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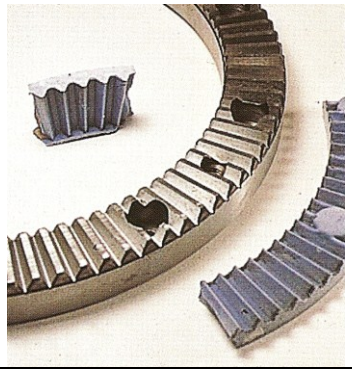
Facsimile



This product produces a mix of semi liquid consistency and is suitable for pouring into component cavities or onto a surface which has been suitably dammed with the plasticine provided in the kit.
When set Facsimile provides an exact hard replica of the form, size and surface finish of the original component
The resulting cast can be measured with standard contact type measuring tools such as micrometers, vernier calipers and surface measuring machines
It also provides excellent images from profile and surface projection

Packed Weight and Dimensions

Code	Description	Weight g	W mm	H mm	L mm
52-016-000	Facsimile 1lb Kit	1120	140	125	260
52-016-003	Facsimile 3lb Kit	2275	135	175	270

Mix time	1 minute
Working time	6-10 minutes
Deformation	None
Strength	Unbreakable plastic
Humidity	No effect
Molten metal	Up to 350°F
Surface	Scratch resistant
Colour	Blue

Code	Description / Size
52-016-000	Facsimile 1Ib Kit
52-016-003	Facsimile 3Ib Kit

FACSIMILE: Instructions for Use:
Preparing the original prior to applying the Facsimile mixture (obtaining separation).
Cover the surface by applying a generous amount of Flexbar Release Agent as supplied with each kit. Use a camel-hair brush, swab, or lint-free cloth. Dam off the original with molding clay, making areas not wanted and undercuts tool. Use release agent on corners, and around bends just in case the applied mixture runs over the edge.

RELEASE AGENT:
When the substrate (specimen) is metal:
• If the metal is "Bone Dry" the Facsimile mixture will cure and bond onto the metal. This may be advantageous in certain applications, such as fixturing or tooling usage.
• If the metal has Release Agent covering the entire area, the cured Facsimile will release from the original.

OTHER RELEASE AGENTS:
Since the chemical composition and metallurgical structure of metals varies a good deal, users of Facsimile often use other substances which work best on the particular substrate. E.G. Petroleum Jelly (Vasoline), - light grease - 3 in 1 oil, vegetable oil - soap solution - transmission fluid - lard - spray-on furniture polish (Pledge) - Polymer car finish (Armor All) etc.

PUTTING IT IN THE FREEZER: If by accident the replica does not separate from the mold, put it in the freezer and separation will occur.

SEPARATION FROM PLASTIC PARTS:
The Facsimile mixture when placed into or onto a plastic substrate will:
(Type A) Separate itself easily from plastic even without Release Agent.
(Type B) Bond itself to the plastic.
Non-stick plastics (Type A) include: Polyethylene, Nylon, Teflon, Delrin and Rubber. If you are not certain, use a scrap piece and experiment using only a small glob of Facsimile mixture.
Plastics which will stick (Type B) include: Acrylics, Acetates, Vinyls, PVCS, Styrenes, Plexiglass, ABS, Fiberglass, CFC's and some others. However, There is a way out! To easily separate replicas from plastic parts which normally stick, use Epoxy *Parfilm*, Flexbar Order No. 16136 (18 ounce spray can)(see page 13).

Facsimile

MIXING FACSIMILE:
The viscosity of Facsimile is adjustable; the more liquid used, the thinner the mixture and vice versa. There is not a fixed ratio of powder to liquid and this depends a good deal upon the application. However, the more powder that can be tolerated in the mixture, the more accurate is the dimensional transfer. If you are a first-time user, it is advisable to experiment with a few different ratios.

MAKING THE MIXTURE:
1. Scoop powder into one graduated cup.
2. Pour liquid into a second cup.
3. Pour the powder into the liquid.
4. Use the wooden spatula and slowly stir for about 60 seconds. If it looks like the mixture is too thick, you still have time to add a bit more of liquid and re-stir. If too thin, you can add more powder and re-stir.
5. (Optional) Turning the cup 60° and rotating the cup in the hands for 10 seconds or so will remove air which may be trapped in the mixture. This will tend to eliminate "Voids" within the cured replica.
6. Examples of Ratios:
   3 to 1
   This means, for example that you put 30cc of powder in cup #1 and 10cc of liquid in cup #2. The cups supplied in each Facsimile Kit are "Graduated". Cups can be ordered separately (See back cover).

POWDER	+	LIQUID	=	RESULTING VISCOSITY
3		1	=	Thin
4		1	=	Medium
5		1	=	Thick

7. CURE TIME: AT 68°-70° (Room Temperature), in most environments, Facsimile will cure in about 10 minutes. After 6 minutes, while the replica may appear "Hard", upon touching it you will observe that is still quite warm and thereafter it cools down very rapidly. Removal when still warm will distort the geometry so wait until it is cold.
8. Increasing work time and cure time:
Many users of Facsimile cannot tolerate the short cure time. In certain situations - this is easily solved as follows: Keep the Facsimile liquid in cold place, such as a refrigerator. Curetime will be increased to 30 to 40 minutes which of course also provides more "Work Time".
DAMMING OFF FACSIMILE:
Various objects can be useful. Keep these on hand or collect them in a box.
: Modeling Clay: sheets of non-stick plastic: Plaster of Paris.
: Plastic Caps: Rubber Plugs: RTV rubber or even better Flexbar REPRORUBBER.
The REPRORUBBER "DAM" will exactly fit the configuration of the area being dammed off and it will constantly keep its shape and tolerance so that the same dam can be used over and over again to make additional replicas.
9. Applying Facsimile in *Putty Form:*
Use A High Powder to liquid ratio. Wait until it gets pasty while covering your hands with oil or petroleum jelly. This is so that the Facsimile putty will not stick to your hands. Pry the putty out with the wooden stick and scoop it into your oiled hands: roll it into a ball and then push it into the test piece. Press several times for it to take shape. Wait for "Full Cure" and then remove it . AVOID TOUCHING FACSIMILE MIXTURE, as follows: spread or put putty on thin plastic sheeting such as a " Baggie", poly bag or piece of wax paper then press it into or onto the test piece. Important: Do not remove plastic sheet until after the Facsimile mixture has cured fully.
10. DISSOLVING CURED FACSIMILE:
Soak in Acetone or Ethylene Dichloride
11. USING A SYRINGE:
Many types of plastic syringes are readily available including Flexbar Monoject Syringes (see page 15). The Facsimile mixture can be poured into a Polyethylene Syringe body; then insert the plunger and dispense under very controlled conditions. The cured Facsimile residue will push out easily to that the same syringe can be used over and over again.
12. HINTS FOR REMOVAL:
a. Many shapes are easy to remove. Use a thin knife edge to pluck up the edge of the replica and it will pop off. Often times, rapping the set up with a wooden mallet will dislodge the specimen without harming either the original test piece or the duplicate, for more difficult configurations, sink a handle into the potted area. E.G., use a hex bolt or headed machine screw (head in always).
b. If the original has one or more undercuts, so that there is no draft, then fill into the undercut with clay or similar material.

