE) CAN IGNITE EXPLOSIVELY.

N.F.P.A. HAZARD RATING:

4=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT

FIRE : 3
HEALTH : 2
REACTIVITY : 0

TLV..... FOR TOLUENE = 100 PPM

SYMPTOMS - SOURCE *** OVER EXPOSURE COULD CAUSE THE FOLLOWING ***

-INHALE..... ANESTHESIA
RESPIRATORY IRRITATION
HEADACHE
NAUSEA
DIZZINESS

-INGEST..... GASTROINTESTINAL IRRITATION
NAUSEA
VOMITING

-SKIN CONTACT.. SKIN IRRITATION
DERMATITIS

-EYE CONTACT... EYE IRRITATION

1ST AID..... IF INHALED : IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR.
IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHI
HAS STOPPED GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WAR
QUIET AND GET MEDICAL ATTENTION.
IF SWALLOWED : DO NOT INDUCE VOMITING, KEEP PERSON WARM,
QUIET, AND GET MEDICAL ATTENTION. ASPIRATION OF MATERIAL
INTO THE LUNGS DUE TO VOMITING CAN CAUSE CHEMICAL
PNEUMONITIS WHICH CAN BE FATAL.
IF ON SKIN : THOROUGHLY WASH EXPOSED AREA WITH SOAP AND
WATER. REMOVE CONTAMINATED CLOTHING. LAUNDER CONTAMINAT
CLOTHING BEFORE RE-USE.
IF IN EYES : FLUSH WITH LARGE AMOUNTS OF WATER, LIFTING
UPPER AND LOWER LIDS OCCASIONALLY. GET MEDICAL ATTENTIC

ITY DATA.. STABILITY : STABLE.
CONDITIONS TO AVOID :
INCOMPATABILITY :AVOID CONTACT WITH STRONG OXIDIZING AGENTS
HAZARDOUS DECOMPOSITION PRODUCTS : CO, CO2 WHEN COMBUSTED
HAZARDOUS POLYMERIZATION : WILL NOT OCCUR

LL/LEAK DATA.. SPILL : SMALL SPILL: ABSORB LIQUID ON PAPER, VERMICULITE, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND TRANSFER TO HOOD.
LARGE SPILL: ELIMINATE ALL IGNITION SOURCES (FLARES, FLAMES, INCLUDING PILOT LIGHTS, ELECTRICAL SPARKS). PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN-UP HAS BEEN COMPLETED. STOP SPILL AT SOURCE, DIKE AREA OF SPILL TO PREVENT SPREADING, PUMP LIQUID TO SALVAGE TANK. REMAINING LIQUID MAY BE TAKEN UP ON SAND, CLAY, EARTH, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND SHOVELED INTO CONTAINERS.
WASTE DISPOSAL: LIQUID IS CLASSIFIED AS A RCRA WASTE. DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

TECTION DATA.. RESPIRATORY PROTECTION : NIOSH APPROVED ORGANIC VAPOR RESPIRATORY EQUIPMENT.
PROTECTIVE GLOVES : RUBBER GLOVES (BUNA-N) IF DIRECT SKIN CONTACT IS EXPECTED
EYE PROTECTION : CONVENTIONAL EYE COVER TO GUARD AGAINST UNEXPECTED SPLASHING.
VENTILATION : LOCAL EXHAUST: DESIRABLE - GENERAL - WITH APPROVED GROUP D EXPLOSION-PROOF MOTORS AND SWITCHES

CAUTION DATA.. CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED. SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THIS DATA SHEET MUST BE OBSERVED. AVOID OPEN FLAMES AND SPARK SOURCES. AVOID SPLASH-FILLING. PROVIDE ADEQUATE VENTILATION. AVOID EXCESSIVE HEAT. AVOID BREATHING VAPOR.

CATED IN DIV... 001-2600-ACTIVE-85-11-22
001-3400-ACTIVE-85-11-22
001-3800-ACTIVE-85-11-22

SCRIPTION USE.. SOLVENT (GRAVURE PRINTING INK)

