

SAFETY DATA SHEET



SECTION 1: IDENTIFICATION

Company Information	KALO, Inc., 13200 Metcalf Ave., Ste. 250, Overland Park, KS 66213
Phone Numbers	800-255-5196 / 913-491-9146 FAX
Website	www.kalo.com
Product Identity	BIO-FILM EXPORT (for international use)
Reference/Item Number	BF55
Intended Use	See technical data sheet.
Application Method	See technical data sheet.
24 HOUR EMERGENCY NUMBER/CHEMTREC (USA)	1-800-424-9300
POISON CONTROL CENTER (USA)	1-800-222-1212

SECTION 2: HAZARDS IDENTIFICATION

HAZARD COMMUNICATION STANDARD (HCS) PICTOGRAM(S) AND SIGNAL WORD(S)



Flam. Liq. 2:	H225: Highly flammable liquid and vapour.
Acute Tox. 5:	H303: May be harmful if swallowed. (Not adopted by U.S. OSHA.) H313: May be harmful in contact with skin. (Not adopted by U.S. OSHA.)
Skin Irrit. 2:	H315: Causes skin irritation.
Eye Dam. 2A:	H319: Causes serious eye irritation.
STOT SE 3:	H336: May cause drowsiness or dizziness.
Prevention:	P210: Keep away from heat, sparks, open flames and hot surfaces. NO SMOKING! P241: Use explosion-proof electrical, ventilation, light and equipment. P261: Avoid breathing dust, fume, gas, mist, vapors and spray. P264: Wash thoroughly after handling. P271: Use only outdoors or in a well-ventilated area. P280: Wear protective gloves and eye/face protection.
Response:	P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do; continue rinsing. P337+313: If eye irritation persists, get medical advice/attention. P304+312: IF INHALED: Call a poison center or doctor/physician if you feel unwell. P340: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P302+352: IF ON SKIN: Wash with plenty of soap and water. P332+313: If skin irritation occurs, get medical advice/attention. P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. P362: Take off contaminated clothing and wash before reuse. P370+378: IN CASE OF FIRE: Use alcohol resistant foam, CO2, powder, water spray for extinction. Do not use water jet.
Storage:	P403+233: Store in a well-ventilated place. Keep container tightly closed. P405: Store locked up.
Disposal:	P501: Dispose of contents/container in accordance with local/national regulations.

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

This product is labeled with the following GHS classifications, as it contains substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations. This product is a proprietary blend and the ingredients and mixture percentages are being withheld as confidential business information.

Ingredient/Chemical Designations:	1-Methoxy-2-propanol
CAS No.:	0000107-98-2
Weight %:	10% - 25%
Notes:	[1] Substance classified with a health or environmental hazard. [2] Substance with a workplace exposure limit.
Ingredient/Chemical Designations:	Isopropyl alcohol
CAS No.:	0000067-63-0
Weight %:	10% - 25%
Notes:	[1] Substance classified with a health or environmental hazard. [2] Substance with a workplace exposure limit.
Ingredient/Chemical Designations:	Nonylphenol polyethylene glycol ether
CAS No.:	0127087-87-0
Weight %:	10% - 25%
Notes:	[1] Substance classified with a health or environmental hazard.
Ingredient/Chemical Designations:	Morpholine
CAS No.:	0000110-91-8
Weight %:	1.0% - 10%
Notes:	[1] Substance classified with a health or environmental hazard. [2] Substance with a workplace exposure limit.
Ingredient/Chemical Designations:	Di-2-ethylhexyl sodium sulphosuccinate
CAS No.:	0000577-11-7
Weight %:	1.0% - 10%
Notes:	[1] Substance classified with a health or environmental hazard.

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SECTION 4: FIRST AID MEASURES

[DESCRIPTIONS]

General:	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
Inhalation:	Remove to fresh air. Keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.
Eyes:	Irrigate copiously with clean fresh water for at least 10 minutes, holding the eyelids apart and seek medical attention.
Skin:	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser. Do NOT use solvents or thinners.
Ingestion:	If accidentally swallowed, obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

[MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED]

Overview:	No adverse symptoms or effects anticipated under normal handling conditions. Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage.. See Section 2 for further details.
Inhalation:	May cause drowsiness or dizziness.
Eyes:	Causes serious eye irritation.
Skin:	May be harmful in contact with skin. (Not adopted by U.S. OSHA.) Causes skin irritation.
Ingestion:	May be harmful if swallowed. (Not adopted by U.S. OSHA.)