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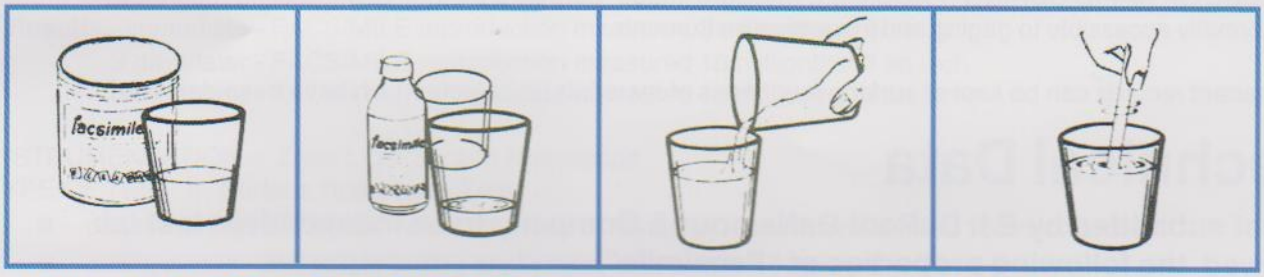
Facsimile

Directions for Mixing and Pouring:

ACCURATE REPRODUCTION IN MINUTES

NOTE: Temperature and humidity conditions can affect mixing ratio but you can easily achieve the best ratio with a couple of trial mixes. Record the best.

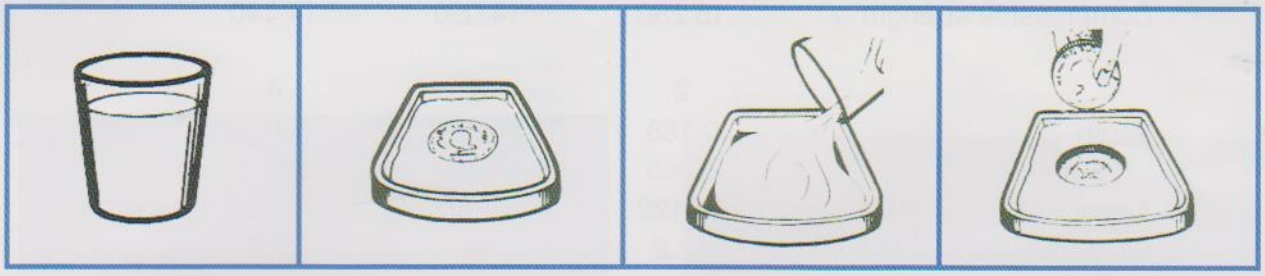
EXAMPLE GIVEN BELOW IS ONLY FOR "THIN VISCOSITY".
SEE PAGE 5 FOR OTHER MIX RATIOS.



Method No. 1: FOR USE IN LIQUID STATE (where area is easily dammed off). 3:1 Ratio

1. Pour Powder into cup (30cc).
2. Pour liquid into second cup (10cc).
3. Pour Powder into liquid.
4. Spatulate slowly for 60 seconds.

This ratio will result in a thin viscosity.



5. Wait 30 seconds for bubbles to settle.
6. Prepare area for release by using a release agent.
7. Pour over object or into cavity and let it set for 6-8 minutes at room temperature (more in cold areas).
8. Remove specimen (press) out or insert knife edge to loosen and pry out).

Cured Facsimile has a density of 1.1 so that small amount goes a long way.

Our mixing cups are polyethylene or polypropylene so that residue will peel out easily; thus mixing cups are re-usable. Disposable cups are also included.

#16000, one pound kit yields 20.9 cubic inches of solid (cured) material.
#16003, three pound kit yields 62 cubic inches of solid (cured) material.
#16025, twenty five pound kit yields 518 cubic inches of solid (cured) material.

Facsimile

facsimile®

QUICK-SETTING COMPOUND

Laboratory Reports

Laboratory reports on FACSIMILE specimens show surface roughness measurements of 0.1 to 2,000 microinches are exact duplicates of the material tested, measurable on surface testing instruments of both electronic and optical types.

THE USE OF RAPID CURING "FACSIMILE measure image" permits a method of duplicating roughness of areas not normally accessible to gaging and inspection instruments.

Permanent records can be kept of surface roughness of materials on objects which have been delivered.

Technical Data

A test submitted by E.I. DuPont DeNemour & Company to an independent test lab showed the following properties of "Facsimile".

	1	2	3
Diameter	0.805	0.799	0.805
Length	0.699	0.0699	0.700
Area	0.509	0.501	0.509
Breaking Load (lbs.)	7,780*	7,060*	7,200*
Compressive strength	15,280	14,090	14,140

	2	3	4
Width	0.188	0.189	0.192
Thickness	0.065	0.064	0.072
Area	0.0122	0.0121	0.0138
Ultimate Load (lbs.)	42.2	53	43.8
Ultimate Tensile (psi)	3,460	4,380	3,170

*1st deformation - sample did not break

END OF REPORT

TEMPERATURE RESISTANCE:
Under heat, Facsimile does break down which starts around 350°F. Users have bonded metals and springs using heat of up to 350° C. Thermal insulation can be increased by mixing in a normal amount of special powder e.g., rock wool.

SHRINK FACTORS:
A. Non confined - as around an air-foil section - excellent.
B. Confined casting of Facsimile. This will result in a very small amount of shrinkage. Therefore, dam off part of internal cavity with clay or pliable material. To improve close tolerance dimensional transfers:

1. Load a lot of powder into the mixture and push material into ring or form.
2. Cure (after pouring) in a pressure vessel at 15 p.s.i. A pressure cooker with an air valve will do.
3. Take a partial impression e.g. 60% of a hole diameter.

P.S. FACSIMILE, when cured, is sufficiently hard for use of a stylus following the edge of FACSIMILE template.

HARDNESS: ROCKWELL - M 90 (Comparable to an ABS Plastic)
THIS IS A STANDARD FOR PLASTICS ONLY.

Facsimile

USE #1 Case History

(see below for graphs)

INSTRUMENTATION - Zeiss Interference Surface Tester
TYPE OF TEST I. Flatness Check

- original being reproduced was optically flat to 3 millionths of an inch.
- curing period - approximately 30 minutes.

Results: immediate - FACSIMILE reproduction measured 3 millionths of an inch.
3 days later - FACSIMILE reproduction measured 10 millionths of an inch.
6 days later - FACSIMILE reproduction measured 10 millionths of an inch.

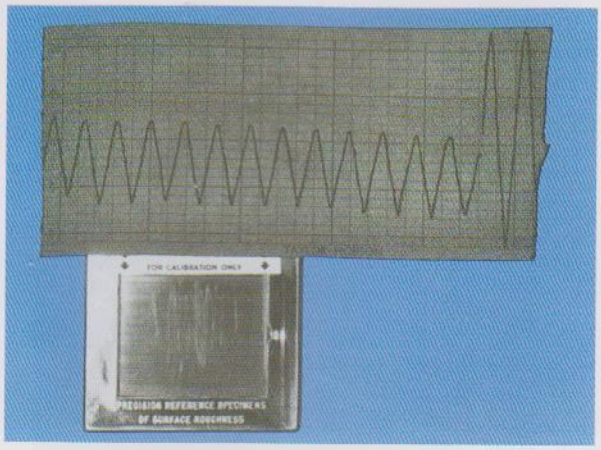
INSTRUMENTATION - Zeiss Light Section Microscope
TYPE OF TEST II. Surface Roughness Test

- original being reproduced was a flaw on a 6" diameter roll which measured 160 microinches.
- curing period - due to late-in-day application, cast was left overnight.