TE..... REVISED 90/04/18
INPUT 85/11/22
EVALUATED 90/04/18

R. R. DONNELLEY & SONS COMPANY
MSS/446 MATERIAL SAFETY SYSTEM
DATA SHEET: RECSOL (GALLATIN)

DATE 89/013
TIME 17:13:68
PAGE 1

02-90100

5-1-92

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 3

To Dorothy Mc	From Michelle
Co. Ann Arbor	Co. Livonia
Dept.	Phone #
Fax #	Fax #

MANUFACTURE NAME. R. R. DONNELLEY & SONS COMPANY

MANUFACTURE INFO. 801 STEAM PLANT ROAD
GALLATIN, TENNESSEE 37066

EMERGENCY PHONE.. (615) 452-5170

CHEMICAL NAME.... RECOVERED SOLVENT MIXTURE
80-85% Gallatin

TRADE NAME..... RECSOL

CHEMICAL FAMILY.. AROMATIC HYDROCARBON/
ALIPHATIC HYDROCARBON MIXTURE

CAS NUMBER..... 108-88-3 TOLUENE
1330-20-7 XYLENE
142-82-5 HEPTANE
108-87-2 METHYLCYCLOHEXANE

INGREDIENTS..... (INGREDIENT PERCENTAGES MAY VARY SLIGHTLY. CURRENT VALUES MAY BE OBTAINED BY CONTACTING ENVIRONMENTAL ENGINEERING.)
TOLUENE.....80-85%
XYLENE (O-, M-, P-ISOMERS).....0-2%
HEPTANE.....0-4%
METHYLCYCLOHEXANE.....0-4%
MIXED ALKANES (C6-C8, EACH LESS THAN 1%).....2-8%
MISCELLANEOUS (EACH LESS THAN 1%)
(THIS PRODUCT CONTAINS LESS THAN 0.01% BENZENE)
THIS PRODUCT CONTAINS TOLUENE AND XYLENE, WHICH ARE CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372.

PHYSICAL DATA.... BOILING POINT (F) : 200 - 250 DEGREES F
VAPOR PRESSURE (MM HG)* : @ 68 DEGREES F (20 C): 23.98
VAPOR DENSITY (AIR=1)* : 3.22
SOLUBILITY IN WATER : NEGLIGIBLE
SPECIFIC GRAVITY (H2O = 1) : @ 60 DEGREES F: 0.8462
% VOLATILE BY VOLUME : 100%
EVAPORATION RATE (N-BUAC = 1)* : 2.0 - 2.5
APPEARANCE/ODOR : WATER WHITE LIQUID WITH AROMATIC ODOR.
*(ESTIMATED, ASSUMING TOLUENE THE MAJOR COMPONENT)

FIRE/EXPLOSION... FLASH POINT* (METHOD) : 34 DEGREES F (TAG CLOSED CUP)
FLAMMABLE LIMITS* : LEL 1.8 UEL 7.0
*(ESTIMATED, ASSUMING TOLUENE THE MAJOR COMPONENT)
EXTINGUISHING MEDIA : HANDLE AS FLAMMABLE LIQUID. USE FOAM, CO2, STEAM, WATER-FOG, DRY CHEMICALS.
SPECIAL FIRE FIGHTING PROCEDURES : DO NOT USE WATER, EXCLUDE AIR. USE WATER SPRAY TO COOL EXPOSED DRUMS. WEAR SELF-CONTAINED BREATHING APPARATUS. CONSULT LOCAL FIRE MARSHAL.
UNUSUAL FIRE AND EXPLOSION HAZARDS : VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR MAY BE MOVED BY

VENTILATION AND IGNITED BY PILOT LIGHTS, OTHER FLAMES, SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS, STATIC DISCHARGE OR OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT. NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

N.F.P.A. HAZARD RATING:

4=EXTREME
3=HIGH
2=MODERATE
1=MINIMAL

FIRE : 3
HEALTH : 2
REACTIVITY : 0

TLV..... FOR TOLUENE = 100 PPM

SYMPTOMS - SOURCE *** OVER EXPOSURE COULD CAUSE THE FOLLOWING ***

-INHALE.....
ANESTHESIA
RESPIRATORY IRRITATION
HEADACHE
NAUSEA
DIZZINESS

-INGEST.....
GASTROINTESTINAL IRRITATION
NAUSEA
VOMITING

-SKIN CONTACT..
SKIN IRRITATION
DERMATITIS

-EYE CONTACT...
EYE IRRITATION

1ST AID.....
IF INHALED : IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM, QUIET AND GET MEDICAL ATTENTION.
IF SWALLOWED : DO NOT INDUCE VOMITING, KEEP PERSON WARM, QUIET, AND GET MEDICAL ATTENTION. ASPIRATION OF MATERIAL INTO THE LUNGS DUE TO VOMITING CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.
IF ON SKIN : THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. LAUNDER CONTAMINATED CLOTHING BEFORE RE-USE.
IF IN EYES : FLUSH WITH LARGE AMOUNTS OF WATER, LIFTING UPPER AND LOWER LIDS OCCASIONALLY. GET MEDICAL ATTENTION.

REACTIVITY DATA..
STABILITY : STABLE.
CONDITIONS TO AVOID :
INCOMPATABILITY : AVOID CONTACT WITH STRONG OXIDIZING AGENTS
HAZARDOUS DECOMPOSITION PRODUCTS : CO, CO2 WHEN COMBUSTED
HAZARDOUS POLYMERIZATION : WILL NOT OCCUR

SPILL/LEAK DATA..
SPILL : SMALL SPILL: ABSORB LIQUID ON PAPER, VERMICULITE, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND TRANSFER

TO HOOD.

LARGE SPILL: ELIMINATE ALL IGNITION SOURCES (FLARES, FLAMES, INCLUDING PILOT LIGHTS, ELECTRICAL SPARKS). PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN-UP HAS BEEN COMPLETED. STOP SPILL AT SOURCE, DIKE AREA OF SPILL TO PREVENT SPREADING, PUMP LIQUID TO SALVAGE TANK. REMAINING LIQUID MAY BE TAKEN UP ON SAND, CLAY, EARTH, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND SHOVELED INTO CONTAINERS.

