



UFlek-AF®

SOLVENT-BASED, HIGH-GLOSS DECORATIVE FLAKE TOP COAT

UFlek-AF uses UGloss-AF, an extremely chemical resistant high gloss urethane top coat specially formulated for use on floors where vehicles, equipment, and frequent oil and chemical exposure are present. This product is a self-leveling top coat that exhibits superior durability and resilience characteristics.

Physical Properties

Solids by Weight: Mixed=56% (± 2%)

Solids by Volume: Mixed=53% (± 2%)

Volatile Organic Content:
Less than 3.8 pounds per gallon

Recommended Film Thickness:
3-5 mils per coat wet thickness

Coverage per Gallon:
385 square feet @ 3-5 mils wet

Mix Ratio:
2 parts Part 2 to 1 part Part 1 by volume

Packaging Information:
This product is available in 1.5 gallon kits as well as 1.5 and 0.75 gallon material only packs

Shelf Life: 1 year

Finish Characteristics:
High gloss (80-100 at 60°@Erichsen glossmeter)

Abrasion Resistance:
Taber abrasor CS-17 calibrase wheel with 1000 gram total load and 500 cycles=20mg loss

Impact Resistance:
Gardner impact=160 in. lb. (passed)
(direct and reverse)

Hardness: ShoreD=72

Flexibility: No cracks on a 1/8 in. mandrel

Adhesion: 360 psi@elcometer
(concrete failure, no delamination)

Cure Schedule: (70°F)

Pot life.....	1½ hrs
Tack free.....	2-4 hrs
Recoat or topcoat.....	4-6 hrs
Light foot traffic.....	14-24 hrs
Full cure (heavy traffic).....	5 days

Application Temperature: 50-90° F

Viscosity: Mixed=200-400 cps

Chemical Resistance:

Reagent.....	Rating
acetic acid 5%	C
xylene	E
mek.....	B
methyl alcohol.....	B
gasoline.....	D
10% sodium hydroxide	E
50% sodium hydroxide	D
10% sulfuric acid	D
10% hydrochloric acid	D
20% nitric acid	C
ethylene glycol.....	D

Rating key:

A – not recommended, B – 2hr term splash spill, C – 8 hr term splash spill, D – 72 hr immersion, E – long term immersion. NOTE – extensive chemical information is available through your sales representative.

Primer: Non required. Any suitable UCoat Standard finish can be coated.

DOT Classification:

- Part 1 "Flammable Liquid N.O.S., 3, UN1993, PGIII"
- Part 2 "Flammable Liquid N.O.S., 3, UN1993, PGIII"

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**UFlek-AF[®]**

SOLVENT-BASED, HIGH-GLOSS DECORATIVE FLAKE TOP COAT

UFlek-AF Top Coat System uses : UGloss-AF Part 1 Activator (1 of 2)HMIS Codes: H F R P
2* 3 1 G**Section 1 - Manufacturer Identification****Manufacturer's Name:** UCoat It America, LLC.
Address: 1797 Atlantic Blvd., Auburn Hills, MI 48326
Date Revised: 08-26-09**Emergency Phone:** Chemtrec - 1(800) 424-9300
Information Phone: 1(800) 826-2848
Name of Preparer: UCoat It America, LLC.**Section 2 - Hazardous Ingredients/SARA III**

Hazardous Components	CAS Number	Occupational Exposure Limits			Vapor Pressure mm Hg@ Temp	Weight Percent
		OSHA PEL	ACGIH TLV	OSHA STEL		
Homopolymer of HDI	28182-81-2	1mg/m ³	None	None	N/A	
*Xylene	1330-20-7	100 ppm	100 ppm	150 ppm	5.1 68°F	12
n-Butyl Acetate	123-86-4	150 ppm	150 ppm	200 ppm	10.0 66°F	
Hexamethylene Diisocyanate (HDI)	822-06-0	None	0.005 ppm	None	N/A	

* - Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372. Xylene ACGIH Stel = 150 ppm. For HDI Oral LD50 > 10,000 mg/kg (Rats), Inhalation LC50 Ranges from 137 to 1150 mg/m³, Eye Irritation score 54.6/110 for a 24 hour exposure, Skin exposure - Moderate irritant irritation score 3.4/8 (Rabbit)

