



CITY AND COUNTY OF SAN FRANCISCO
 San Francisco Municipal Transportation Agency
 Request for Proposals
 THE PROCUREMENT OF
 30-Foot, 40-FOOT AND 60-FOOT LOW FLOOR
 DIESEL HYBRID COACHES

Proposal Section	Title	Bid Submission Requirements
3-J	Materials	1) Describe any material, which could produce toxic smoke or gases during collision repair. 2) Describe your experience in supplying materials, which meet the requirements of Section 1.15 and 7.1 of the Technical Specifications-Volume 2. 3) Are you proposing any materials, which do not meet the requirements of Section 7.1.1, Hazardous Materials, of the Technical Specifications-Volume 2? If so explain why. 4) Are you proposing any materials, which do not meet the requirements of Section 7.1.2, Consumables, of the Technical Specifications-Volume 2? If so explain why. 5) How have electrical wire and cable insulation been selected to minimize fire and toxic smoke hazards?

New Flyer has a vast list of materials that comply with MSDS we have attached copies as a demonstration (sample). However should New Flyer be the successful proponent, any specific materials that are in question can be discussed at the Pre Production meeting should New Flyer be the successful contractor.

M A T E R I A L S A F E T Y D A T A S H E E T

SECTION I - PRODUCT IDENTIFICATION AND USE

Product Identifier: POLYSEAL ADHESIVE SEALANT GHW

Identification Number: GS02001HW

Product Use: SEALANT

WHMIS Class: B3 D1B D2A

MANUFACTURER:

SUPPLIER:

Cloverdale Paint Inc.

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50 PANET ROAD

50 PANET ROAD

WINNIPEG, MB

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R2J 0R9 204/237-0241

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PREPARED BY: Mr Robert Tinsley, 204-237-0241

DATE: 09/09/13

SECTION II - HAZARDOUS INGREDIENTS

CHEMICAL NAME	CAS NUMBER	WT. PERCENT		EXPOSURE LIMIT	LC50	LD50
			RANGE			
TITANIUM DIOXIDE	13463-67-7		1.0-5.0	10 MG/M3	6.82MG/L RAT	>25G/KGORAL RAT
CALCIUM CARBONATE	471-34-1	30.0	60.0	5 mg/m3 DUST	N/AV	6450 MG/KG RAT
HEXAMETHYLENE DIISOCYANATE POLYMER	28182-81-2		1.0-5.0	0.5 mg/m3	137 MG/M3 RAT	>10 G/KG RAT
HIGH FLASH NAPHTHA	64742-95-6		1.0-5.0	25 ppm	10.2MG/L RAT	4ML/KG RAT
OXY-BIS PROPANOL DIBENZOATE	27138-31-4		1.0-5.0	NO INFO	N/AV	N/AV
ISOPHORONE DIISOCYANATE	4098-71-9		1.0-5.0	0.005 PPM	670 MG/M3 RAT	4285 MG/KG RAT
MDI MIXED ISOMERS	26447-40-5		0.1-1.0	0.005 PPM	430 MG/M3 RAT	10 G/KG RAT

N.A. - NOT APPLICABLE

SECTION III - PHYSICAL DATA

BOILING RANGE	: 155-200 C	VAPOR DENSITY	: IS HEAVIER THAN AIR
ODOR	: AROMATIC	EVAPORATION RATE:	IS SLOWER THAN BUTYL ACETATE
APPEARANCE	: WHITE PASTE	SOLUBILITY	: NEGLIGIBLE
VOLATILE BY WEIGHT:	3.3%	SPECIFIC GRAVITY:	1.420
VOLATILE BY VOLUME:	5.4%	FREEZING POINT	: -29 C
PH @ 0.00 %	: 7.0		
VAPOR PRESSURE	: 10 mm Hg		

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SECTION IV - FIRE AND EXPLOSION DATA
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FLASH POINT: 41 C
(TAGLIABUE C. C.)
CLASS 3, DIVISION 2

LEL: 0.6%
UEL: 7.0%

EXTINGUISHING MEDIA: DRY CHEMICAL CARBON DIOXIDE FOAM

UNUSUAL FIRE AND EXPLOSION HAZARDS: COMBUSTIBLE LIQUID (FLASH POINT LESS THAN 200 F/93 C). MAY FORM COMBUSTIBLE MIXTURES. VAPORS MAY BE EXPLOSIVE IN AIR. ELIMINATE IGNITION SOURCES. GROUND ALL EQUIPMENT. KEEP CONTAINER CLOSED.