WASTE DISPOSAL: LIQUID IS CLASSIFIED AS A RCRA WASTE. DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

PROTECTION DATA.. RESPIRATORY PROTECTION : NIOSH APPROVED ORGANIC VAPOR RESPIRATORY EQUIPMENT.
PROTECTIVE GLOVES : RUBBER GLOVES (BUNA-N) IF DIRECT SKIN CONTACT IS EXPECTED
EYE PROTECTION : CONVENTIONAL EYE COVER TO GUARD AGAINST UNEXPECTED SPLASHING.
VENTILATION : LOCAL EXHAUST: DESIRABLE - GENERAL - WITH APPROVED GROUP D EXPLOSION-PROOF MOTORS AND SWITCHES

PRECAUTION DATA.. CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED. SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THIS DATA SHEET MUST BE OBSERVED. AVOID OPEN FLAMES AND SPARK SOURCES. AVOID SPLASH-FILLING. PROVIDE ADEQUATE VENTILATION. AVOID EXCESSIVE HEAT. AVOID BREATHING VAPOR.

LOCATED IN DIV... 013-2200-ACTIVE-85-11-19
013-2600-ACTIVE-85-11-19
013-2700-ACTIVE-85-11-19
013-8400-ACTIVE-86-11-19

DESCRIPTION USE.. SOLVENT (GRAVURE PRINTING INK)

DATE..... REVISED 88/11/29
INPUT 85/11/19
EVALUATED 88/11/29

RE NAME. DONNELLEY PRINTING COMPANY / FLINT INK CORP.

ACTURE INFO. 216 GREENFIELD ROAD
LANCASTER, PENNSYLVANIA 17601

ENCY PHONE.. (717) 392-4074

CAL NAME.... RECOVERED SOLVENT MIXTURE

NAME..... RECSOL

CAL FAMILY.. AROMATIC HYDROCARBON/
ALIPHATIC HYDROCARBON MIXTURE

IUMBER..... 108-88-3 TOLUENE
1330-20-7. XYLENE
108-87-2 METHYLCYCLOHEXANE
142-82-5 HEPTANE

ED.IENTS..... (INGREDIENT PERCENTAGES MAY VARY SLIGHTLY. CURRENT VALUES MAY BE OBTAINED BY CONTACTING ENVIRONMENTAL ENGINEERING.)
TOLUENE.....85-90%
XYLENE.....1-3%
METHYLCYCLOHEXANE.....1-2%
HEPTANE.....1-2%
MIXED ALKANES (C6-C8)...5-10%
MISCELLANEOUS (EACH LESS THAN 1%)

ICAL DATA.... BOILING POINT (F) : 200 - 250 DEGREES
VAPOR PRESSURE (MM HG)* : @ 68 DEGREES F (20 C): 22.98
VAPOR DENSITY (AIR=1)* : 3.2
SOLUBILITY IN WATER :NEGLIGIBLE
SPECIFIC GRAVITY (H2O = 1) : @ 60 DEGREES F: 0.8452
% VOLATILE BY VOLUME : 100%
EVAPORATION RATE (N-BUAC = 1)* : 2.0 - 2.5
APPEARANCE/ODOR : WATER WHITE LIQUID WITH AROMATIC ODOR.
*(ESTIMATED, ASSUMING TOLUENE THE MAJOR COMPONENT)

:/EXPLOSION... FLASH POINT (METHOD) : 34 DEGREES F (TAG CLOSED CUP)
FLAMMABLE LIMITS* : LEL 1.2 UEL 7.0
*(ESTIMATED, ASSUMING TOLUENE THE MAJOR COMPONENT)
EXTINGUISHING MEDIA : HANDLE AS FLAMMABLE LIQUID. USE FOAM, CO2, STEAM, WATER-FOG, DRY CHEMICALS.
SPECIAL FIRE FIGHTING PROCEDURES : DO NOT USE WATER, EXCLUDE AIR. USE WATER SPRAY TO COOL EXPOSED DRUMS. WEAR SELF-CONTAINED BREATHING APPARATUS. CONSULT LOCAL FIRE MARSHAL.
UNUSUAL FIRE AND EXPLOSION HAZARDS : VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR MAY BE MOVED BY VENTILATION AND IGNITED BY PILOT LIGHTS, OTHER FLAMES, SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS, STATIC DISCHARGE OR OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT. NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

..... FOR TOLUENE = 100 PPM

OMS - SOURCE *** OVER EXPOSURE COULD CAUSE THE FOLLOWING ***

...ALE..... ANESTHESIA
RESPIRATORY IRRITATION
HEADACHE
NAUSEA
DIZZINESS

INGEST..... GASTROINTESTINAL IRRITATION
NAUSEA
VOMITING

SKIN CONTACT.. SKIN IRRITATION
DERMATITIS

EYE CONTACT... EYE IRRITATION

AID..... IF INHALED : IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM, QUIET AND GET MEDICAL ATTENTION.
IF SWALLOWED : DO NOT INDUCE VOMITING, KEEP PERSON WARM, QUIET, AND GET MEDICAL ATTENTION. ASPIRATION OF MATERIAL INTO THE LUNGS DUE TO VOMITING CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.
IF ON SKIN : THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. LAUNDER CONTAMINATED CLOTHING BEFORE RE-USE.
IF IN EYES : FLUSH WITH LARGE AMOUNTS OF WATER, LIFTING UPPER AND LOWER LIDS OCCASIONALLY. GET MEDICAL ATTENTION.