SECTION 5: FIREFIGHTING MEASURES

Extinguishing Media:	Recommended extinguishing media: alcohol resistant foam, CO ₂ , powder, water spray. Do not use water jet.
Special Hazards Arising From the Substance or Mixture:	HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flame. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Containers may explode when heated. Irritating or toxic substances may be emitted upon thermal decomposition or heat of fire. Thermal decomposition products include carbon oxides, sulfur oxides and other products of incomplete combustion. Keep away from heat / sparks / open flames / hot surfaces - No smoking. Use explosion-proof electrical, ventilating, lighting and equipment. Avoid breathing dust, fume, gas, mist, vapors and spray.
Advice For Firefighters:	Evacuate area. Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection. Inhalation or contact with material may irritate or burn skin and eyes. Fire may produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation. Runoff from fire control or dilution water may cause pollution. Prevent contamination from run-off of adjacent areas, streams, drinking water and sewers. Do not flush down sewers or other drainage systems. Use water-spray to cool fire exposed surfaces and personnel.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Precautions/Procedures:	Remove sources of ignition. Do not turn lights or unprotected electrical equipment on or off. Water spray may reduce vapor, but may not prevent ignition in closed spaces.
Environmental Precautions:	Do not allow spills to enter drains or water courses.
Methods and Material For Containment and Cleaning Up:	CALL Emergency Response Telephone Number. As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Keep unauthorized personnel away. Stay upwind and out of low areas. Ventilate the area and avoid breathing vapors or mists. Take the personal protective measures listed in section 8. Contain and absorb spillage with non-combustible materials e.g. sand, earth, and vermiculite. Place in closed containers outside buildings and dispose of according to the Waste Regulations. (See section 13). Clean, preferably with a detergent. Do not use solvents. Do not allow spills to enter drains or watercourses. If drains, sewers, streams or lakes are contaminated, inform the local water company immediately. In the case of contamination of rivers, streams or lakes the Environmental Protection Agency should also be informed.

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SECTION 7: HANDLING AND STORAGE

Precautions For Safe Handling: All sources of ignition (hot surfaces, sparks, open flames etc.) should be excluded from areas of preparation and application. All electrical equipment (including torches) should be protected (Ex) to the appropriate standard. The product may charge electrostatically. Always use earthing leads when pouring solvents and transferring product. Operators should wear clothing which does not generate static (at least 60% natural fiber) and anti-static footwear; floors should be of conducting type. Handle containers carefully to prevent damage and spillage. Do not get in eyes, on skin or on clothing. Do not breathe vapors or mists. Keep container closed. Use only with adequate ventilation. Use good personal hygiene practices. Wash hands before eating, drinking, smoking. Remove contaminated clothing and clean before re-use. Take personal protective measures listed in section 8. See Section 2 for further details.

Conditions For Safe Storage: Naked flames and smoking should not be permitted in storage areas. It is recommended that fork lift trucks and electrical equipment are protected to the appropriate standard. Store in tightly container in dry, well-ventilated area away from excessive heat and incompatibles. See Section 2 for further details.

Incompatible Materials: Oxidizing agents, strong acids, strong bases.

Specific End Use(s): See technical data sheet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Data: This product contains the following ingredients (at greater than 0.1%) with established limits for exposure under OSHA, ACGIH and/or NIOSH.

CAS No.	Ingredient	Source	Value
0000067-63-0	Isopropyl Alcohol	OSHA	TWA: 400ppm (980 mg/m ³) / STEL: 500ppm
		ACGIH	TWA: 200ppm STEL: 400ppm / Revised 2003
		NIOSH	TWA: 440ppm (980 mg/m ³) / ST: 500ppm (1,225 mg/m ³)
0000107-98-2	1-Methoxy-2-propanol	OSHA	No Established Limit
		ACGIH	TWA: 50ppm / STEL: 75ppm
		NIOSH	TWA: 100ppm (360 mg/m ³) / ST: 150ppm (540 mg/m ³)
0000110-91-8	Morpholine	OSHA	TWA: 20ppm (70 mg/m ³) [skin] / STEL: 300ppm
		ACGIH	TWA: 20ppm [skin]
		NIOSH	TWA: 20 ppm (70 mg/m ³) / ST: 30ppm (105 mg/m ³) [skin]

Carcinogen Data: This product contains no ingredients (at greater than 0.1%) that are suspected of being or known to be a carcinogen under OSHA, NTP or IARC.

[PERSONAL PROTECTIVE EQUIPMENT]

Respiratory: If workers are exposed to concentrations above the exposure limit, they must use the appropriate certified respirators.

Eyes: Wear safety eyewear (e.g. safety spectacles/goggles/visors) to protect against the splash of liquids.

Skin: Overalls, which cover the body, arms, and legs, should be worn. Skin should not be exposed. All parts of the body should be washed after contact.

Engineering Controls: Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates, and any vapor below occupational exposure limits, suitable respiratory protection must be worn.

Other Work Practices: See technical data sheet. See Section 2 for further details [Prevention].