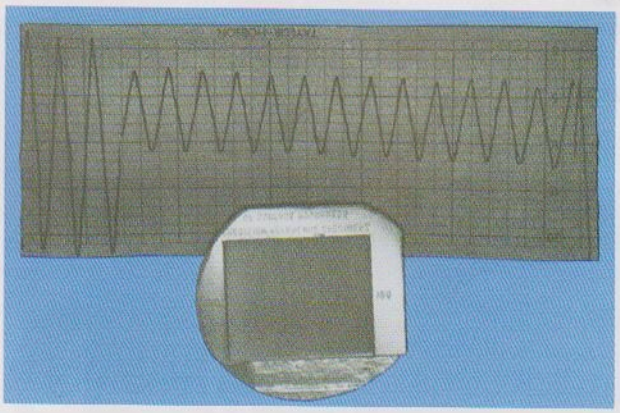
Results: FACSIMILE reproduction measured 160 microinches.

QUESTION: What are the optimum results which can be anticipated when using standard surface roughness measuring instruments on FACSIMILE reproductions?

ANSWER: **A SURFACE FINISH OF 0.1 MICROINCHES** can be checked! Higher values will also replicate accurately.



I. Talysurf recording of caliblock roughness master.



II. Talysurf recording of FACSIMILE duplicate.

When you check surface roughness on original using stylus-type equipment, some surface damage will result from stylus and/or skid pressure but NEVER when you use FACSIMILE replica, which is identical to original.

Facsimile Liquid

Material Safety Data Sheets:

MATERIAL SAFETY DATA SHEET

Facsimile Liquid

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHEMICAL NAME: Promoted Methacrylate Monomer

PRODUCT NAME: F. P. Monomer, Self Cure

TRADE NAME/PRODUCT CODE: P 902 0000

PRODUCT USE: Organic Process Chemical

MANUFACTURER:
ADDRESS: Flexbar Machine Corporation
250 Gibbs Road
Islandia, NY 11749-2697

24 HR. EMERGENCY TELEPHONE: 1-800-424-9300, Chemtrec

FOR INFORMATION CALL: **1-631-582-8440** During Business Hours
1-610-497-9000, Then Press 6 At All Other Times

PRINT DATE: 4/8/10 UPDATE: 4/6/10

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER:	WT/WT %
01	Methyl Methacrylate Monomer	80-62-6	60.0-100.0
02	N,N-Dimethyl-p-Toluidine	99-97-8	0.1-1.0
03	Benzophenone	131-57-7	0.1-1.0
04	Hydroquinone	123-31-9	40-80 ppm

	ACGIH		OSHA		Company	
ITEM	TLV-TWA	TLV-STEL	PEL TWA	PEL CEILING	Recommendation	SKIN
01	100 ppm	NE	100 ppm	NE	100 ppm	NE
02	NE	NE	NE	NE	NE	NE
03	NE	NE	NE	NE	NE	NE
04	2 m/m^3	NE	2 m/m^3	NE	NE	NE

See Section 16 for Abbreviations.

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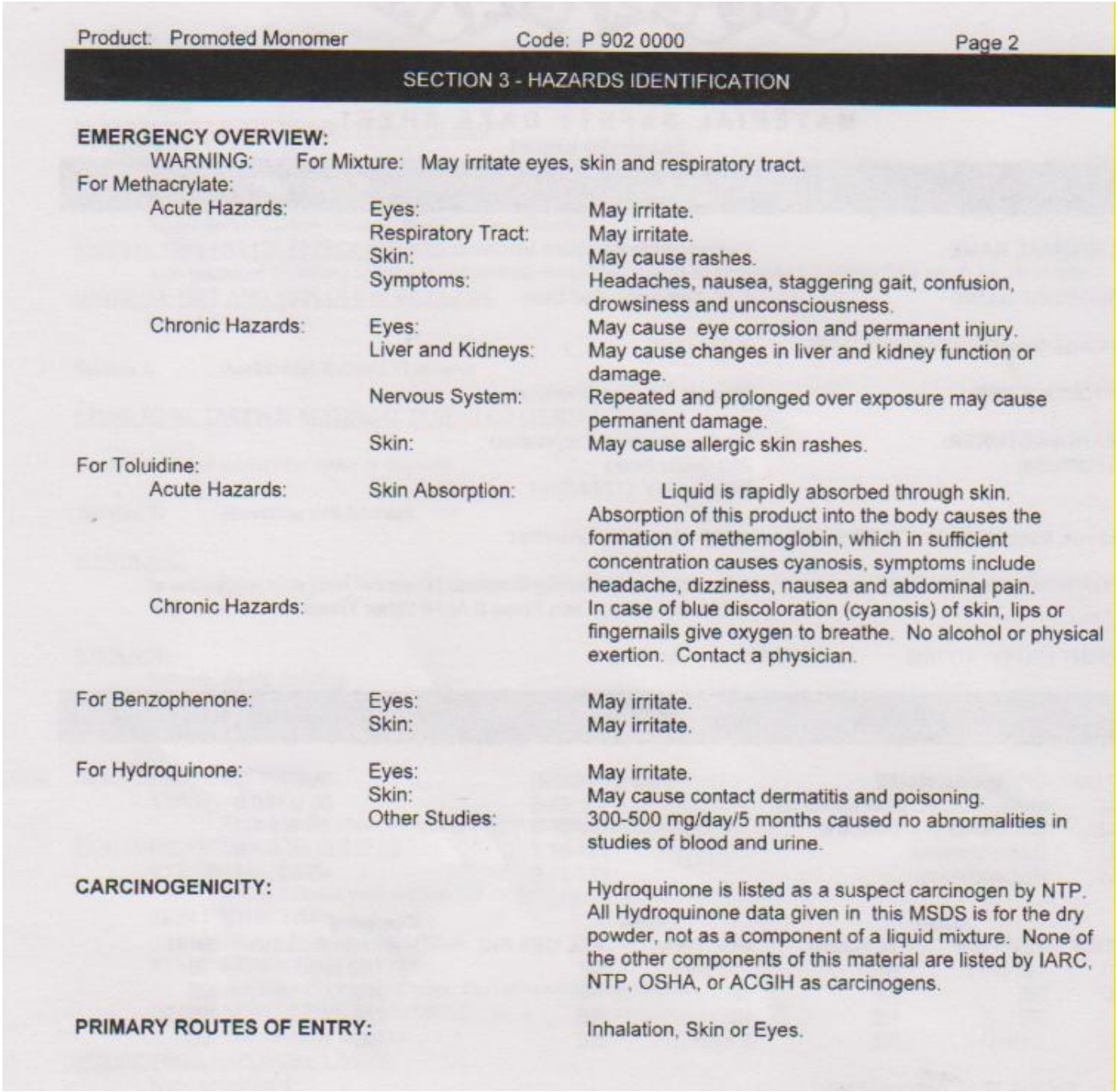
Facsimile Liquid

Material Safety Data Sheets:



Product: Promoted Monomer Code: P 902 0000 Page 2

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

WARNING: For Mixture: May irritate eyes, skin and respiratory tract.

For Methacrylate:

Acute Hazards:	Eyes:	May irritate.
	Respiratory Tract:	May irritate.
	Skin:	May cause rashes.
	Symptoms:	Headaches, nausea, staggering gait, confusion, drowsiness and unconsciousness.
Chronic Hazards:	Eyes:	May cause eye corrosion and permanent injury.
	Liver and Kidneys:	May cause changes in liver and kidney function or damage.
	Nervous System:	Repeated and prolonged over exposure may cause permanent damage.
	Skin:	May cause allergic skin rashes.