ACTIVITY DATA.. STABILITY : STABLE.
CONDITIONS TO AVOID :
INCOMPATABILITY :AVOID CONTACT WITH STRONG OXIDIZING AGENTS
HAZARDOUS DECOMPOSITION PRODUCTS : CO, CO_2 WHEN COMBUSTED
HAZARDOUS POLYMERIZATION : WILL NOT OCCUR

ILL/LEAK DATA.. SPILL : SMALL SPILL: ABSORB LIQUID ON PAPER, VERMICULITE, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND TRANSFER TO HOOD.
LARGE SPILL: ELIMINATE ALL IGNITION SOURCES (FLARES, FLAMES, INCLUDING PILOT LIGHTS, ELECTRICAL SPARKS). PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN-UP HAS BEEN COMPLETED. STOP SPILL AT SOURCE, DIKE AREA OF SPILL TO PREVENT SPREADING, PUMP LIQUID TO SALVAGE TANK. REMAINING LIQUID MAY BE TAKEN UP ON SAND, CLAY, EARTH, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND SHOVELED INTO CONTAINERS.
WASTE DISPOSAL: SMALL SPILL: ALLOW VOLATILE PORTION TO EVAPORATE IN HOOD. ALLOW SUFFICIENT TIME FOR VAPORS TO COMPLETELY CLEAR HOOD DUCT WORK. DESTROY REMAINING MATERIAL BY BURNING IN AN IRON PAN.

LARGE SPILL: DESTROY BY LIQUID INCINERATION. CONTAMINATED ABSORBENT MAY BE DEPOSITED IN A LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

OTECTION DATA.. RESPIRATORY PROTECTION : NIOSH APPROVED ORGANIC VAPOR RESPIRATORY EQUIPMENT.
PROTECTIVE GLOVES : RUBBER GLOVES (BUNA-N) IF DIRECT SKIN CONTACT IS EXPECTED
EYE PROTECTION : CONVENTIONAL EYE COVER TO GUARD AGAINST UNEXPECTED SPLASHING.
VENTILATION : LOCAL EXHAUST: DESIRABLE - GENERAL - WITH APPROVED GROUP D EXPLOSION-PROOF MOTORS AND SWITCHES

RECAUTION DATA.. CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED. SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THIS DATA SHEET MUST BE OBSERVED. AVOID OPEN FLAMES AND SPARK SOURCES. AVOID SPLASH-FILLING. PROVIDE ADEQUATE VENTILATION. AVOID EXCESSIVE HEAT. AVOID BREATHING VAPOR.

.OCATED IN DIV... 018-3900-ACTIVE-85-04-18
018-2200-ACTIVE-85-04-18
018-3700-ACTIVE-85-04-18

)ESCRIPTION USE.. SOLVENT (GRAVURE PRINTING INK)

)ATE..... REVISED 87/03/19
INPUT 85/11/19
EVALUATED 87/03/19

Flint 92% Toluene Free Sol-Substantary

MATERIAL SAFETY DATA SHEET

SG

SECTION 1 GENERAL INFORMATION

Manufacturer
Flint Ink Corporation
25111 Glendale
Detroit, MI 48239
1-313-458-7500

Supplier
Flint Ink Corporation
302 Jones Road
Spartanburg, SC 29302
1-803-579-3870

Applicable Products
02-60430

24 hr. Medical Emergency Numbers
1-800-228-5365
1-612-221-3999 (Minneapolis/St. Paul only)

Technical Information
1-313-995-3100

MSDS Information
1-313-995-3100

Preparation Date: 01/31/92

Product Identification
Type: Solvent Based Ink
Class: Publication or Packaging - General
System: Gravure

SECTION II INGREDIENTS

Name	%	8 Hour Exposure Limit OSHA PEL	ACGIH TVL
Toluene	93%	100 ppm	100 ppm
Xylene	2%	100 ppm	100 ppm
VM&P	5%	300 ppm	300 ppm

SECTION III PHYSICAL PROPERTIES

Boiling Point: 200-330°F

Vapor Pressure: > 10 mm Hg

Vapor Density: (air = 1) > 1.0

Solubility in Water: Low

Appearance & Odor: Colored Liquid, hydrocarbon odor

VOC (weight %): 100.0
(Method: __24. __24A. __30. _X_calculated)

Density: 7.15 lb/gal

Evaporation Rate: <1.0
(butyl acetate = 1)

SECTION IV FIRE AND EXPLOSION HAZARD INFORMATION

Lowest Flash Point: 20°F T.C.C.

