

MATERIAL SAFETY DATA SHEET

No. 555-04, TOPAZ

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SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

MANUFACTURER'S NAME / ADDRESS

FLAME CONTROL COATINGS LLC
4120 HYDE PARK BLVD.
NIAGARA FALLS, N.Y. 14305

TRADE NAME: TEMPERKOTE No. 555
COLOR: 04 TOPAZ
MAIN USE: LOW VOC HI-HEAT®
RESISTANT COATING

EMERGENCY TELEPHONE NUMBER: 800-535-5053

INITIAL ISSUE DATE: OCTOBER 1, 2008 REVISION DATE: NOVEMBER 21, 2011 PREPARED BY: J.W. ESSIG

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	Wt. %	CAS Number
XYLENE-MIXED ORTHO, META AND PARA ISOMERS	15-30	001330-20-7
ETHYLBENZENE	0.1-1.0	000100-41-4
N BUTYL ACETATE	15-30	000123-86-4
COBALT CHROMITE BLUE-GREEN SPINEL**	15-30	068187-11-1
TERTIARY BUTYL ACETATE	5-10	000540-88-5
COBALT 2-ETHYLHEXANOATE	0.1-1.0	000136-52-7
ZIRCONIUM 2-ETHYLHEXANOATE	0.1-1.0	022464-99-9

** This product is the result of high temperature calcinations of the component substances. Due to its unique crystalline structure the properties of this finished pigment do not necessarily reflect the properties of the component metals or oxides.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: DANGER!
HARMFUL OR FATAL IF SWALLOWED
HARMFUL IF INHALED
CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING
ORGANS: BLOOD, KIDNEYS, LIVER, GASTROINTESTINAL TRACT,
RESPIRATORY TRACT, SKIN, NERVOUS SYSTEM, EYE, LENSE OR CORNEA
FLAMMABLE LIQUID AND VAPOR
VAPOR MAY CAUSE FLASH FIRE
MAY BE HARMFUL IF ABSORBED THROUGH SKIN
POSSIBLE CANCER HAZARD
CONTAINS MATERIAL WHICH CAN CAUSE CANCER

PRIMARY ROUTES OF ENTRY: EYE CONTACT, SKIN CONTACT, INHALATION, INGESTION.

HEALTH HAZARDS (ACUTE AND CHRONIC EXPOSURES)

EYES:

ACUTE – LIQUID, AEROSOLS OR VAPORS ARE SEVERELY IRRITATING AND CAN CAUSE PAIN, TEARING, REDDENING AND SWELLING. IF LEFT UNTREATED, CORNEAL DAMAGE CAN OCCUR AND INJURY IS SLOW TO HEAL. HOWEVER, DAMAGE IS USUALLY REVERSIBLE

CHRONIC – PROLONGED VAPOR CONTACT MAY CAUSE CONJUNCTIVITIS

SKIN CONTACT:

ACUTE – REPEATED OR PROLONGED SKIN CONTACT CAN RESULT IN DRY, DEFATTED AND CRACKED SKIN CAUSING INCREASED SUSCEPTIBILITY TO INFECTION. IN ADDITION IRRITATION MAY DEVELOP INTO DERMATITIS. SOLVENTS CAN PENETRATE THE SKIN AND MAY CAUSE EFFECTS SIMILAR TO THOSE IDENTIFIED UNDER ACUTE INHALATION SYMPTOMS.

CHRONIC – MAY CAUSE EFFECTS SIMILAR TO THOSE IDENTIFIED UNDER CHRONIC INHALATION EFFECTS.

SKIN ABSORPTION:

ACUTE – ND

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CHRONIC - ND

SECTION 3: HAZARDS IDENTIFICATION (CON'T)

INHALATION:

ACUTE - SOLVENT VAPORS ARE IRRITATING TO THE EYES, NOSE, AND THROAT. SYMPTOMS OF IRRITATION MAY INCLUDE RED, ITCHY EYES, DRYNESS OF THE THROAT AND A FEELING OF TIGHTNESS IN THE CHEST. OTHER POSSIBLE SYMPTOMS OF OVEREXPOSURE INCLUDE: HEADACHE, DIZZINESS, NAUSEA, NARCOSIS FATIGUE AND LOSS OF APPETITE. PERSONS EXPOSED TO 200 PPM OF XYLENE EXPERIENCED EYE, NOSE AND THROAT IRRITATION. CONCENTRATIONS OF 10,000 PPM OF XYLENE CAN BE IMMEDIATELY DANGEROUS TO LIFE AND HEALTH