For Toluidine:

Acute Hazards:	Skin Absorption:	Liquid is rapidly absorbed through skin. Absorption of this product into the body causes the formation of methemoglobin, which in sufficient concentration causes cyanosis, symptoms include headache, dizziness, nausea and abdominal pain.
Chronic Hazards:		In case of blue discoloration (cyanosis) of skin, lips or fingernails give oxygen to breathe. No alcohol or physical exertion. Contact a physician.

For Benzophenone:	Eyes:	May irritate.
	Skin:	May irritate.
For Hydroquinone:	Eyes:	May irritate.
	Skin:	May cause contact dermatitis and poisoning.
	Other Studies:	300-500 mg/day/5 months caused no abnormalities in studies of blood and urine.

CARCINOGENICITY: Hydroquinone is listed as a suspect carcinogen by NTP. All Hydroquinone data given in this MSDS is for the dry powder, not as a component of a liquid mixture. None of the other components of this material are listed by IARC, NTP, OSHA, or ACGIH as carcinogens.

PRIMARY ROUTES OF ENTRY: Inhalation, Skin or Eyes.

Data Sheet: LDS 1228 Date: 18-11-2010

Facsimile Liquid

Material Safety Data Sheets:

SECTION 4 - FIRST AID MEASURES

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION:	Remove to fresh air. Get medical help if discomfort persists.
EYES:	Flush with water for 15 minutes, including under eyelids.
SKIN:	Wash with soap and water.
INGESTION:	Rinse mouth out with water. Do not induce vomiting. Call doctor if amount was large.
CLOTHING:	Wash thoroughly before reuse.
TREATMENT:	Maintain airway. Provide oxygen and/or ventilation assistance, if needed. Treat burns or allergic reactions conventionally after decontamination.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT:	10 °C , 51 °F
FLAMMABLE LIMIT, AIR VOL% LOWER:	2.12
UPPER:	12.5
AUTOIGNITION TEMPERATURE:	435 °C, 815 °F
EXTINGUISHER METHOD:	Chemical foam, carbon dioxide, dry chemical.
FIRE AND EXPLOSION HAZARDS:	Vapors may travel to source of ignition and flash back. Heat can cause polymerization with rapid release of energy which may rupture container explosively. (Spontaneous polymerization may occur on prolonged storage.)
SPECIAL FIRE FIGHTING PROCEDURES:	Wear self contained breathing apparatus, and full protective gear. Use water spray to cool containers.
EXPLOSION HAZARD:	Fight fire from protected location.
SENSITIVE TO MECHANICAL IMPACT:	No.
SENSITIVE TO STATIC DISCHARGE:	Yes.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE:	Evacuate the area. Eliminate sources of ignition. Use self-contained breathing apparatus and protective clothing. Dike and absorb with inert material. Transfer to proper containers for disposal, use non-sparking tools. Contaminated monomer may be unstable, add inhibitor to prevent polymerization. Keep spills and cleaning runoffs out of sewers and open bodies of water. Spills on porous surfaces can contaminate the groundwater.

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Facsimile Liquid

Material Safety Data Sheets:

SECTION 7- HANDLING AND STORAGE

PRECAUTIONS FOR HANDLING: Observe precautions found on the label. Close container after each use. Ground all metal containers when transferring. Use explosion-proof equipment.

PRECAUTIONS FOR STORAGE: Store in cool dry place away from heat, sparks, flame and direct sunlight. Check inhibitor levels every three months.

SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION

VENTILATION: Use good, local explosion-proof ventilation with a minimum capture velocity of 100 ft/min (30 m/min) at point of monomer release. Refer to Industrial Ventilation: A Manual of Recommended Practice published by the American Conference of Governmental Industrial Hygienists. Local exhaust ventilation is preferred since it prevents contamination dispersion into the work area by controlling it at its source.

RESPIRATORY PROTECTION: Use self-contained breathing apparatus when needed.

EYE PROTECTION: Safety glasses or chemical splash goggles.

PROTECTIVE GLOVES: Impervious, nitrile.

OTHER PROTECTIVE EQUIPMENT: Provide eyewash, safety shower and impervious clothing. Protective creams should not be used for protection, but may be used for ease of clean up.

INDUSTRIAL HYGIENE PRACTICES: Wash face and hands thoroughly with soap and water after use and before eating, drinking, smoking or applying cosmetics.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear, pale liquid.
ODOR:	Acrid, fruity.
pH:	ND
ODOR THRESHOLD:	ND
BOILING POINT:	101 °C, 214 °F
FREEZING POINT:	ND
VISCOSITY:	Like water
SPECIFIC GRAVITY (H_2O=1):	0.94
VAPOR PRESSURE: 29 mm Hg @	20 °C, 68 °F
PERCENT VOLATILE W/W%:	99+
VAPOR DENSITY (AIR=1):	3.5 @ 15.5 °C, 60 °F
EVAPORATION RATE (BuAc =1):	3.0
SOLUBILITY IN WATER:	Moderate, 1.6 gm/100 gm @ 20 °C, 68 °F
COEFFICIENT OF WATER/OIL DISTRIBUTION:	ND

Facsimile Liquid

Material Safety Data Sheets:

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Temperatures above 21 °C, 70 °F, ignition sources, oxidizing/reducing agents, peroxides, acids, alkalis, amines, aging and contamination.

INCOMPATIBILITY (MATERIALS TO AVOID): Reducing and oxidizing agents and UV light. Material has strong solvent properties and can soften paint and rubber.

HAZARDOUS DECOMPOSITION PRODUCTS: Mainly Oxides of Carbon when burned.

HAZARDOUS POLYMERIZATION: MAY OCCUR: X WILL NOT OCCUR:

STABILITY: UNSTABLE: X STABLE:

SECTION 11- TOXICOLOGICAL PROPERTIES

TARGET ORGANS:

For Methyl Methacrylate:	Nose, Liver and kidneys.
For Ethylene Glycol Dimethacrylate Monomer:	None Listed.
For Substituted Toluidine:	None listed.
For Benzophenone:	None Listed.
For Hydroquinone:	Kidneys and eyes.

MUTAGENICITY DATA:

For Methyl Methacrylate Monomer:

Ovary Hamster	Cytogenetic Analysis:	1600 mg/L.
Inhalation Rat	Cytogenetic Analysis:	4 mg/m^3/16W.
Lymphocyte Mouse	Gene Mutation in Mammalian Cells:	704 mg/L.
Lymphocyte Mouse	Microsomal Assay:	500 mg/L.
Ovary Hamster	Sister Chromatid Exchange:	1500 mg/L.

For Hydroquinone:

HeLa Cell Human	DNA Inhibition:	100 µ mol/L.
Lymphocyte Mouse	DNA Inhibition:	10 µ mol/L.
Oral Rat	Unscheduled DNA Synthesis:	8 gm/kg.
Intraperitoneal Mouse	Micronucleus Test:	220 mg/kg.
Oral Mouse	Micronucleus Test:	200 mg/kg.
Subcutaneous Mouse	Micronucleus Test:	240 mg/kg/6D-C.
S. Typhimuriam	Microbial Maturation without S9:	2 µ mol/plate.
Lymphocyte Human	Sister Chromatid Exchange:	5 µ mol/L.
Lymphocyte Human	Test Systems Other:	5 µ mol/L.
Lymphocyte Mouse	Test Systems Other:	10 µ mol/L.
Bone Marrow Rabbit	Test Systems Other:	6 µ mol/L.

