

SAFETY DATA SHEET

FLAME CONTROL NO. 1212 02 SI

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

TRADE NAME: FLAME CONTROL NO. 1212 02 SILVER

CHEMICAL FAMILY: SILICONE, AROMATIC SOLVENT

MAIN USE: INDUSTRIAL HI-HEAT® COATING

MANUFACTURER'S NAME / ADDRESS: FLAME CONTROL COATINGS LLC
4120 HYDE PARK BLVD.
NIAGARA FALLS, N.Y. 14305

EMERGENCY TELEPHONE NUMBER: 800-535-5053

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REVISION DATE:

PREPARED BY: P. PISARSKI

SECTION 2: HAZARDS IDENTIFICATION

CLASSIFICATION: SILVER PIGMENTED LIQUID, AROMATIC SOLVENT ODOR

IMPORTANT HAZARDS:

FLAMMABLE LIQUID- CATEGORY 2
SKIN CORROSION/IRRITATION- CATEGORY 2
SERIOUS EYE DAMAGE/EYE IRRITATION- CATEGORY 2A
CARCINOGENICITY- CATEGORY 2B
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)
(RESPIRATORY TRACT IRRITATION)- CATEGORY 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)
(NARCOTIC EFFECTS)- CATEGORY 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE)- CATEGORY 1
ASPIRATION HAZARD- CATEGORY 1

GHS LABEL ELEMENTS HAZARD PICTOGRAMS:



EMERGENCY OVERVIEW:

DANGER!
FLAMMABLE LIQUID AND VAPOR
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
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.

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SECTION 2: HAZARDS IDENTIFICATION (CON'T)

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

CHRONIC – ND

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.

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. TOLUENE HAS BEEN DEMONSTRATED TO BE EMBRYO/FETOTOXIC AND TERATOGENIC IN LABORATORY ANIMALS. PROLONGED OR REPEATED OVEREXPOSURE TO TOLUENE CAN CAUSE IRRITATION TO THE RESPIRATORY TRACT, ENLARGED LIVER, KIDNEY EFFECTS AND CARDIAC SENSITIZATION.

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 3: COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE/MIXTURE: MIXTURE

OTHER MEANS OF IDENTIFICATION: NOT AVAILABLE

HAZARDOUS INGREDIENTS	Wt. %	CAS Number
TERTIARY BUTYL ACETATE	10-30	000540-88-5
ALUMINUM FLAKE	10-30	007429-90-5
STODDARD SOLVENT	7-15	008052-41-3
CERAMIC FRITS	10-30	065997-18-4
VM&P NAPHTHA	1-5	064742-89-8
TOLUENE	1-5	000108-88-3
XYLENE-MIXED ORTHO, META AND PARA ISOMERS	5-10	001330-20-7
ETHYLBENZENE	0.1-1.0	000100-41-4

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.

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SECTION 4: FIRST AID MEASURES (CON'T)

NOTES TO PHYSICIAN: ACUTE MASSIVE EXPOSURE TO TOLUENE CAN CAUSE TRANSIENT HEMATURIA AND ALBUMINURIA. CARDIAC ARRHYTHMIAS CAN OCCUR AFTER MASSIVE INHALATION.

SECTION 5: FIRE FIGHTING MEASURES

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.

SPECIFIC HAZARDS ARISING FROM CHEMICAL: FLAMABLE LIQUID AND VAPOR. IN A FIRE OR IF HEATED A PRESSURE INCREASE WILL OCCUR AND THE CONTAINER MAY BURST, WITH THE RISK OF A SUBSEQUENT EXPLOSION. VAPOR IS HEAVIER THAN AIR AND WILL SPREAD ACROSS THE GROUND.

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO₂

HAZARDOUS POLYMERIZATION (REACTIVITY): WILL NOT OCCUR.

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.

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

INGREDIENTS (CAS)	<u>EXPOSURE LIMITS (ppm)</u>				OTHER
	OSHA		ACGIH		
	TWA	STEL	TWA	STEL	
000540-88-5	200	NE	200	NE	
007429-90-5	10mg/m ³	ND	10mg/m ³	ND	(SEE NOTE 1)
008052-41-3	100	NE	100	NE	
065997-18-4	2.5mg/m ³	ND	2.5mg/m ³	ND	(SEE NOTE 1)
064742-89-8	200	250	200	250	
000108-88-3	100	150	100	150	
001330-20-7	100	150	100	150	
000100-41-4	100	125	100	125	

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.

