

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS IDENTIFICATION NAME: TYFO® U Coat, PART A
MSDS NUMBER: TYFO-U-A-001

DATE: March 28, 2011 **PAGE:** 1 OF 7
SUPERSEDES MSDS: 10/01/08

SECTION I: MATERIAL AND MANUFACTURER IDENTIFICATION

MANUFACTURER:
FYFE CO. LLC
8380 Miralani Drive
San Diego, CA 92126

EMERGENCY TELEPHONE NUMBER:
800-424-9300 or 703-527-3887
INFORMATION TELEPHONE NUMBER:
858-642-0694

PRODUCTION IDENTIFICATION NUMBER: TYFO® U, PART A
CHEMICAL FAMILY:

SECTION II: COMPOSITION / INFORMATION ON INGREDIENTS

MATERIAL COMPONENT	OR	CAS NUMBER	% BY WEIGHT	ACGIH-TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA-CEIL
Microcrystalline Silica		14808-60-7	40.0	0.025 Mg/M3 (respirable)	N/E	0.1 Mg/M3 (respirable)	N/E
Titanium Dioxide		13463-67-7	30.0	10 Mg/M3	N/E	10 Mg/M3	N/E
1-Methoxy-2-Propanol Acetate		108-65-6	15.0	N/E	N/E	N/E	N/E
Meta-Xylene		108-38-3	10.0	434 Mg/M3	651 Mg/M3	434 Mg/M3	N/E
Aluminum Silicate		1332-58-7	10.0	2 Mg/M3	N/E	5 Mg/M2	N/E
Toluene		108-88-3	5.0	20 PPM	N/E	375 Mg/M3	N/E
Para-Xylene		106-42-3	5.0	100 PPM	150 PPM	435 Mg/M3	N/E
Ethyl Benzene		100-41-4	5.0	100 PPM	125 PPM	435 Mg/M3	N/E
Aromatic Hydrocarbon 1,2,3		64742-95-6	5.0	N/E	N/E	N/E	N/E
Trimethylbenzene		95-63-6	5.0	25 PPM	N/E	125 Mg/M3	N/E
Carbon Black		1333-86-4	5.0	3.5 Mg/M3	N/E	3.5 Mg/M3	N/E
Ortho-Xylene		95-47-6	5.0	434 Mg/M3	651 Mg/M3	434 Mg/M3	N/E
Butyl Benzyl Phthalate		85-68-7	5.0	N/E	N/E	N/E	N/E

SECTION III: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Warning! Flammable. Harmful if inhaled. Causes eye and skin irritation. Aspiration may cause lung damage. May cause dizziness and drowsiness. Keep away from heat, sparks, flame. Avoid breathing vapor. Avoid contact with eyes, skin and clothing. Do not swallow. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Contains SILICA which can cause cancer. Risk of Cancer depends on duration and level of exposure.

EFFECTS OF OVEREXPOSURE:

Eye Contact: May cause eye irritation.

SECTION III: HAZARDS IDENTIFICATION (Continued)

Skin Contact: Direct skin contact may cause irritation.

Inhalation: Harmful if inhaled, may affect the brain or nervous system, causing dizziness, headache, or nausea. May cause nose and throat irritation.

Ingestion: Harmful if swallowed.

Chronic Hazards: Crystalline silica is known to cause silicosis. Crystalline silica (Quartz) is classified as a known human carcinogen (Group 1) by IARC. Exposure is by route of inhalation. If material is in a liquid matrix it is unlikely to be inhaled. However, when sanding or grinding the finished product, there may be potential for crystalline silica to become airborne. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

Primary Route(s) of Entry: Skin Contact, Inhalation, Ingestion, Eye Contact

Medical Conditions Prone to Aggravation by Exposure: If you have a condition that could be aggravated by exposure to dust or organic vapors, see a physician prior to use.

SECTION IV: FIRST AID MEASURES**FIRST AID MEASURES:**

Eye Contact: If material gets into eyes, flush with water immediately for 15 minutes. Consult a physician.

Skin Contact: In case of contact, immediately flush skin with plenty of water while removing contaminated clothing and shoes. Launder clothing before reuse. If rash or irritation develops, consult a physician.

Inhalation: If inhaled, remove to fresh air. Administer oxygen if necessary. Consult a physician if symptoms persist or exposure was severe.

Ingestion: If swallowed do not induce vomiting. Seek immediate medical attention.