Section 3 - Physical/Chemical Characteristics**Boiling Range:** 279°F**Vapor Density:** N/A**Solubility in Water:** Negligible**Appearance and Odor:** Pale yellow liquid with solvent odor**Specific Gravity (H20=1):** 1.1**Evaporation Rate:** N/A**Section 4 - Fire and Explosion Hazard Data****Flammable Limits in Air by Volume:** Lower: N/A Upper: N/A**Flash point:** 91°F**Method Used:** SETA Flash**Extinguishing Media:** Foam, Alcohol Foam, CO₂, Dry Chemical**Special Firefighting Procedures:** Do not enter confined fire area without full bunker gear including a positive pressure NIOSH approved self-contained breathing apparatus. Presence of solvents in product may require grounding. Remove all sources of ignition.**Unusual Fire and Explosion Hazards:** If fire occurs, solvents may produce excessive pressure. Sealed drums may rupture and ignite. Vapors are heavier than air and may travel along the ground and ignite by any source of ignition. During a fire, HDI vapors and other toxic gasses may be evolved. Containers may burst if contaminated with water. Vapor flashback to source is possible.**Section 5 - Reactivity Data****Stability:** Stable**Conditions to Avoid:** Avoid excessive heat or open flames as well as sources of ignition such as sparks, heaters, static discharges, etc.**Incompatibility (materials to avoid):** Avoid water, Amines, Strong bases, Alcohols, Metal Compounds, and surface active compounds.**Hazardous decomposition or byproducts:** May form toxic chemicals, carbon dioxide, carbon monoxide, oxides of nitrogen, HCN and HDI**Hazardous Polymerization:** May occur - Moisture or materials that react with isocyanates and temperatures above 400°F may cause polymerization.

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SOLVENT-BASED, HIGH-GLOSS DECORATIVE FLAKE TOP COAT

UFlek-AF Top Coat System uses : UGloss-AF Part 1 Activator (2 of 2)

Section 6 - Health Hazard Data

Inhalation health risks and symptoms of exposure: Can cause nausea and respiratory irritation, dizziness, weakness, fatigue, nausea, headache, and possible unconsciousness. Burning sensation to mucous membranes, shortness of breath and flu like symptoms may occur.

Skin and eye contact health risks and symptoms of exposure: Skin: may cause irritation, defatting and dermatitis. Eyes: Can cause severe irritation, redness, tearing, or blurred vision as well as corneal opacity and conjunctivitis.

Skin absorption health risks and symptoms of exposure: Can cause reddening, swelling, rash, scaling, or blistering. Overexposure may cause sensitization resulting in reaction to contact of small amounts.

Ingestion health risks and symptoms of exposure: Can cause gastrointestinal irritation, nausea, vomiting, diarrhea. Aspiration of material into the lungs can cause chemical pneumonitis which can be fatal. Product can cause corrosive action to mucous membranes and digestive tracts.

Health Hazards (Acute and Chronic): Can cause sensitization by exposure through contact or high concentrations of vapor. Overexposure to this material can cause cardiac abnormalities. Overexposure can possibly cause anemia, liver abnormalities, kidney damage, or eye damage. May cause asthma or other respiratory disorders, bronchitis, emphysema, hyperactivity, and eczema.

Carcinogenicity: NTP? No ARC monograph? No OSHA regulated? No

*No listed ingredients of this product are regulated as carcinogens

Medical conditions generally aggravated by exposure: Respiratory conditions or other allergic response

Emergency and first aid procedures: EYES: Flush eyes with water for at least fifteen minutes and consult a physician. SKIN: For extreme exposure use a safety shower immediately, wash affected area with soap and water and remove contaminated clothing promptly. INHALATION: Remove victim to fresh air area and administer oxygen if necessary. Obtain medical assistance. Asthmatic type symptoms may occur immediately or be delayed for several hours. Treatment is symptomatic. INGESTION: Do not induce vomiting, keep person warm and consult a physician immediately. Give 1-2 cups of milk or water to drink.

Section 7 - Precautions for Safe Handling and Use

Steps to be taken in case material is released or spilled: Wear respirator and protective clothing. Remove all sources of ignitions. Remove excess with spark proof equipment, and the remainder with an absorbant such as clay and place in disposal containers, contained air respirator may be necessary.

Waste disposal method: Dispose of material in a waste disposal site in accordance with local, state and federal laws.

Precautions to be taken in handling and storing: Store in cool dry place, seal all partially used containers, wash with soap and water before eating, drinking, smoking or using toilet facilities. Mixed materials contain hazards of all the components, therefore, read the MSDS's of all the components prior to using materials. Properly label all containers. Keep material away from all sources of ignition.