Flammable Limits (LEL): 1.3%

Extinguishing Media: Foam, Carbon Dioxide, or dry chemical

Special Fire Fighting Procedures: Use water fog to cool containers to prevent pressure build up. Use self contained breathing apparatus where appropriate to fight fire. Wear protective clothing. fight fire from safe distance.

Unusual Fire and Explosion Hazards: Material may explode at temperatures above 150°F. Vapors are heavier than air. may form explosive mixture with air. may travel and ignite or flash back. Explosion-proof equipment should be used. Material is a class I. flammable liquid (flashpoint less than 100°F) as defined by the National Fire Protection Association (NFPA) criteria and sited in 29 CFR 1910.106(19).

SGg

FLINT INK CORPORATION

SECTION V REACTIVITY DATA

Stability: Unstable _____
Stable X

Materials to Avoid: Strong oxidizing agents, strong acids

Conditions to Avoid: Extreme heat, open flames or sparks

Decomposition byproducts: Acrid Smoke
Oxides of Carbon (Carbon Monoxide, Carbon Dioxide)
Oxides of Nitrogen (Nitrogen Dioxide)

Polymerization Reactions: May Occur _____
Will Not Occur X

SECTION VI HEALTH HAZARD DATA

Primary Routes of Entry: Inhalation, eye contact, skin contact

Effects of Exposure (Acute and chronic):

Skin: Direct contact with liquid may cause irritation. Material may be absorbed through skin. Prolonged contact with liquid may lead to dermatitis and systemic effects similar to inhalation overexposure.

Eyes: Direct contact with liquid will cause irritation. Vapors may irritate eyes.

Ingestion: May produce digestive tract irritation, nausea, vomiting, and systemic illness.

Inhalation: Inhalation of high concentrations of vapors may cause respiratory tract irritation and narcotic effects. Prolonged exposure may cause liver and kidney damage.

Medical Conditions to Avoid: None known.

Emergency and First Aid Procedures:

Skin: Wash skin with soap and water. Remove contaminated clothing. Contact physician if redness or irritation occurs.

Eyes: Flush eyes with water for 15 minutes. Contact physician if irritation persists.

Ingestion: Seek medical attention. Do NOT induce vomiting. Call 24 hr. emergency phone number on page 1 for treatment information.

Inhalation: Remove to fresh air. Contact a physician.

*Carcinogenicity:

NTP	IARC Monograph	OSHA Regulated
No	No	No

*Refers to components

SGg

FLINT INK CORPORATION

SECTION VII — SAFE HANDLING PRACTICES

Information in this section is based on the ink only. If the ink has been mixed or contaminated with other material, consult the material safety data sheet for those material for additional safe handling information.

Spill Procedure:	Remove all sources of ignition. Absorb or contain with sand or an absorbent material, and dispose of in approved manner. Do not allow spill to enter sewer or water courses. Wear appropriate protective equipment which includes gloves, safety glasses or goggles, and apron. Respiratory protection is not normally required with adequate ventilation.
Waste Disposal:	Dispose in accordance with Federal, State, or local regulations. Material may be compatible with industrial waste incineration or inclusion in a fuel-blending program. This characterization is subject to approval by your waste management contractor. Material should be recycled if possible.
Handling and Storage:	Protect container from freezing. Avoid high temperatures. Do not stack 55 gallon containers more than 2 high. Handle 55 gallon containers with appropriate equipment. Keep containers closed when not in use. For industrial use only.

SECTION VIII — CONTROL MEASURES

Respiratory Protection:	Not normally required with adequate ventilation. Use MSHA/NIOSH approved respirator in accordance with 29 CFR 1910.134, when adequate ventilation is not available.
Eye Protection:	Splashproof safety goggles.
Skin Protection:	Chemical resistant gloves; clothing which covers other exposed areas of arms, legs, and torso.
Ventilation:	Good general ventilation should be adequate.
Other Protective Equipment:	Convenient eye wash stations should be provided in the workplace.

SECTION IX — REGULATORY INFORMATION

SARA Title III, Section 313*

Compound Name	CAS #	% by Weight
Toluene	108-88-3	93%
Xylene	1330-20-7	2%

For reporting of base metal the following percentages should be used: Zinc Compound contains 3% Zinc, Barium Compound contains 15.4% barium.

* Compounds listed in this section have been listed by the U.S. EPA under Section 313, the Toxic Chemical Release Inventory.

04. 06. 92 01:11PM *FLINT INK-NEW ALBANY P01

FAX COVER SHEET

FLINT INK CORPORATION
800 INDUSTRIAL BOULEVARD
NEW ALBANY, IN 47150-2290
TELEPHONE: (812) 948-1586 FAX: (812) 948-1589

TO: Jennifer Weatherdon FROM: Tom Kamensek

Hercules New Albany

Total Number of Pages 4 (including this cover sheet)

Attached is the MSD Sheet you requested for Spartanburg solvent.