SECTION V: FIRE FIGHTING MEASURES**FIGHTING MEASURES:**

Flash Point, F: 95F (35C)
(Seta flash)

Lower Explosive Limit, %: 0.6
Upper Explosive Limit, %: 12.7

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unusual Fire and Explosion Hazards: Flammable Liquid. Vapors are heavier than air and will accumulate. Vapors will form explosive concentrations with air. Vapors travel long distances and will flashback. Use mechanical ventilation when necessary to keep percent vapor below the "Lower Explosion Level" (LEL). Eliminate all ignition sources. Keep away from sparks, open flames and heat sources. All electric equipment and installations should be made and grounded in accordance with the National Electrical Code. In areas where explosion hazards exist, workers should be required to use non-ferrous tools and to wear conductive and non-sparking shoes.

Special Firefighting Procedures: Flammable. Cool fire-exposed containers using water spray.

SECTION VI: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES:

Steps to Be Taken If Material Is Released Or Spilled: Eliminate all ignition sources. Handling equipment must be grounded to prevent sparking. Evacuate the area of unprotected personnel. Wear appropriate personal protection clothing and equipment. Follow exposure controls/personal protection guidelines in Section 8. contain and soak up residual with an absorbent (clay or sand). Take up absorbent material and seal tightly for proper disposal. Dispose of in accordance with local, state and federal regulations. Refer to Section 15 for SARA Title III and CERCLA information.

SECTION VII: HANDLING AND STORAGE

HANDLING AND STORAGE:

Handling: Do not get in eyes, on skin, or on clothing. Keep container tightly closed when not in use. Wear personal protection equipment. Do not breathe vapors. Wash thoroughly after handling. If pouring or transferring materials, ground all containers and tools. Do not weld, heat, cut or drill on full or empty containers. Use only in accordance with Carboline application instructions, container label and Product Data Sheet. Avoid breathing vapors or spray mist.

Storage: Keep away from heat, sparks, open flames and oxidizing agents. Keep containers closed. Store in a cool, dry place with adequate ventilation.

SECTION VIII: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE CONTROLS/PERSONAL PROTECTION:

Engineering Controls: Use explosion-proof ventilation when required to keep below health exposure guidelines and Lower Explosion Limit (LEL).

Respiratory Protection: Use only with ventilation to keep levels below exposure guidelines listed in Section 2. User should test and monitor exposure levels to ensure all personnel are below guidelines. If not in a confined space, and not able to monitor, use MSHA/NIOSH approved organic vapor respirator. Follow all current OSHA requirements for respirator use.

Skin Protection: Recommend impervious gloves and clothing to avoid skin contact. If material penetrates to skin, change gloves and clothing. The use of protective creams may be beneficial to certain individuals. Protective creams should be applied before exposure.

Eye Protection: Recommend safety glasses with side shields or chemical goggles to avoid eye contact.

Other protective equipment: Eye wash and safety showers should be readily available.

Hygienic Practices: Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Use of a hand cleaner is recommended. Launder contaminated clothing before reuse. Leather shoes can absorb and allow hazardous materials to pass through. Check shoes carefully after soaking before reuse.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES:

Boiling Range: 176 F (80 C) - 464 F (240 C)

Odor: Solvent

Appearance: Viscous Liquid, Various Colors

Solubility in H2O: N/D

Freeze Point: N/D

Vapor Pressure: N/D

Physical State: Liquid

Vapor Density: Heavier than Air

Odor Threshold: N/D

Evaporation Rate: Slower Than Ether

Specific Gravity: app. 1.45

PH: N/D

(see Section 16 for abbreviation legend)

SECTION X: STABILITY AND REACTIVITY

STABILITY AND REACTIVITY:

Conditions To Avoid: Heat, sparks and open flames.

Incompatibility: Keep away from strong oxidizing agents, heat and open flames.

Hazardous Decomposition Products: Carbon monoxide, nitrogen oxides, and unidentified organic compounds. Consider all smoke and fumes from burning material as very hazardous. Welding, cutting or abrasive grinding can create smoke and fumes. Do not breathe any fumes or smoke from these operations.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