Facsimile Liquid

Material Safety Data Sheets:

SECTION 11- TOXICOLOGICAL PROPERTIES CONTINUED

REPRODUCTIVE TOXICITY DATA:

For Methacrylate:		
Inhalation Rat	TC_{Lo}:	109 gm/m^3/17M.
Inhalation Rat	TC_{Lo}:	109 gm/m^3/54M, 6-15 days of pregnancy.
Inhalation Rat	TC_{Lo}:	54mg/m^3/24H, 8 weeks of pregnancy.
Inhalation Rat	TC_{Lo}:	4480 mg/m^3/2H, 6-18 days of pregnancy.
Intraperitoneal Rat	TC_{Lo}:	405 mg/kg.
Intraperitoneal Rat	TC_{Lo}:	801mg/kg.
For Benzophenone:		
Oral Rat	TD_{Lo}:	45 mg/kg.
For Hydroquinone:		
Oral Rat	TD_{Lo}:	2500 mg/kg.
Subcutaneous Rat	TD_{Lo}:	5 mg/kg.
Subcutaneous Rat	TD_{Lo}:	5100 mg/kg.

TOXICITY DATA:

For Methacrylate:		
Acute Oral Rat	LD_{50}:	7990 mg/kg.
Acute Dermal Rabbit	LD_{50}:	35,500 mg/kg.
Acute Inhalation Rat	LC_{50}:	>12,500 to 16,500 ppm for 0.5 hours.
Inhalation Human	TC_{Lo}:	125 ppm.
Inhalation Human	TC_{Lo}:	60 mg/m^3.
Human Patch Test:		Approximate one-third of subjects developed mild redness at the site of application. Twenty percent showed sensitivity when tested 10 days later.
For Dimethacrylate:		
Intraperitoneal Rat	LD_{50}:	2880 mg/kg.
Oral Mouse	LD_{50}:	2000 mg/m^3.
Oral Rat	LD_{50}:	3300 mg/m^3.
For Toluidine:		
Intraperitoneal Mouse	LD_{50}:	212 mg/kg.
For Benzophenone:		
Oral Rat	TD_{Lo}:	45 gm/kg.
Oral Rat	TD_{Lo}:	54 gm/kg.
Intraperitoneal Mouse	LD_{50}:	300 mg/kg.
Oral Rat	LD_{50}:	7400mg/kg.
For Hydroquinone:		
Human, Adult	LD:	70-170 mg/kg.
Human, Child	LD:	2.4-4.0 mg/kg.
Acute Oral, Rat	LD_{50}:	400 mg/kg.
Acute Oral, Mouse	LD_{50}:	100-200 mg/kg.
Dermal, Guinea Pig	LD_{50}:	>1000 mg/kg.
Eye irritation, Rabbit	:	Moderate erythema clearing by day 14.

Facsimile Liquid

Material Safety Data Sheets:

SECTION 12 - ECOLOGICAL INFORMATION

AQUATIC TOXICITY:

For Methacrylate:

Flathead Minnows	TLm_{96H}:	100-1000 ppm.
Goldfish	TLm_{24H}:	420 ppm.
Bluegills	TLm_{24H}:	368 ppm.

For Hydroquinone:

Flathead Minnows	$LC_{50\text{-}96H}$:	0.1-.0.8 mg/L.
Goldfish	$LC_{50\text{-}48H}$:	0.287 mg/L.
Golden Orfe	$LC_{50\text{-}48H}$:	0.16 mg/L.
Rainbow Trout	$LC_{50\text{-}48H}$:	0.097 mg/L.
Water Flea	$LC_{50\text{-}48H}$:	0.032-0.32 mg/L.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

When discarded it is listed as a hazardous waste by the EPA under RCRA U-162 with the reportable quantity (RQ) of 1000 pounds (40 CFR Part 302). Incinerate liquid and diking material after addition of excess inhibitor, in accordance with Federal, State, and Local regulations.

DISPOSAL OF EMPTY CONTAINERS:

Reuse of empty drums or containers is not recommended. Employees should be advised of the potential hazards, due to residual flammable material, associated with empty containers. It is our policy to discourage the reuse of empty containers and to dispose of all empty containers properly, in accordance with Federal, State and Local regulations.

SECTION 14 - TRANSPORTATION

DOT/UN SHIPPING NAME:	METHYL METHACRYLATE MONOMER, STABILIZED, SOLUTION
DOT/UN CLASS:	3
NA/UN NUMBER:	UN 1247
PACKING GROUP:	PACKING GROUP II
NAERG:	129P
LABEL:	Flammable Liquid
NMFC ITEM #:	42650
SCHEDULE B:	2916.14.2020
IMDG CLASS:	3.2
IMDG PG:	3259
CERLA RQ:	For Methacrylate: 1000 lb. For Hydroquinone: 100 lb.

Data Sheet: LDS 1228 Date: 18-11-2010

Facsimile Liquid

Material Safety Data Sheets:

SECTION 15 - REGULATORY INFORMATION

ITEM	TSCA	EINECS	CERCLA	313	CAA	RCRA
01	X	X	X	X	X	U 162
02	X	X				
03	X	X				
04	X	X	X	X		

ITEM	CWA	PA	NJ	CA 65	WHMIS
01		X	X		X
04					X

TSCA: FOR USE IN FDA REGULATED PRODUCTS ONLY

CANADIAN WHMIS: This product has been classified in accordance with the hazardous criteria of the CPR and the MSDS contains all the information required by the CPR.

SECTION 16 - OTHER INFORMATION

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM (HMIS) RATING:

HEALTH:	2
FLAMMABILITY:	3
REACTIVITY:	2
PERSONAL PROTECTIVE EQUIPMENT:	Gloves and Safety Glasses or Chemical Splash Goggles.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAZARD IDENTIFICATION RATING:

HEALTH:	2
FLAMMABILITY:	3
REACTIVITY:	2

ABBREVIATIONS:

NA	Not Applicable	ND	Not Determined
NE	Not Established	CPR	Controlled Products Regulation
ppm	parts per million	G	Gallon
mg	Milligram	L	Liter
gm	Gram	mol	Mole
kg	Kilogram	µ	Micro
mm	Millimeter		
LC	Lethal Concentration	LD	Lethal Dose
TC	Toxic Concentration	TD	Toxic Dose
BOD	Biological Oxygen Demand	COD	Chemical Oxygen Demand
Lo	Lowest	ThOD	Theoretical Oxygen Demand
TLm	Threshold Limit		
H	Hours	M	Months
D	Days	Y	Years
W	Weeks		

Facsimile Liquid

Material Safety Data Sheets:

SECTION 16 - OTHER INFORMATION

Prepared By: Louis A. Valenti Health, Safety and Environment

Reviewed By: Bernd D. Arch Technical Review

Reviewed By: Jonathan Adler President

Issue Date: 5/31/01

THIS MATERIAL SAFETY DATA SHEET IS PREPARED IN COMPLIANCE WITH FEDERAL REGULATIONS (29 CFR 1910.1200), THE COMMONWEALTH OF PENNSYLVANIA REGULATIONS (TITLE 34. CHAPTERS 301-323) AND CANADIAN WHMIS REGULATIONS, ANY APPLICABLE STATE AND LOCAL REGULATIONS SHOULD BE CONSULTED. THE ABOVE INFORMATION MAY BE BASED IN PART ON INFORMATION PROVIDED BY COMPONENT SUPPLIERS AND IS BELIEVED TO BE CORRECT AS OF THE DATE HEREOF. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY USE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OF THESE DATA, THE RESULTS TO BE OBTAINED FROM THE USE OF THE MATERIAL, OR THE HAZARDS CONNECTED WITH SUCH USE. SINCE THE INFORMATION CONTAINED HEREIN MAY BE APPLIED UNDER CONDITIONS BEYOND OUR CONTROL AND WITH WHICH WE MAY BE UNFAMILIAR, AND SINCE DATA MADE AVAILABLE SUBSEQUENT TO THE DATE HEREOF MAY SUGGEST MODIFICATION OF THE INFORMATION, WE ASSUME NO RESPONSIBILITY FOR THE RESULT OF ITS USE. THIS INFORMATION AND MATERIAL IS FURNISHED ON THE CONDITION THAT THE PERSON RECEIVING IT SHALL MAKE HIS/HER OWN DETERMINATION AS TO THE SUITABILITY OF THE MATERIAL FOR HIS/HER PARTICULAR PURPOSE AND ON THE CONDITION THAT HE/SHE ASSUME THE RISK OF HIS/HER USE THEREOF.