Other precautions: Avoid all skin contact, avoid breathing vapors generated from the material. Observe conditions of good general hygiene and safe working practices. Contaminated leather articles can not be cleaned and must be discarded if contaminated with this product. Wash all contaminated clothing prior to reuse. Wear appropriate safety equipment and respirator at all times when ventilation is not sufficient to control vapors. Observe OSHA regulations for respirator use (29CFR 1910.134). When spraying material avoid exposure to all mists generated by using air supplied respirator.

Section 8 - Control measures

Respiratory protection: Use a NIOSH approved respirator as required to prevent over exposure to vapor in accordance with 29 CFR 1910.134. Engineering or administrative measures should be taken to reduce the risk and exposure. Use a positive pressure supplied air respirator when exceeding TLV's or if HDI monomer concentrations exceed acceptable limits or when spraying material.

Ventilation: Exhaust ventilation sufficient to keep airborne concentrations of HDI below their TLV and MGL maximum. Refer to Patty's Industrial Hygiene and Toxicology - Volume 1 (3rd edition) Chapter 17 and Volume III (1st edition) Chapter 3 for details.

Protective gloves: Impervious - neoprene or rubber

Eye protection: Splash goggles or glasses with side shields. Do not wear contact lenses when using this product.

Other protective clothing or equipment: Wear body covering clothing and other coverings as necessary such as apron and appropriate footwear to avoid contact with material.

Work/hygienic practices: Observe good general hygienic practices.

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SOLVENT-BASED, HIGH-GLOSS DECORATIVE FLAKE TOP COAT

UFlek-AF Top Coat System uses : UGloss-AF Part 2 Base (1 of 2)HMIS Codes: H F R P
2* 3 0 G**Section 1 - Manufacturer Identification****Manufacturer's Name:** UCoat It America, LLC.
Address: 1797 Atlantic Blvd., Auburn Hills, MI 48326
Date Revised: 08-26-09**Emergency Phone:** Chemtrec - 1(800) 424-9300
Information Phone: 1(800) 826-2848
Name of Preparer: UCoat It America, LLC.**Section 2 - Hazardous Ingredients/SARA III**

Hazardous Components	CAS Number	Occupational Exposure Limits			Vapor Pressure mm Hg@ Temp	Weight Percent
		OSHA PEL	ACGIH TLV	OSHA STEL		
*Xylene	1330-20-7	100 ppm	100 ppm	150 ppm	5.1 68°F	< 0.5%
*Normal Butyl Acetate	123-86-4	150 ppm	150 ppm	200 ppm	10.0 66°F	7
*Ethyl Benzene	100-41-4	100 ppm	100 ppm	125 ppm	1.0 14°F	< 0.5%
Saturated Polyester Polyol (non hazardous)	Unknown	None	None	None	N/A	
Propylene Glycol Monomethyl Ether Acetate	108-65-6	None	None	None	3.7 68°F	
Cellulose Acetate Butyrate Ester	9004-36-8	None	None	None	N/A	
Methyl N Amyl Ketone	110-43-0	100 ppm	50 ppm	None	2.1 68°F	
Dibutyltin Diluarate	77-58-7	0.1mg/m	0.1mg/m	0.1mg/m	N/A	
Proprietary - Non Hazardous Additives	Unknown	None	None	None	N/A	
2,6-Dimethyl-4-Heptanone	108-83-8	25 ppm	25 ppm	None	1.0 90°F	

* - Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372. Xylene ACGIH STEL = 150ppm. Methyl n-Amyl Ketone ACGIH STEL = 100 ppm.

Section 3 - Physical/Chemical Characteristics**Boiling Range:** 279°F - 300°F
Vapor Density: N/A
Solubility in Water: Negligible
Appearance and Odor: Clear low viscosity liquid with ketone odor
Specific Gravity(H₂O=1): 1.1
Evaporation Rate: N/A**Section 4 - Fire and Explosion Hazard Data****Flammable Limits in Air by Volume:** Lower: N/A Upper: N/A**Flash point:** 100°F**Method Used:** SETA Flash**Extinguishing Media:** Foam, Alcohol Foam, CO₂, Dry Chemical, Water Fog**Special Firefighting Procedures:** Do not enter confined fire area without full bunker gear including a positive pressure NIOSH approved self-contained breathing apparatus. Cool all fire exposed containers with water. Minimize contact with material.**Unusual Fire and Explosion Hazards:** Closed containers may explode when exposed to extreme heat, solvent vapors may be heavier than air. Under conditions of stagnant air, vapors may build up and travel along the ground to an ignition source which can result in flash back to the source of the vapors. Toxic vapors could be evolved from the combustion of this material.**Section 5 - Reactivity Data****Stability:** Stable**Conditions to Avoid:** Avoid excessive heat or open flames. This material should not be mixed with phosphorous containing material or oxidizers**Incompatibility (materials to avoid):** Can react vigorously with strong oxidizing agents and phosphorous containing materials.**Hazardous decomposition or byproducts:** Carbon dioxide, carbon monoxide.**Hazardous Polymerization:** Will not occur.