Please note that the only specifications applicable are the W.P.G.

(7.15 lb./gal.) and the aromatics (92-96%).

FAX #: 302-995-4448

APR 6 '92 13:14 812 948 1589 PAGE.001

MATERIAL SAFETY DATA SHEET
FOR PRINTING INK AND RELATED MATERIALS

INFORMATION ON THIS FORM IS PROPRIETARY INFORMATION AND FURNISHED SOLELY FOR THE USE OF OUR CUSTOMERS

DATE OF PREP. 6-17-92 PREPARED BY M. Bowers

HAZARD RATINGS
Minimal 0
Slight 1
Moderate 2
Serious 3
Severe 4

HEALTH	2
FLAMMABILITY	3
REACTIVITY	0

Section I

MANUFACTURER'S NAME: Quebecor Printing Dallas
STREET ADDRESS: 4800 Spring Valley Road CITY, STATE AND ZIP CODE: Dallas, Texas 75240
EMERGENCY TELEPHONE NUMBER: (214) 233-3400
PRODUCT CLASS: Recycled Gravure Ink Solvent Dallas, TX
TRADE NAME: Gravure Recovered Solvent MANUFACTURER'S CODE IDENTIFICATION: None

Section II - HAZARDOUS INGREDIENTS

INGREDIENT	AMT	CAS NO.	ACGIH TLV/STEL	OSHA TWA/STEL
PETROLEUM DISTILLATES	42-38	64742-89-8	300/-	300/400
TOLUENE *	54-57	108-88-3	100/150	100/150
XYLENES *	4-5	1330-20-7	100/150	100/150

* Denotes items listed in EPCRA Section 313.
AMT = Percent by weight in total formular

Section III - PHYSICAL DATA

BOILING RANGE °F	VAPOR DENSITY: HEAVIER ☒ vs. air LIGHTER ☐	LIQUID DENSITY: HEAVIER ☐ vs. water LIGHTER ☒	TYPE OF ODOR
230-284			Aromatic
APPEARANCE Clear Liquid	EVAPORATION RATE FASTER ☒ vs. Butyl Acetate SLOWER ☐	PERCENT VOLATILE WT. 100	

Section IV - FIRE & EXPLOSION DATA

FLAMMABILITY CLASSIFICATION		FLASH POINT °F	LEL
OSHA 1B		45	
DOT		(Method Used) TCC	1.0%

EXTINGUISHING MEDIA:

☒FOAM ☐"ALCOHOL" FOAM ☒CO2 ☒DRY CHEMICAL ☐WATER FOG ☐OTHER

UNUSUAL FIRE AND EXPLOSION HAZARDS Vapors may ignite explosively, exposure of closed container to excessive heat during fire may cause disruptive pressure.

SPECIAL FIREFIGHTING PROCEDURES Self contained breathing apparatus, with full face piece operated in pressure demand or other positive pressure mode-use water to cool exposed containers.

Section V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE Prolonged breathing of vapors in excess of TLV may cause nausea, intoxication, coma, kidney and liver damage. Skin contact may cause irritation due to defatting action of solvent. Eye contact causes irritation. Inhalation may result in irritation of nose and throat.

PRIMARY ROUTE(S) OF ENTRY: ☒DERMAL ☒INHALATION

EMERGENCY AND FIRST AID PROCEDURES Excessive inhalation of vapors/narcosis: remove to fresh air, give artificial respiration or oxygen if necessary. Eyes: wash liberally with soap and water. Remove contaminated clothing-launder before reuse. Ingestion: call physician, do not induce vomiting, keep person warm and quiet. Aspiration of material into lungs can cause chemical pneumonitis which may be fatal.

Section VI - REACTIVITY DATA

PRODUCT STABILITY ☒STABLE ☐UNSTABLE

CONDITIONS TO AVOID Do note mix or store with strong acids, alkali, or oxidizers. Avoid excessive heat.

Section VII - SPILL OR LEAK PROCEDURES

PROCEDURE WHEN MATERIAL SPILLED OR RELEASED Eliminate all sources of vapor ignition, ventilate area. Dike area to prevent spreading, pump to salvage tank or container bulk of material-remove balance with suitable absorbant material.

WASTE DISPOSAL METHOD In accordance with applicable local, state and federal regulations.

Section VIII - SPECIAL PROTECTION INFORMATION

VENTILATION General ventilation with a minimum of not less than (1) CFM per square foot of solid floor area, to include all floor areas or pits where flammable vapors ma collect.

PROTECTIVE GLOVES & impermiable apron should be worn where prolonged contact may occur.