Facsimile Powder

Material Safety Data Sheets:

MATERIAL SAFETY DATA SHEET

Facsimile Powder

SECTION I - PRODUCT IDENTIFICATION

CHEMICAL NAME: Blended, Pigmented, Filled, Acrylic Polymers

PRODUCT NAME: F. P. Tray Polymer, #64 Blue, Shade #26151

FOR USE IN FDA REGULATED PRODUCTS ONLY

DOT/UN SHIPPING NAME: SYNTHETIC GUM RESIN GRANULAR, NOIBN
NMFC ITEM #46030, SCHEDULE B 3906.90.6000

CAS REG. NO.: NE **TRADE NAME/PRODUCT CODE:** M 044 5066

FORMULA: Proprietary Formulation

MANUFACTURER: Flexbar Machine Corporation
ADDRESS: 250 Gibbs Road
Islandia, NY 11749-2697

FOR INFORMATION CALL: 1-631-582-8440 During Business Hours
1-610-497-9000, Then Press 6 At All Other Times

FOR EMERGENCY CALL: 1-800-424-9300, Chemtrec

PRINT DATE: 4/08/10 **UPDATE :** 04/08/10 **PREPARED BY:** CJB

SECTION II - HAZARDOUS INGREDIENTS OF MIXTURES

HAZARDOUS COMPONENT	CAS REG. NO.	%	TLV	(UNITS)	PEL	(UNITS)
Particulates NOC	NE	<99	10	mg/m^3	15	mg/m^3
Residual Monomers	NA	< 1	NA		NA	
Calcium Carbonate	471-34-1	<50	10	mg/m^3	15	mg/m^3
Benzoyl Peroxide	94-36-0	< 2	5	mg/m^3	5	mg/m^3
Mineral Pigment	57455-37-5	< 5	10	mg/m^3	15	mg/m^3

The decomposition product Ethyl Acrylate is known to the State of California as a substance which causes cancer.

Data Sheet: LDS 1228 Date: 18-11-2010

Facsimile Powder

Material Safety Data Sheets:

PRODUCT: Type 044 Polymer CODE: M 044 5066 PAGE 2

SECTION III - PHYSICAL DATA

BOILING POINT:	NA	**SPECIFIC GRAVITY** (H_2O=1):	1.185
VAPOR PRESSURE:	NA	**PERCENT VOLATILE** W/W%:	< 5
VAPOR DENSITY (AIR=1):	NA	**EVAPORATION RATE** (=1):	NA
SOLUBILITY IN WATER:		Insoluble.	
APPEARANCE AND ODOR:		Fine blue powder. Faint odor in bulk.	

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 304 °C
580 °F

FLAMMABLE LIMIT, AIR VOL% LOWER: NA
UPPER: NA

AUTOIGNITION TEMPERATURE: NE

EXTINGUISHER METHOD: Water, carbon dioxide, dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES:
Avoid extinguishing methods which may generate dust clouds. Water stream can disperse dust into air, producing a fire hazard and possible explosion hazard if exposed to ignition source.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Polymer dust is combustible. The explosive limits of the polymer particles suspended in air are approximately those of coal dust. Firefighters should wear self-contained breathing apparatus.

SECTION V - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: Eyes or skin(no absorption); inhalation of dusts.

CARCINOGENICITY:
Ethyl Acrylate, a product of combustion, is listed as a suspect carcinogen by IARC, NTP and ACGIH. None of the other components of this material are listed by IARC, NTP, OSHA, or ACGIH as carcinogens.

TARGET ORGANS:
For Polymer: None Listed. For decomposition products: Methyl Methacrylate Monomer: Nose, Liver and kidneys, Ethyl Acrylate Monomer: None Available. For Calcium Carbonate: None Listed. For Benzoyl Peroxide: None Listed. For Mineral Pigment: None Listed.

Facsimile Powder

Material Safety Data Sheets:

PRODUCT: Type 044 Polymer CODE: M 044 5066 PAGE 3

SECTION V - HEALTH HAZARD DATA CONTINUED

THRESHOLD LIMIT VALUE (TLV):

For Polymer: NE. For decomposition products, Methyl Methacrylate Monomer: 100 ppm, Ethyl Acrylate Monomer: None Available. For Calcium Carbonate: 10 mg/m^3. For Benzoyl Peroxide: 5 mg/m^3. For Mineral Pigment: 10 mg/m^3.

PERMISSIBLE EXPOSURE LIMIT (PEL):

For polymer: NE. For decomposition products, Methyl Methacrylate Monomer: 100 ppm, Ethyl Acrylate Monomer: None Available. For Calcium Carbonate: 15 mg/m^3. For Benzoyl Peroxide: 5 mg/m^3. For Mineral Pigment: 15 mg/m^3.

TOXICITY DATA:

For Polymer: None Listed. RTECS: Not Listed. TSCA: Listed.
For decomposition products, Methyl Methacrylate Monomer: LD_{50} Acute Oral Rat: 7990 mg/kg. LD_{50} Acute Dermal Rabbit: 35,500 mg/kg. LC_{50} Acute Inhalation Rat: >12,500 to 16,500 ppm for 0.5 hours. TC_{Lo} Inhalation Human: 125 ppm. TC_{Lo} Inhalation Human: 60 mg/m^3. Human Patch Test: Approximate one-third of subjects developed mild redness at the site of application. Twenty percent showed sensitivity when tested 10 days later.
Reproductive Effects: TC_{Lo} Inhalation Rat: 109 gm/m^3/54 minutes, 6-15 days of pregnancy. TC_{Lo} Inhalation Rat: 54 mg/m^3/24 hours, 8 weeks of pregnancy. TC_{Lo} Inhalation Rat: 4480 mg/m^3/2 hours, 6-18 days of pregnancy. RTECS: Listed. TSCA: Listed. EINECS: Listed.
Ethyl Acrylate: Inhalation LC_{Lo}, Guinea Pig: 1204 ppm/7H. Inhalation TC_{Lo}, human: 50 ppm. Inhalation LC_{Lo}, Mouse: 25 mg/m^3/2H. Inhalation LC_{50}, Rat: 2180 ppm/4H. Inhalation LC_{Lo}, Rabbit: 1204 ppm/7H. Intraperitoneal LD_{50}, Mouse: 599 mg/kg. Intraperitoneal LD_{50}, Rat: 450 mg/kg. Oral LD_{50}, Mouse: 1779 mg/kg. Oral LD_{50}, Rat: 800 mg/kg. Oral LD_{50}, Rabbit: 400 mg/kg. Dermal LD_{Lo}, rat: 1800 mg/kg. Dermal LD_{50}, Rabbit: 1834 mg/kg. RTECS: Listed. TSCA: Listed.
For Calcium Carbonate: LD_{50} Oral Rat: 6450 mg/kg. RTECS: Listed. TSCA: Listed.
For Benzoyl Peroxide: LD_{Lo} Intraperitoneal Mouse: 250 mg/kg. LD_{50} Oral Rat: 7710 mg/kg. RTECS: Listed. TSCA: Listed.
For Mineral Pigment: LD_{50} Oral Mouse: > 10,000 mg/kg. LD_{50} Oral Rat: > 10,000 mg/kg. RTECS: Not Listed. TSCA: Listed.