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SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION (CON'T)

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

APPEARANCE

PHYSICAL STATE: LIQUID

COLOR: SILVER

ODOR: AROMATIC SOLVENT

pH: NA

MELTING POINT: ND

BOILING POINT: 110.6°C (231.1°F) (TOLUENE)

FLASHPOINT: 4.4°C (40°F) TCC (TOLUENE)

EVAPORATION RATE: >1 (BUTYL ACETATE = 1)

COEFFICIENT OF WATER/OIL DISTRIBUTION: ND

% VOLATILES BY VOLUME: 71%

FLAMMABLE LIMITS: NOT AVAILABLE

LOWER EXPLOSION LIMIT: 1.2%

UPPER EXPLOSION LIMIT: 7.0%

VAPOR PRESSURE: 24 mm Hg (TOLUENE)

VAPOR DENSITY: 3.1 (AIR = 1)

SPECIFIC GRAVITY: 1.1-1.2

SOLUBILITY IN WATER: INSOLUBLE

AUTO IGNITION TEMP: 480°C (869°F)

% SOLIDS BY WT: 46%

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.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

PRODUCT/INGREDIENT NAME	RESULT	SPECIES	DOSE	EXPOSURE
Toluene	LD50 ORAL	RAT	<870 mg/kg	-
	LC50 INHALATION GAS	RAT	6000 ppm	6Hrs
Tertiary Butyl Acetate	LD50 ORAL	RAT	4100 mg/kg	-
	LC50 INHALATION GAS	RAT	2230mg/m ³	4Hrs
Xylene	LD50 ORAL	RAT	4300 mg/kg	-
	LC50 INHALATION GAS	RAT	5000 ppm	4Hrs
Ethylbenzene	LD50 ORAL	RAT	3500 mg/kg	-
	LC50 INHALATION GAS	RAT	4000 ppm	4Hrs

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SECTION 11: TOXICOLOGICAL INFORMATION (CON'T)
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IRRITATION/CORROSION

PRODUCT/INGREDIENT NAME	RESULT	SPECIES	EXPOSURE
Xylene	SKIN- MILD IRRITANT	RAT	8 HRS/ 60 microliters
	SKIN- MODERATE IRRITANT	RABBIT	24HRS/ 500 milligrams
Ethylbenzene	SKIN- MILD	RABBIT	24 HRS/ 15 milligrams
	EYE- SEVERE	RABBIT	500 milligrams

CARCINOGENICITY

PRODUCT/INGREDIENT NAME	OSHA	IARC	NTP
Toluene	POSSIBLE SELECT CARCINOGEN	3	-
Ethylbenzene	-	2B	-
Xylene	-	3	-

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)

PRODUCT/INGREDIENT NAME	CATEGORY	ROUTE OF EXPOSURE	TARGET ORGANS
TOLUENE	CATEGORY 3	N/A	RESPIRATORY TRACT IRRITATION AND NARCOTIC EFFECTS

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE)

PRODUCT/INGREDIENT NAME	CATEGORY	ROUTE OF EXPOSURE	TARGET ORGANS
TOLUENE	CATEGORY 2	N/D	N/D

POTENTIAL ACUTE HEALTH EFFECTS

EYE: CAUSES SERIOUS EYE IRRITATION

INHALATION: CAN CAUSE CNS DEPRESSION, MAY CAUSE DROWSINESS AND DIZZINESS, RESPIRATORY IRRITATION

SKIN CONTACT: CAUSES SKIN IRRITATION

INGESTION: CAN CAUSE CNS DEPRESSION MAY BE FATAL IF SWALLOWED

POTENTIAL CHRONIC EFFECTS

GENERAL: MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED AND REPEATED EXPOSURE

TERATOGENICITY: YES

MUTAGENICITY: NO

EMBRYOTOXICITY: NO

SECTION 12: ECOLOGICAL INFORMATION

PRODUCT/INGREDIENT NAME	RESULT	SPECIES	EXPOSURE
Tertiary Butyl Acetate	LC50 296 - 362 mg/L FRESHWATER	FRESHWATER FISH	96 Hrs
Toluene	LC50 7.3~22.8 mg/l FRESHWATER	FRESHWATER FISH	96 Hrs
Ethylbenzene	LC50 96 hr – 32-97.1 mg/L	FRESHWATER FISH	96 Hrs

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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 CLASSIFICATION	TDG CLASSIFICATION	MEXICO CLASSIFICATION	IATA	IMDG
UN NUMBER	UN1263	UN1263	UN1263	UN1263	UN1263
UN PROPER SHIPPING NAME	PAINT	PAINT	PAINT	PAINT	PAINT
TRANSPORT HAZARD CLASS(ES)	3 	3 	3 	3 	3 
PACKING GROUP	II	II	II	II	II
ENVIRONMENTAL HAZARD	NO	NO	NO	NO	NO
ADDITIONAL HAZARD	Special provisions Not Applicable ERG No.128	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2. 18-2.19 (Class 3). ERG No.128	Special provisions (ERG#128) ERG No.128	Special provisions Not Applicable	Emergency schedules (EmS) F-E, S-E

SECTION 15: REGULATORY INFORMATION

MATERIAL VOC = 230 gram/ liter

COATING VOC = 397 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, TOLUENE 1000 LBS, XYLENE 100 LBS.

SARA TITLE III

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

SECTION 313 LISTED INGREDIENTS: TOLUENE (CAS #000108-88-3), ETHYL BENZENE CAS #000100-41-4 and XYLENE CAS #001333-20-7

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 #000108-88-3, CAS #000100-41-4 and CAS #001333-20-7.

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SECTION 16: OTHER INFORMATION

HAZARD RATING

HMIS: **HEALTH 2** **FLAMMABILITY 3** **REACTIVITY 0**

LEGEND

ACGIH: AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGEIENISTS
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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