SPECIAL FIREFIGHTING PROCEDURES: FIREFIGHTERS SHOULD WEAR SELF CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. USE WATER SPRAY TO COOL NEARBY CONTAINERS AND STRUCTURES EXPOSED TO FIRE.

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SECTION V - HEALTH HAZARD DATA
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EFFECTS OF OVER EXPOSURE: *** INHALATION: VERY TOXIC MATERIAL. HARMFUL OR FATAL IF INHALED. ISOCYANATE VAPORS AND MISTS CAN IRRITATE THE MUCOUS MEMBRANES CAUSING SHORTNESS OF BREATH AND REDUCED LUNG FUNCTION. *** INGESTION: HIGHLY TOXIC. MAY BE FATAL. SWALLOWING LARGE QUANTITIES MAY CAUSE NAUSEA AND VOMITING. SMALL AMOUNTS OF LIQUID DRAWN INTO THE LUNGS FROM SWALLOWING OR VOMITING MAY CAUSE SEVERE HEALTH AFFECTS (E.G. PULMONARY EDEMA). *** SKIN: CAN CAUSE MODERATE IRRITATION. CAN CAUSE DEFATTING AND DERMATITIS. PROLONGED EXPOSURE MAY CAUSE SKIN SENSITIZATION. CAN CAUSE CHEMICAL BURNS. CAN BE ABSORBED THROUGH THE SKIN CAUSING A HEALTH HAZARD. *** EYES: VAPORS MAY IRRITATE. LIQUID AND MISTS WILL IRRITATE AND MAY BURN THE EYES. *** CHRONIC AFFECTS OF OVEREXPOSURE: REPEATED OR PROLONGED EXPOSURES MAY CAUSE SKIN AND/OR RESPIRATORY SENSITIZATION. REPEATED EXPOSURES OR A SINGLE DOSE MAY CAUSE ISOCYANATE SENSITIZATION (CHEMICAL ASTHMA). IN A LIFETIME INHALATION STUDY, EXPOSURE TO 250 MG/M3 TITANIUM DIOXIDE DUST RESULTED IN THE DEVELOPMENT OF LUNG TUMOURS IN RATS. THESE TUMOURS OCCURRED ONLY AT DUST LEVELS THAT OVERWHELMED THE ANIMALS' LUNG CLEARANCE MECHANISMS AND WERE DIFFERENT FROM COMMON HUMAN LUNG TUMOURS IN BOTH TYPE AND LOCATION. THE RELEVANCE OF THESE FINDINGS TO HUMANS IS UNKNOWN. THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CLASSIFIED TITANIUM DIOXIDE AS POSSIBLY CARCINOGENIC TO HUMANS (GROUP 2B) BASED ON INADEQUATE EVIDENCE OF CARCINOGENICITY IN HUMANS AND SUFFICIENT EVIDENCE OF CARCINOGENICITY IN EXPERIMENTAL ANIMALS.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: ALLERGIES. SKIN DISORDERS. CHRONIC RESPIRATORY DISORDERS.

PRIMARY ROUTE(S) OF ENTRY: DERMAL INHALATION INGESTION

EMERGENCY AND FIRST AID PROCEDURES: *** INHALATION: REMOVE TO FRESH AIR. ASSIST BREATHING IF NECESSARY. KEEP VICTIM WARM AND QUIET. SEEK MEDICAL ATTENTION. *** INGESTION: DO NOT INDUCE VOMITING OR GIVE FLUIDS. KEEP AT REST. GET PROMPT MEDICAL ATTENTION. IF VOMITING OCCURS, KEEP VICTIM'S HEAD BELOW HIPS TO PREVENT ASPIRATION INTO THE LUNGS. *** SKIN: WASH THOROUGHLY WITH SOAP AND WATER AND RINSE WITH WATER FOR AT LEAST 15 MINUTES. CONSULT A PHYSICIAN IF IRRITATION DEVELOPS. *** EYES: FLUSH WITH CLEAN WATER FOR AT LEAST 15 MINUTES AND IMMEDIATELY GET MEDICAL ATTENTION.