CHRONIC - CHRONIC EXPOSURE TO ORGANIC SOLVENTS HAS BEEN ASSOCIATED WITH VARIOUS NEUROTOXIC EFFECTS INCLUDING PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. SYMPTOMS INCLUDE LOSS OF MEMORY, LOSS OF INTELLECTUAL ABILITY AND LOSS OF COORDINATION.

INGESTION:

ACUTE - CAN RESULT IN IRRITATION OF THE DIGESTIVE TRACT. SYMPTOMS CAN INCLUDE SORE THROAT ABDOMINAL PAIN NAUSEA, VOMITING AND DIARRHEA. VOMITING MAY CAUSE ASPIRATION OF SOLVENT RESULTING IN CHEMICAL PNEUMONITIS

CHRONIC - ND

CONDITIONS AGGRAVATED BY EXPOSURE: SKIN DISORDERS AND ALLERGIES.

SECTION 4: FIRST AID MEASURES

GENERAL: REMOVE PERSON FROM AFFECTED AREA AND MAKE COMFORTABLE. TREAT SYMPTOMATICALLY.

EYES: FLUSH WITH WATER FOR 15 MINUTES. GET MEDICAL ATTENTION.

SKIN: REMOVE PRODUCT AND FLUSH AFFECTED AREA WITH WATER FOR 15 MINUTES. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION.

INHALATION: MOVE TO FRESH AIR. GIVE ASSISTED RESPIRATION IF BREATHING HAS STOPPED OR IS LABORED (CALL A PHYSICIAN).

INGESTION: GIVE 3 - 4 GLASSES OF WATER OR MILK IF PERSON CONSCIOUS. **DO NOT INDUCE VOMITING!** OBTAIN MEDICAL CARE AND TREATMENT.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: 4.4°C (40°F) TCC (TBAC)

CONDITIONS OF FLAMMABILITY: NA

FLAMMABLE LIMITS: LEL: 1.26%

UEL: 6.88%

AUTO IGNITION TEMP.: ND

OSHA CLASS: FLAMMABLE LIQUID, PACKING GROUP III

HAZARDOUS COMBUSTION PRODUCTS: CO, CO₂, ALDEHYDES, ACIDS

SENSITIVITY TO IMPACT: ND

SENSITIVITY TO STATIC DISCHARGE: ND

EXTINGUISHING MEDIA: IGNITION MAY GIVE RISE TO A CLASS B FIRE. IN CASE OF FIRE USE: WATER FOG, CARBON DIOXIDE, DRY CHEMICAL, OR ALCOHOL FOAM.

SPECIAL FIRE FIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING. WATER SPRAY IS USEFUL IN COOLING FIRE-EXPOSED VESSELS AND IN DISPERSING VAPORS.

UNUSUAL FIRE AND EXPLOSIVE HAZARDS: MAY GENERATE TOXIC OR IRRITATING COMBUSTION PRODUCTS. SUDDEN REACTION AND FIRE MAY RESULT IF PRODUCT IS MIXED WITH AN OXIDIZING AGENT. 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.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: SHUT OFF SOURCES OF IGNITION. COVER SPILLS WITH ABSORBENT. PLACE IN METAL CONTAINERS FOR RECOVERY OR DISPOSAL. PREVENT ENTRY INTO SEWERS, STORM DRAINS, AND WATERWAYS.

SECTION 7: HANDLING AND STORAGE

GENERAL: STORE IN COOL, WELL VENTILATED AREAS. KEEP AWAY FROM HEAT AND OPEN FLAMES. AVOID PROLONGED INHALATION OF HEATED VAPORS OR MISTS. AVOID PROLONGED SKIN CONTACT. USE NON-SPARKING TOOLS AND GROUNDING CABLES WHEN TRANSFERRING. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY.