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Amber Liquid
Odor:	Mild Solvent
Odor Threshold:	Not Measured
pH:	8 - 9 (1% aqueous dilution)
Specific Gravity:	0.90 - 0.98 @ 20°C
Flashpoint:	70°F (20°C) SETA Flash Closed Cup
Solubility in Water:	Not Measured
Viscosity (cSt):	Not Measured
VOC%:	Not Measured
Vapor Pressure (Pa):	Not Measured
Vapor Density:	Not Measured
Melting/Freezing Points:	Not Measured
Initial Boiling Point/Range (°F/°C):	No Established Limit
Flammability (Solid,Gas):	Not Applicable
Upper Flammability/Explosive Limits:	Not Measured
Lower Flammability/Explosive Limits:	Not Measured
Decomposition Temperature:	Not Measured
Auto-Ignition Temperature:	Not Measured
Partition Co-Efficient n-octanol/water (Log Kow):	Not Measured
Evaporation Rate (Ether=1):	Not Measured
Other:	DMSO extract by IP346: Less than 3.0 wt % (mineral oil component only).

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Not chemically reactive under normal storage and handling conditions.
Chemical Stability:	Stable under normal ambient and anticipated conditions of use.
Hazardous Reactions:	Hazardous reactions not anticipated.
Conditions To Avoid:	Extended exposure to high temperatures can cause decomposition. Avoid all possible sources of ignition.
Incompatible Materials:	Oxidizing agents, strong acids, strong bases.
Hazardous Decomposition Products:	Not anticipated under normal conditions of use.

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SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity: Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage.

	[ACUTE TOXICITY ESTIMATE]
Ingredients:	Proprietary Blend
Oral LD50mg/kg:	2,500.00/Category: 5
Skin LD50mg/kg:	2,500.00/Category: 5
Inhalation Vapor LC50mg/L/4hr:	No Data Available
Inhalation Dust/Mist LC50mg/L/4hr:	No Data Available

ITEM	HAZARD	CATEGORY
Acute Toxicity (mouth):	May be harmful if swallowed. (Not adopted by U.S. OSHA.)	5
Acute Toxicity (skin):	May be harmful in contact with skin. (Not adopted by U.S. OSHA.)	5
Acute Toxicity (inhalation):	Not Applicable	--
Skin Corrosion/Irritation:	Causes skin irritation.	2
Eye Damage/Irritation:	Causes serious eye irritation.	2A
Sensitization (respiratory):	Not Applicable	--
Sensitization (skin):	Not Applicable	--
Germ Toxicity:	Not Applicable	--
Carcinogenicity:	Not Applicable	--
Reproductive Toxicity:	Not Applicable	--
Specific Target Organ Systemic Toxicity-Single Exposure:	May cause dizziness or drowsiness.	3
Specific Target Organ Systemic Toxicity-Repeated Exposure:	Not Applicable	--
Aspiration Hazard:	Not Applicable	--

SECTION 12: ECOLOGICAL INFORMATION

Toxicity:	No additional information provided for this product.
Persistence and Degradability:	There is no data available on the preparation itself.
Bioaccumulative Potential:	Not measured.
Mobility In Soil:	No data available.
Results of PBT and vPvB Assess:	This product contains no PBT/vPvB chemicals.
Other Adverse Effects:	No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Treatment Methods:	Do not allow into drains or water courses. Wastes and emptied containers should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act. Using information provided in this data sheet advice should be obtained from the Waste Regulation Authority, whether the special waste regulations apply. Dispose of contents in accordance with local and national regulations.
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SECTION 14: TRANSPORT INFORMATION

DOT Proper Shipping Name: UN1993, Flammable Liquid, N.O.S. (morpholine and isopropanol), 3, PG II

DOT Hazard Class: 3, Flammable Liquid

DOT Packing Group: II

DOT Label: 3

IMDG Proper Shipping Name: UN1993, Flammable Liquid, N.O.S. (morpholine and isopropanol), 3, PG II

IMDG Hazard Class: 3

IMDG Packing Group: II

IMDG Marine Pollutant: No

ICAO/IATA: UN1993, Flammable Liquid, N.O.S. (morpholine and isopropanol), 3, PG II

SECTION 15: REGULATORY INFORMATION

Regulatory Overview: The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Toxic Substance Control Act (TSCA): All ingredients of this product are listed on the TSCA inventory, or are not required to be listed on the TSCA inventory.

WHMIS Classification: B2 D2B

U.S. EPA Tier II Hazards: Fire=NQ / Sudden Release of Pressure=NQ / Reactive=NQ / Immediate (acute)=YES / Delayed (chronic)=NQ

EPCRA 302–Extremely Hazardous (0.1%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 311/312–Chemicals and RQs (>0.1%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 313–Toxic Chemicals (>0.1%): Isopropyl alcohol

Proposition 65–Carcinogens (>0.0%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65–Developmental Toxins (>0.0%): Ethanol / Methoxyethanol

Proposition 65–Female Repro Toxins (>0.0%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65–Male Repro Toxins (>0.0%): Methoxyethanol

N.J. RTK Substances (>1%): 1-Methoxy-2-propanol / Isopropyl alcohol / Morpholine

PENN RTK Substances (>1%): 1-Methoxy-2-propanol / Isopropyl alcohol / Morpholine

SECTION 16: OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. Company accepts no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations and orders.