RESPIRATORY PROTECTION NIOSH approved for organic vapors **EYE PROTECTION** Safety glasses for splash protection

OTHER PROTECTIVE EQUIPMENT spark proof tools

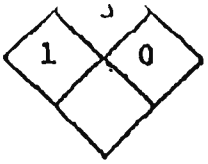
Section IX - SPECIAL PRECAUTIONS

HANDLING AND STORING Use with adequate ventilation, keep containers closed when not in use, keep away from open flame, or excessive heat. Wash hands thoroughly after using, and before smoking and eating. It is inadvisable to breathe mist of any solvent

OTHER PRECAUTIONS None.

FLINT RECOVERED SOLVENT
(W. F. HALL - EVANS, GA)

SAFETY BULLETIN



02-60470

Code No.:

UN No. 1210

MANUFACTURER'S NAME

W. F. Hall Printing Company of Georgia, Inc.

STREET ADDRESS

4301 Evans-To-Locks Road

CITY, STATE, AND ZIP CODE

Evans, Georgia 30809

Business Phone: 404-860-8000

EMERGENCY TELEPHONE NO.

Transportation Emergencies call CHEMTREC (800) 424-9300
Health Emergencies Call Los Angeles Poison Control Center (24 hours) (213) 664-2121

PRODUCT: Petrolium Naptha

COMMON NAME: Augusta Solvent Recovery

GENERIC NAME: Volatile Solvent

CHEMICAL NAME: Not Applicable

CHEMICAL FAMILY: Hydrocarbon Mixture

PROPER SHIPPING NAME:

Petroleum Naphtha

WARNING STATEMENT:

Warning Flammable.
DO NOT induce vomiting if swallowed.
For industrial use only.

Section I -- INGREDIENTS

	TLV*		TLV*
Toluene	200		
Xylene	100		
C_8 Paraffins, Cycloparaffins & Aromatics	NE*		

*Threshold Limit Value A. OSHA [X] B. ACGIH [ ] C. See Section III [ ] D. Other [ ]

*Not Established

m AM-8402 (10-80) Printed in U.S.A.

ERGENCY: Have a physician call LOS ANGELES POISON CONTROL CENTER (24 hrs.) 213/664-2121	
tact	If this product comes in contact with the eyes, flush with large quantities of water for at least 15 minutes and seek immediate medical attention.
n tact	If this product comes in contact with the skin, wash with soap and large quantities of water and seek medical attention if irritation from contact persists.
alation	If breathing difficulties, dizziness, or lightheadedness occur when working in areas with high vapor concentrations, victim should seek air free of vapors. If victim experiences continued breathing difficulties, administer oxygen until medical assistance can be rendered. If breathing stops, begin artificial respiration and seek immediate medical attention.
gestion	If this product is swallowed, DO NOT induce vomiting. Seek immediate medical advice and/or attention.

Section III - - PHYSIOLOGICAL EFFECTS AND HEALTH INFORMATION	
	This product may be an eye irritant.
Skin Effects	This product may cause skin irritation upon prolonged or repeated contact.
Systemic Effects	Various studies have shown a possible association with exposure to this product and the following: Respiratory tract irritation Central nervous system depression in high concentrations

Section IV - SPECIAL PROTECTION INFORMATION

ratory ction ilty	The use of respiratory protection depends on vapor concentration above the time-weighted TLV; use a NIOSH approved cartridge respirator or gas mask.
ation	General mechanical ventilation may be sufficient to keep product vapor concentrations within specified time-weighted TLV ranges. If general ventilation proves inadequate to maintain safe vapor concentrations, supplemental local exhaust may be required. Other special precautions such as respiratory masks or environmental containment devices may be required in extreme cases.

ective es	The use of impermeable gloves is advised to prevent skin irritation in sensitive individuals.	Eye Protection	Safety glasses, chemical goggles and/or face shields are recommended to safeguard against potential eye contact, irritation, or injury.
r ective · ipment	Impermeable aprons are advised when working with this product. The availability of eye washes and safety showers in work areas is recommended.		

Section V - REACTIVITY DATA

bility	Unstable		Conditions to Avoid:
	Stable	X	
tibility s to Avoid)	This product is incompatible with strong oxidizing agents strong acids or bases selected amines		
zardous composition oducts	Thermal decomposition in the presence of air may yield carbon monoxide and/or carbon dioxide		
zardous lymerization	May Occur		Conditions to Avoid:
	Will Not Occur	X	

Section VI - SPILL OR LEAK PROCEDURES

HIGHWAY OR RAILWAY SPILLS - CALL CHEMTREC 800/424-9300

ecautions Case of Release or Spill	Keep sources of ignition and hot metal surfaces isolated from the spill. Flush spilled material into suitable retaining areas or containers with large quantities of water. Small amounts of spilled material may be absorbed into an appropriate absorbant.
portable Identity	Notify Coast Guard National Response Center: Phone No. 800-424-8802, If Spill is Greater Than ____ lbs (Kilograms)
er l s.	Dispose of product in accordance with applicable local, county, state and federal regulations.