STORAGE: AVOID TEMPERATURE EXTREMES. STORE AWAY FROM EXCESSIVE HEAT, FROM SOURCES OF IGNITION AND FROM REACTIVE MATERIALS. MATERIAL CAN BURN; LIMIT INDOOR STORAGE TO AREAS EQUIPPED WITH AUTOMATIC SPRINKLERS. STORE OUT OF DIRECT SUNLIGHT IN A COOL PLACE. KEEP CONTAINERS TIGHTLY CLOSED. GROUND ALL METAL CONTAINERS DURING STORAGE AND HANDLING.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

EXPOSURE LIMITS (ppm)

INGREDIENTS (CAS)	OSHA		ACGIH		OTHER
	TWA	STEL	TWA	STEL	
001330-20-7	100	150	100	150	
000100-41-4	100	125	100	125	
000123-86-4	150	NE	150	200	
068187-11-1*	NE	NE	NE	NE	
*cobalt metal, dust, fumes (as Co)	0.1mg/m ³	ND	0.02mg/m ³	ND	(SEE NOTE 1, 2)
*chromium compounds (as Cr)	0.5mg/m ³	ND	0.5mg/m ³	ND	(SEE NOTE 1, 2)
*zinc compounds (as Zn)	5mg/m ³	ND	5mg/m ³	ND	(SEE NOTE 1, 2)
000540-88-5	200	NE	200	NE	
001333-86-4	3.5mg/m ³	ND	3.5mg/m ³	ND	(SEE NOTE 1)
000136-52-7	0.1mg/m ³	ND	0.02mg/m ³	ND	(SEE NOTE 1)
022464-99-9	5mg/m ³	ND	10mg/m ³	ND	(SEE NOTE 1)

LEGEND: (M) MAX. EXPOSURE LIMIT; (S) OCCUPATIONAL EXP. LIMIT; (R) SUPPLIERS REC. LIMIT, (+) PERCUTANEOUS RISK

NOTE 1: VALUES MEANINGFUL ONLY WHEN HARDENED PRODUCT IS ABRADED, GROUND, ETC.

NOTE 2: HAZARDOUS COMPONENTS OF PIGMENT SEE ** SECTION 2 FOR DETAILS.

ENGINEERING CONTROLS: EXHAUST VENTILATION IS SUFFICIENT TO KEEP AIRBORNE CONCENTRATION OF THE SOLVENTS BELOW THEIR RESPECTIVE TLV'S. EXHAUST AIR MAY NEED TO BE CLEANED BY SCRUBBERS OR FILTERS TO REDUCE ENVIRONMENTAL CONTAMINATION.

RESPIRATORY PROTECTION: NONE REQUIRED IN ADEQUATELY VENTILATED AREAS. IF VAPOR CONCENTRATION EXCEEDS 20ppm FOR LONGER THAN 15 MINUTES, A NIOSH APPROVED RESPIRATOR FOR ORGANIC VAPORS IS RECOMMENDED.

PROTECTIVE GLOVES: NITRILE RUBBER

EYE PROTECTION: SPLASH-PROOF GOGGLES OR CHEMICAL SAFETY GLASSES

OTHER PROTECTIVE EQUIPMENT: LONG SLEEVED SHIRTS AND TROUSERS. EMERGENCY SHOWERS AND EYE WASH STATIONS SHOULD BE READILY ACCESSIBLE.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: >98°C (>208°F)

SPECIFIC GRAVITY: 1.05-1.15

VAPOR PRESSURE: 34 mmHg @25°C (77°F)

MELTING POINT: ND

VAPOR DENSITY: ND
(AIR = 1)

EVAPORATION RATE: >1
(BUTYL ACETATE = 1)

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (CON'T)

SOLUBILITY IN WATER: INSOLUBLE

pH: NA

COEFFICIENT of WATER/OIL DISTRIBUTION: ND

ODOR THRESHOLD: ND

APPEARANCE AND ODOR: PIGMENTED LIQUID, AROMATIC SOLVENT ODOR

% VOLATILES BY VOLUME: 54%

%SOLIDS BY WEIGHT: 57%

SECTION 10: STABILITY AND REACTIVITY

STABILITY: STABLE; HOWEVER MAY FORM PEROXIDES OF UNKNOWN STABILITY

CONDITIONS TO AVOID: NOT APPLICABLE (MATERIAL IS STABLE).