Data Sheet: LDS 1228 Date: 18-11-2010

Facsimile Powder

Material Safety Data Sheets:

SECTION V - HEALTH HAZARD DATA CONTINUED

EFFECTS OF OVER EXPOSURE:

For Polymer: OSHA classifies this material as Particulates, Not Otherwise Classified. Eyes, Skin and Respiratory Tract may be irritated by gross overexposure to Particulates, Not Otherwise Classified, no matter how they are generated. Avoid inhalation of dust. Keep dust out of eyes to prevent possible irritation.

For decomposition products, Methyl Methacrylate Monomer: Liquid or high vapor concentration can irritate eyes, respiratory system and cause skin rashes. Prolonged exposure can lead to headaches, nausea, staggering gait, confusion, drowsiness and unconsciousness. Repeated and prolonged over exposure may cause permanent brain and nervous system damage, allergic skin rashes, eye corrosion and permanent injury, as well as changes in liver and kidney function or damage.

Ethyl Acrylate: Inhalation of vapor or mist is harmful and can cause severe irritation of nose, throat and lungs. It may cause permanent, irreversible eye damage. It can be absorbed through the skin and cause skin sensitization. It is corrosive to the skin. Prolonged or repeated exposure can cause the allergic skin reaction, kidney damage and liver damage.

For Calcium Carbonate: Inhalation of dust may irritate the nose, throat, and respiratory tract, cause sneezing and coughing. Dust may irritate the eyes. Prolonged or repeated skin contact with the dust may irritate the skin. May aggravate pre-existing eye, skin or respiratory disorders.

For Benzoyl Peroxide: Prolonged skin contact may cause skin irritation. May cause eye irritation or damage. Dust may cause irritation of the nose, throat, and lungs. May produce muscular weakness upon ingestion.

For Mineral Pigment: None expected, but inhalation of large quantities of dust may cause irritation of the respiratory tract. Ingestion of large quantities may liberate sulfur dioxide.

For Dialkyl Phthalate: Inhalation of vapors or mists may cause irritation the respiratory tract and nausea. Ingestion of excessive quantities may cause nausea, abdominal pain and diarrhea. May cause irritation, burning, tearing and redness of the eyes. Prolonged or repeated contact may cause redness and burning of the skin.

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION:	Remove to fresh air. Get medical help if discomfort persists.
EYES:	Flush with water for 15 minutes, including under eyelids. Get medical help if discomfort persists.
SKIN:	Wash with soap and water. Get medical help if discomfort persists.
INGESTION:	Rinse mouth out with water. Call doctor if amount was large.
CLOTHING:	Wash thoroughly before reuse.
TREATMENT:	Treat symptoms after thorough decontamination.

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM (HMIS) RATING:

HEALTH:	1
FLAMMABILITY:	1
REACTIVITY:	0
PERSONAL PROTECTIVE EQUIPMENT:	Gloves and Safety Glasses or Chemical Splash Goggles.

Facsimile Powder

Material Safety Data Sheets:

PRODUCT: Type 044 Polymer CODE: M 044 5066 PAGE 5

SECTION VI - REACTIVITY DATA

STABILITY:	UNSTABLE:	STABLE: X
CONDITIONS TO AVOID:	Heating above 240 °C, 464 °F.	
INCOMPATIBILITY (MATERIALS TO AVOID):	Strong oxidizing agents.	
HAZARDOUS DECOMPOSITION PRODUCTS:	Acrylate and Methacrylate monomers, and Oxides of Carbon.	
HAZARDOUS POLYMERIZATION:	MAY OCCUR:	WILL NOT OCCUR: X
CONDITIONS TO AVOID:	NA	

SECTION VII - SPILL OR LEAK PROCEDURE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Sweep up to avoid slipping hazard. Keep airborne particulates at a minimum when cleaning up spills.

ENVIRONMENTAL EFFECTS:

AQUATIC TOXICITY:

For decomposition product, Methyl Methacrylate Monomer: Estimate of 96 hours median Threshold limit(TLm_{96}): 100-1000 ppm. Flathead minnows and goldfish TLm_{24}: 420 ppm. Bluegills TLm_{24}: 368 ppm.
For Mineral Pigment: LC_{50} Rainbow Trout: > 32,000 mg/l.
For Dialkyl Phthalate: Flathead minnow $LC_{50\text{-}96hr}$: 1-10 µl/L; Water Flea $LC_{50\text{-}96hr}$: 1-10 µl/L.

ECOLOGICAL TOXICITY:

For Benzoyl Peroxide: Ecological Toxicity is not known.

OXYGEN DEMAND:

For Dialkyl Phthalate: ThOD: 2.24 g/g; COD: 1.71 g/g; BOD: 0.34- 0.43 g/g.

PLANT EFFECTS:

For Dialkyl Phthalate: No adverse effects on germination or seedlings.

WASTE DISPOSAL METHOD:

Contains a Dialkyl Phthalate, contaminated product may be a RCRA/OSHA hazardous waste (40 CFR Part 261 and 29 CFR Part 1910). Incinerate material in accordance with Federal, State, and Local regulations.

Facsimile Powder

Material Safety Data Sheets:

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE):
Use type for Particulates Not Otherwise Classified, if needed.

VENTILATION:
Use good local exhaust at processing equipment, including buffers, sanders, grinders and polishers.

PROTECTIVE GLOVES: If hot plastic is handled.

EYE PROTECTION: Safety glasses or chemical splash goggles.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
High temperature processing equipment should be well ventilated.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
Store in cool dry place. Keep container closed to prevent water absorption and contamination.

OTHER PRECAUTIONS:
Wash face and hands thoroughly with soap and water after use and before eating, drinking, smoking or applying cosmetics.

Data Sheet: LDS 1228 Date: 18-11-2010

Facsimile Powder

Material Safety Data Sheets:

PRODUCT: Type 044 Polymer CODE: M 044 5066 PAGE 7

SECTION X - ADDITIONAL INFORMATION

Prepared By: Louis A. Valenti Health, Safety and Environment

Reviewed By: Bernd O. Arndt Technical Review

Reviewed By: Jonathan Allen President

Issue Date: 5/31/01

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Facsimile Separator

Material Safety Data Sheets:

MATERIAL SAFETY DATA SHEET
FACSIMILE SEPARATOR

Section 1. Chemical Product and Company Identification

PRODUCT NAME:	Facsimile Separator
CHEMICAL FAMILY:	Potassium salt of oleic acid
FORMULA:	Mixture
CAS NUMBER:	Mixture
DATE PREPARED:	5/04/08
Information Telephone:	800-879-7575
24-Hour Emergency Telephone:	800-424-9300 (Chemtrec)
MANUFACTURER:	Flexbar Machine Corporation
ADDRESS:	250 Gibbs Road, Islandia, NY 11749

Section 2. Composition / Information on Ingredients

MATERIAL	CAS NUMBER	AMOUNT
Water		70-90 %
Potassium Oleate	143-18-0	10-20 %
Propylene Glycol	57-55-6	2-5 %

Section 3. Hazards Identification

POTENTIAL HEALTH EFFECTS:

INHALATION None expected
EYE: May cause irritation.
SKIN: Prolonged contact may cause irritation
INGESTION: None determined

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

None Known

Section 4. First Aid Measures

INHALATION:

Not applicable

EYE CONTACT:

Promptly flush with water, holding the eyelids apart for 15 minutes. Seek medical attention.