...nd ...ling ...autions	Keep product containers cool, dry, and away from sources of ignition. Use and store this product with adequate ventilation. (See Section IV.)
...l ...ecautions	Personnel should avoid inhalation of vapors. (See sections I, II, III, V, VI) Personal contact with the product should be avoided. Should contact be made, remove saturated clothing and flush affected areas with water. (See sections II, IV, VI)

Section VIII. - FIRE AND EXPLOSION HAZARD DATA

...OT ...lammability ...lassification	Flammable Liquid	Flash Point Range: ☐ Below 20° F, ☒ 20° F - 100° F ☐ 100° F - 200° F ☐ Over 200° F ☐ None to boiling
...xtinguishing ...edia	Use foam, CO_2 or dry chemical fire fighting apparatus.	
...nusual Fire ...nd Explosion ...azards	Keep work areas free of hot metal surfaces and other sources of ignition.	
...ire ...ighting ...ocedures	The use of self-contained breathing apparatus is recommended for fire fighters. Water may be unsuitable as an extinguishing media, but helpful in keeping adjacent containers cool. Avoid spreading burning liquid with water used for cooling purposes.	

Section IX. - PHYSICAL DATA

...ximate ...g Range, ° F	241° - 250°F	Vapor Density: ☒ Heavier ☐ Lighter Than Air	
Evaporation Rate: ☐ Faster ☒ Slower Than Ether		Percent Volatile: 100%	Solubility in Water: Negligible
Specific Gravity: ☒ Lighter ☐ Heavier Than Water		Weight per Gallon:	
Appearance and Odor: This product is clear, has little if any color and has a characteristic odor.			

Section X. - DOCUMENTARY INFORMATION

Product Code No.	Issue Date	Prepared By
Replaces: UCD No.	Product Code No.	Issued
...d By:	Manager, Loss Prevention	
...viewed By:	Director of Occupational Health & Toxicology	
Reviewed By:	Science and Technology Division	

MATERIAL SAFETY DATA SHEET

Master File - Do not Remove

300-239

SunChemical Corporation
General Printing Ink Division
631 Central Avenue
Carlstadt, N.J. 07072
Telephone (201) 933-4500

1. PRODUCT IDENTIFICATION

Product Name	300-239	**HMIS**	
Product Description	Recovered Solvent	**Health**	2
Product Category	Publication Gravure Solvent	**Flammability**	3
MSDS Date	09/25/92	**Reactivity**	0

2. COMPOSITION (Hazardous Components)

The Components listed below are identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Chemical Name	CAS Number	Concentration
Rotosolve (Aliphatic Portion)	64742-89-8	41.00 %
Toluene	108-88-3	57.02 %
Xylene (Mixed Isomers)	1330-20-7	1.73 %

3. HAZARDS IDENTIFICATION

Emergency Overview

Flammable Liquid
Eye Irritant
Skin Irritant
May Cause Nervous System Depression
Aspiration Hazard

Potential Health Effects

Inhalation and dermal contact are the primary routes of occupational exposure. This formulation may cause skin and eye irritations. The following adverse health effects are attributable to the hazardous ingredients listed in Section II.

Eye

This material may cause eye irritation. Direct contact with the liquid or exposure to its vapors or mists may cause stinging, tearing, redness and swelling.

Skin

This material may cause skin irritation. Prolonged or repeated exposure to this material may cause redness, burning, drying and cracking of the skin.
Direct contact may result in skin absorption of toluene, but symptoms of toxicity are not expected by this route.

Continued...

3. HAZARDS IDENTIFICATION (continued)

Inhalation

Inhalation of vapors or mists may cause irritation of the mucous membranes and the upper respiratory tract and signs of nervous system depression (e.g. drowsiness, dizziness, loss of coordination and fatigue).
Exposure to high concentrations of toluene may cause cardiac arrhythmias.

Ingestion

Ingestion of excessive quantities may cause irritation of the digestive tract and signs of nervous system depression.

Chronic Effects

Chronic overexposure may result in liver and kidney abnormalities as well as brain and nervous system damage. Pre-existing respiratory and skin disorders may be aggravated by exposure to this material.

4. FIRST AID MEASURES

Eye Contact

If irritation or redness from exposure to vapors develops or persists consult a physician. In case of direct contact, flush eyes with clean water for at least 15 minutes and seek medical attention.

Skin Contact

Remove contaminated clothing. Wash affected area thoroughly with soap and water. Seek medical attention if irritation or redness develops and persists.

Inhalation

Remove affected person away from source of exposure and into fresh air. If breathing difficulties develop, oxygen should be administered by qualified personnel. If breathing has stopped give artificial respiration. Seek immediate medical attention.

Ingestion

Do not induce vomiting. Aspiration of liquid into the lungs can cause chemical pneumonitis and pulmonary edema / hemorrhage which can be fatal. Seek immediate medical attention. If victim is drowsy or unconscious, place on the left side with head down and do not give anything by mouth. If vomiting occurs keep head below hips to prevent aspiration of liquid into lungs.

5. FIRE FIGHTING MEASURES

Flash Point 45.0 F

Flash Point Method Tag Closed Cup

Flash Point Category (OSHA / NFPA) IB

Lower Flammability Limit in Air (% by Vol) 1.0