INCOMPATIBILITY (MATERIAL TO AVOID): OXIDIZING AGENTS (PERCHLORATES, NITRATES), STRONG ACIDS, HYPOCHLORITES, AND PEROXIDES SHOULD NOT BE COMBINED WITH PHOSPHOROUS CONTAINING MATERIALS BECAUSE HIGHLY TOXIC FUMES CAN BE EMITTED IN A FIRE SITUATION.

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO₂.

HAZARDOUS POLYMERIZATION (REACTIVITY): WILL NOT OCCUR.

SECTION 11: TOXICOLOGICAL INFORMATION

CARCINOGENIC DATA: THIS PRODUCT CONTAINS XYLENE, ETHYL BENZENE IN CONCENTRATIONS OF 0.1% OR GREATER.

TERATOGENICITY: YES

MUTAGENICITY: ND

EMBRYOTOXICITY: ND

SYNERGISTIC MATERIAL: ND

OVEREXPOSURE EFFECTS: LACRIMATION OF EYES, SKIN IRRITATION, DIZZINESS.

IRRITANCY: YES

SENSITIZER: YES

ACUTE TOXICITY EFFECTS: ORAL LD₅₀: 11.4g/kg (Rats); DERMAL LD₅₀: >20ml/kg (Rabbit); INHALATION: ND

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: NOT READILY BIODEGRADABLE.

ECOTOXICITY: ECO Daphnia Magna: 1-10 mg/l; Bacteria: >100 mg/l

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: INCINERATION IS PREFERRED. COMPLY WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS. RCRA CLASSIFIED HAZARDOUS WASTE WITH CHARACTERISTIC OF IGNITABILITY.

SECTION 14: TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: PAINT

UN NUMBER: UN1263

PACKAGING GROUP: III

DOT PRODUCT RQ LBS (KGS): 800 LBS. (362.9 KGS)

HAZARD LABEL: FLAMMABLE LIQUID

HAZARD PLACARD: FLAMMABLE LIQUID

IMO SHIPPING DATA: PAINT, HAZARD CLASS 3, UN1263, PACKING GROUP III, FLAMMABLE LIQUID

ICAO/IATA SHIPPING DATA: PAINT, HAZARD CLASS 3, UN1263, PACKING GROUP III, FLAMMABLE LIQUID

PASSENGER AIR MAX QUANTITY: 60L

PASSENGER PACKING INSTRUCTION: 355

CARGO AIR- MAX QAUNTITY.: 220L

CARGO AIR INSTRUCTION NUMBER: 366

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SECTION 15: REGULATORY INFORMATION

MATERIAL VOC = 336 gram / liter

COATING VOC = 401 gram/liter

TSCA (TOXIC SUBSTANCE CONTROL ACT): ALL COMPONENTS ARE LISTED IN THE TSCA CHEMICAL SUBSTANCE INVENTORY.

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION and LIABILITY ACT): REPORTABLE QUANTITY, XYLENE 100 LBS.

SARA TITLE III

SECTION 312 HAZARD CLASS: IMMEDIATE (ACUTE) HEALTH HAZARD, DELAYED HEALTH HAZARD; FIRE HAZARD.

SECTION 313 LISTED INGREDIENTS: XYLENE (CAS #001330-20-7), ETHYL BENZENE (CAS #000100-41-4), COBALT COMPOUNDS, CHROMIUM COMPOUNDS, ZINC COMPOUNDS

CALIFORNIA PROPOSITION 65: The below list of compounds is known to the State of California to cause cancer, birth defects or other reproductive harm: CAS #001330-20-7, CAS #000100-41-4.

SECTION 16: OTHER INFORMATION

HAZARD RATING

HMIS: HEALTH 2 FLAMMABILITY 3 REACTIVITY 0

LEGEND

ACGIH: AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
OSHA: OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
STEL: SHORT TERM EXPOSURE LIMIT
TWA: TIME WEIGHTED AVERAGE
PEL: PERMISSABLE EXPOSURE LIMIT
TLV: THRESHOLD LIMIT VALUE
NA: NOT APPLICABLE
NE: NOT ESTABLISHED
ND: NO DATA

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