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UFlek-AF Top Coat System uses : UGloss-AF Part 2 Base (2 of 2)

Section 6 - Health Hazard Data

Inhalation health risks and symptoms of exposure: Solvent vapors are irritating to the eyes, nose and throat and respiratory tract resulting in dryness of the throat and tightness in the chest. Other symptoms include headache, nausea, narcosis, fatigue, and loss of appetite.

Skin and eye contact health risks and symptoms of exposure: SKIN: May cause irritation or allergic skin response. May cause defatting, dryness cracking, rash redness, or dermatitis. EYES: May cause corneal damage if left untreated which is slow to heal but usually reversible.

Skin absorption health risks and symptoms of exposure: Solvents can penetrate the skin causing effects similar to those for acute inhalation symptoms.

Ingestion health risks and symptoms of exposure: Can cause irritation to the digestive tract including sore throat, abdominal pain, nausea, vomiting, and diarrhea. Vomiting may cause aspiration of solvents resulting in chemical pneumonitis.

Health Hazards (Acute and Chronic): Chronic exposure to organic solvents has been associated with various neurotoxic effects including brain damage, nervous system damage or death. Prolonged vapor contact may cause conjunctivitis. Chronic inhalation may also include loss of memory, loss of intellectual ability, and loss of coordination. Corneal damage is possible but usually reversible. Repeated exposure to solvents can cause anemia, liver abnormalities, kidney damage or cardiac abnormalities.

Carcinogenicity: NTP? No ARC monograph? No OSHA regulated? No

*No listed ingredients of this product are regulated as carcinogens

Medical conditions generally aggravated by exposure: Respiratory conditions or other allergic response

Emergency and first aid procedures: EYES: Flush eyes with water for at least fifteen minutes and consult a physician. SKIN: Wash affected area with soap and water and remove contaminated clothing promptly. INHALATION: Remove victim to fresh air area and administer oxygen if necessary. Obtain medical assistance. INGESTION: Do not induce vomiting, never give anything by mouth to an unconscious person. Consult a physician.

Section 7 - Precautions for Safe Handling and Use

Steps to be taken in case material is released or spilled: Remove all sources of ignition and ventilate the area. Wear appropriate protective equipment such as vapor cartridge or supplied air respirator as necessary. Dike and absorb the material with absorbant such as clay and place in disposal containers.

Waste disposal method: Dispose of material in a waste disposal site in accordance with local, state and federal laws. Empty containers should be handled with care due to product residue and possible vapor from organic solvents. Never use a gas or electric torch to cut the drums.

Precautions to be taken in handling and storing: Store in cool dry place, seal all partially used containers, wash with soap and water before eating, drinking, smoking or using toilet facilities. Mixed materials contain hazards of all the components, therefore, read the MSDS's of all the components prior to using materials. Properly label all containers.

Other precautions: Avoid all skin contact, avoid breathing vapors generated from the material. Observe conditions of good general hygiene and safe working practices. Contaminated leather articles can not be cleaned and must be discarded if contaminated with this product. Wash all contaminated clothing prior to reuse. Supply appropriate ventilation or engineering controls prior to using this product.

Section 8 - Control measures

Respiratory protection: Use a NIOSH approved respirator as required to prevent over exposure to vapor in accordance with 29 CFR 1910.134. Use a positive pressure respirator when airborne concentrations are not known or if exceeding TLV's of if working in a confined space. Always consider the hazards from all components in the mixed material state.

Ventilation: Exhaust ventilation sufficient to keep airborne concentrations of solvents and other hazardous materials below the toxic level concentrations.

Protective gloves: Impervious - neoprene or rubber

Eye protection: Splash goggles or glasses with side shields. If the environment warrants, a full face shield should be employed.

Other protective clothing or equipment: Wear body covering clothing and other coverings as necessary such as apron and appropriate footwear to avoid contact with material.

Work/hygienic practices: Observe good general hygienic practices.

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