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SECTION VI - REACTIVITY DATA
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STABILITY: THIS PRODUCT IS STABLE UNDER NORMAL STORAGE CONDITIONS.

HAZARDOUS POLYMERIZATION: COULD OCCUR UNDER NORMAL CONDITIONS. CARE MUST BE EXERCISED.

HAZARDOUS DECOMPOSITION PRODUCTS: OXIDES OF CARBON. OXIDES OF NITROGEN. TOXIC FUMES AND SMOKE.

CONDITIONS TO AVOID: HEAT, SPARKS OR FLAME.

INCOMPATABILITY: OXIDIZING AGENTS. ACIDS. ALKALIES. AMINES. ACTIVE METALS, METAL IONS. WATER ALCOHOLS.

SENSITIVITY TO STATIC DISCHARGE: TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGES.

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SECTION VII - SPILL OR LEAK PROCEDURES
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STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: ELIMINATE IGNITION SOURCES. STOP SOURCE OF SPILL. VENTILATE AREA. EVACUATE ALL NON ESSENTIAL PERSONNEL. WEAR APPROPRIATE PROTECTIVE EQUIPMENT. DIKE SPILL TO KEEP FROM SPREADING. COVER WITH INERT ABSORBENT. REMOVE TO DISPOSAL CONTAINER.

WASTE DISPOSAL METHOD: DO NOT CONTAMINATE ANY LAKES, PONDS, STREAMS, OR UNDERGROUND WATER SUPPLIES. DISPOSE OF IN ACCORDANCE WITH LOCAL, PROVINCIAL AND FEDERAL REGULATIONS IN YOUR AREA.

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SECTION VIII - SAFE HANDLING AND USE INFORMATION
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RESPIRATORY PROTECTION: USE CONTINUOUS FLOW SUPPLIED AIR RESPIRATOR WITH FULL FACEPIECE.

VENTILATION: EFFICIENT LOCAL EXHAUST VENTILATION IS REQUIRED. USE EXPLOSION PROOF VENTILATION EQUIPMENT.

PROTECTIVE GLOVES: WEAR APPROPRIATE CHEMICAL RESISTANT GLOVES/CLOTHING TO PREVENT SKIN CONTACT.

EYE PROTECTION: DO NOT GET IN EYES. WEAR CHEMICAL GOGGLES OR A FACE SHIELD.

OTHER PROTECTIVE EQUIPMENT: IMPERMEABLE APRON AND BOOTS. EYE BATH AND SAFETY SHOWER.

HYGENIC PRACTICES: DO NOT GET IN EYES, SKIN OR CLOTHING. AVOID INHALING. DO NOT SWALLOW. KEEP AWAY FROM FOOD PRODUCTS. WASH HANDS THOROUGHLY AFTER HANDLING. CHANGE AND WASH CONTAMINATED CLOTHING. DISCARD CONTAMINATED SHOES.

SPECIAL SHIPPING INFORMATION: NOT REGULATED FOR ROAD OR RAIL TRANSPORT. CANUTEC
24 HOUR EMERGENCY NUMBER: (613) 996-6666

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SECTION IX - SPECIAL PRECAUTIONS
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PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: STORE IN A COOL, DRY, WELL VENTILATED AREA, AWAY FROM ALL INCOMPATIBLE MATERIALS. KEEP AWAY FROM HEAT, SPARKS AND FLAME. KEEP CONTAINER CLOSED. GROUND ALL EQUIPMENT.

OTHER PRECAUTIONS: DO NOT USE PRESSURE TO EMPTY CONTAINERS. DO NOT CUT, GRIND, WELD OR DRILL ON OR NEAR THIS CONTAINER. CONTAINERS WILL RETAIN PRODUCT RESIDUES AND VAPORS. HANDLE EMPTY CONTAINERS AS IF THEY WERE FULL. SOME OR ALL OF THE LISTED COMPONENTS OF THIS PRODUCT MAY PRESENT A HEALTH THREAT IN THE FORM OF DUSTS.

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SECTION X - HMIS INFORMATION
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HMIS: HEALTH: 3 FLAMMABILITY: 2 REACTIVITY: 1 PERSONAL
PROTECTION: K