SKIN CONTACT:

Wash contaminated skin with mild soap and water.

INGESTION:

Treat as a soap ingestion. Get medical attention..

NOTES TO PHYSICIAN (INCLUDING ANTIDOTES):

Treat symptomatically.

Facsimile Separator

Material Safety Data Sheets:

Section 5. Fire Fighting Measures

FLASH POINT (METHOD USED):
None
FLAMMABLE LIMITS IN AIR (% BY VOLUME)
LEL: N/A
UEL: N/A
EXTINGUISHING MEDIA:
Water Spray, Carbon Dioxide, Foam, or Dry Chemical
SPECIAL FIRE FIGHTING PROCEDURES:
Self-contained breathing apparatus and protective clothing should be worn when fighting fires involving chemicals.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
None known

Section 6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS SPILLED OR RELEASED:

Contain spill and recover for reuse or disposal

Section 7. Handling and Storage

HANDLING:
In accordance with good industrial practice, handle with care and avoid unnecessary personal contact Avoid contact with eyes.

STORAGE:
Indoors. Avoid freezing.

Section 8. Exposure Controls / Personal Protection

ENGINEERING CONTROLS:
VENTILATION:
Not normally required, general room ventilation is satisfactory.
PERSONAL PROTECTIVE EQUIPMENT:
EYE PROTECTION:
Safety Glasses with side shields for prolonged contact.
SKIN PROTECTION:
Gloves for prolonged contact.
RESPIRATORY PROTECTION:
Not normally required when used at normal temperatures
OTHER PROTECTIVE EQUIPMENT:
Not normally required
PERMISSIBLE EXPOSURE LIMITS:
None determined

Section 9. Physical and Chemical Properties

pH	10.5
VAPOR DENSITY (AIR=1):	NA
SOLUBILITY (in water)	Complete
SPECIFIC GRAVITY	1.01
VAPOR PRESSURE (25 C)	NA
BOILING POINT	NA
APPEARANCE	Dark amber flowable paste, soap odor
% VOLATILE	NA
EVAPORATION RATE	NA
REACTIVITY IN WATER	NA

Facsimile Separator

Material Safety Data Sheets:

Section 10. Stability and Reactivity

STABILITY:
Stable
CONDITIONS TO AVOID:
Excessive heat
HAZARDOUS POLYMERIZATION:
Will not occur.
INCOMPATIBILITY (MATERIALS TO AVOID):
Strong oxidizers
HAZARDOUS DECOMPOSITION PRODUCTS:
None determined

Section 11. Toxicological Information

None available

IS CHEMICAL LISTED AS A CARCINOGEN OR POTENTIAL CARCINOGEN?

IARC	NTP	OSHA
No	No	No

Section 12. Ecological Information

NO DATA

Section 13. Disposal Considerations

WASTE DISPOSAL METHOD:
Care must be taken when using or disposing of chemical materials and/or their containers to prevent environmental contamination. It is your duty to dispose of chemical materials and/or their containers in accordance with all federal, state and local regulations.

Section 14. Transport Information

U.S. DOT SHIPPING NAME: Not Regulated
U.S. DOT HAZARD CLASS: Not Regulated

Section 15. Regulatory Information

Ingredients contained in this product are in compliance with TSCA.
Ingredients regulated by SARA III: none

Section 16. Other Information

The information contained herein are based upon data believed to be correct. However no guarantee or warranty of any kind either expressed or implied is made with respect to the information contained herein. We assume no responsibility for any loss, damage, or expense, direct or indirect, arising out of its use.

Data Sheet: LDS 1228 Date: 18-11-2010

Modelling Clay

Material Safety Data Sheets:

MATERIAL SAFETY DATA SHEET

1.1	**Product Trade Name:**	**Modeling Clay**
1.2	**Chemical Name:**	**Modeling Clay**
1.3	**Chemical Family:**	**Modeling Clay**

SECTION I

1.3 **Division Name**	: Flexbar Machine Corporation
1.4 **Address**	: 250 Gibbs Road
	: Islandia, NY 11749
1.5 **Emergency phone number**	: (800) 879-7575
1.6 **Phone number for information**	: (631) 582-8440
1.7 **Date prepared**	: July 11, 2007

SECTION II - Hazardous Ingredients/Identity Information

Hazardous Components	**OSHA PEL**	**ACGIH TLV**	**Other limits**
: None.	:	:	:

SECTION III - Physical/Chemical Characteristics

3.1 Boiling point	: N/A	3.7 Specific Gravity	: 2.447
3.2 Vapor pressure	: N/A	3.8 Evaporation rate	: N/A
3.3 Vapor density	: N/A	3.9 % volatile by value @	
3.4 Solubility in water	: N/A	400 degres F	: 39.44
3.5 Reactivity in water	**: None**		

3.6 Appearance and odor : Pliable Solid - No Odor

SECTION IV - Fire and Explosion Hazard Data

4.1 Flash point (method used)	: 465 degrees F
4.2 Flammability limits in air % by value:	Lower: N/A Upper: N/A
4.3 Auto-Ingnition Temperature	: N/A
4.4 Extinguishing media	: Foam Dry Chemical Waterfog
4.5 Special fire fighting procedures	: None.
4.6 Unusual fire and explosion hazards	: None

SECTION V - Physical Hazards

5.1 Stability : **Unstable:** **Stable: X**

5.2 Conditions to avoid (stability): None Known.

5.3 Incompatibility (materials to avoid): None Known.

5.4 Hazardous decomposition or byproducts: None

5.5 Hazardous polymerization **May occur:** **Will not occur: X**

5.6 Conditions to avoid (polymerization): None Known.

Data Sheet: LDS 1228 Date: 18-11-2010

Modelling Clay

Material Safety Data Sheets:

SECTION VI - Health Hazard Data

6.1 Threshold Limit Value: None
6.2 Carcinogenicity NTP? No OSHA? No IARC monographs?: No
6.3 Signs and symptoms of exposure: None.
6.4 Medical conditions generally aggravated by skin exposure:
6.5 Emergency first aid procedures: 1) Inhalation: N/A; 2) Eyes: Remove as any foreign object; 3) Skin: Wash with soap and water; 4) Ingestion: Improbable. Not known to cause a problem.

SECTION VII - Precautions for safe handling and use

7.1 Steps to be taken in case material is released or spilled: No special.
7.2 Waste disposal methods: Dispose of in accordance with local state and federal regulations.
7.3 Precautions to be taken in handling and storage: Store at room temperature.
7.4 Special protection information: None needed.

The information set forth herein has been gathered from standard reference materials and is, to the best knowledge and belief of Flexbar Machine Corporation 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. Flexbar Machine Corporation makes no warranties, express or implied, with respect to the use of such information or the use of specific materials identified herein combination with any other material or process, and assumes no responsibility therefore.