SECTION XI: TOXICOLOGICAL INFORMATION

PRODUCT LD50: N/D

CHEMICAL NAME	CAS NUMBER	LD50	OSHA PEL-TWA
Microcrystalline Silica	14808-60-7	NOT AVAILABLE	NOT AVAILABLE
Titanium Dioxide	13463-67-7	>25 G/KG, ORAL, RAT	6.82 Mg/L 4HR, RAT
1-Methoxy-2-Propanol Acetate	108-65-6	NOT AVAILABLE	NOT AVAILABLE
Meta-Xylene	108-38-3	NOT AVAILABLE	NOT AVAILABLE
Aluminum Silicate	1332-58-7	NOT AVAILABLE	NOT AVAILABLE
Toluene	108-88-3	5.0 G/KG RAT ORAL, 14G/KG RABBIT	8000 PPM/4HRS, RAT, INHALATION
Para-Xylene	106-42-3	NOT AVAILABLE	NOT AVAILABLE
Ethyl Benzene	100-41-4	3500 Mg/KG RAT, ORAL	NOT AVAILABLE
Aromatic Hydrocarbon	64742-95-6	4700 Mg/KG RAT, ORAL	3670 PPM/8 HOURS, RAT, INHALATION
1,2,3 Trimethylbenzene	95-63-6	5GM/KG, RAT, ORAL	18 GM/M3/4 OURS
Carbon Black	1333-86-4	NOT AVAILABLE	>8000 Mg/KG, ORAL, RAT
Ortho-Xylene	95-47-6	NOT AVAILABLE	NOT AVAILABLE
Butyl Benzyl Phthalate	85-68-7	20400 Mg/KG, RAT, ORAL	6.7 MG/KG, RAT, ORAL

SECTION XII: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No Data

SECTION XIII: DISPOSAL CONSIDERATIONS

DISPOSAL INFORMATION: Dispose of in accordance with State, Local, and Federal Environmental regulations. Responsibility for proper waste disposal is with the owner of the waste.

SECTION XIV: TRANSPORTATION INFORMATION

TRANSPORTATION INFORMATION:

DOT Proper Shipping Name:	Paint
Packing Group:	III
DOT Technical Name:	N/A
Hazard Subclass:	N/A
DOT Hazard Class:	3
Resp. Guide Page:	128
DOT UN/NA Number:	UN 1263

SECTION XV: REGULATORY INFORMATION

REGULATORY INFORMATION:

CERCLA – SARA HAZARD CATEGORY:

This product has been reviewed according to the EPA Hazard Categories promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA SECTION 313: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER
Meta-Xylene	108-38-3
Toluene	108-88-3
Para-Xylene	106-42-3
Ethyl Benzene	100-41-4
1,2,4 Trimethylbenzene	95-63-6
Ortho-Xylene	95-47-6

TOXIC SUBSTANCES CONTROL ACT:

All components of this product are listed on the TSCA inventory.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(B) Substances exist in this product.

U.S. STATE REGULATIONS AS FOLLOWS:**NEW JERSEY RIGHT-TO-KNOW:**

The following materials are non-hazardous, but are among the top five components in this product.

CHEMICAL NAME	CAS NUMBER
Acrylic Copolymer	TRADE SECRET
Polyester Resin	TRADE SECRET

PENNSYLVANIA RIGHT-TO-KNOW:

The following non-hazardous ingredients are present in the product at greater than 3%.

CHEMICAL NAME	CAS NUMBER
Acrylic Copolymer	TRADE SECRET
Polyester Resin	TRADE SECRET
Organic Pigment	5567-15-7
Fast Red Pigment	MIXTURE
Organic Pigment	31837-42-0
Yellow Iron Oxide	51274-00-1
Iron Oxide	1332-37-2

CALIFORNIA PROPOSITION 65:

WARNING: The following ingredients present in the product are known to the State of California to cause Cancer:

CHEMICAL NAME	CAS NUMBER
Microcrystalline Silica	14808-60-7
Ethyl Benzene	100-41-4
Carbon Black	1333-86-4
Cumene	98-82-8
Organic Pigment	31837-42-0
Yellow Iron Oxide	51274-00-1
Iron Oxide	1332-37-2

WARNING: The following ingredients present in the product are known to the State of California to cause birth defects, or other reproductive hazards:

CHEMICAL NAME	CAS NUMBER
Toluene	108-88-3
Butyl Benzyl Phthalate	85-68-7

INTERNATIONAL REGULATIONS AS FOLLOWS:**CANADIAN WHMIS**

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: B2 D2A D2B

SECTION XVI: OTHER INFORMATION

HMIS Ratings: Health: 2 Flammability: 2 Reactivity: 0 Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, GR/LTR MIXED (UNTHINNED): 383

REASON FOR REVISION: Changes made in Section(s): 1, 2, 5, 8, 9,11, and 15

Legend: N.A. – Not Applicable, N.E. – Not Established, N.D. – Not Determined

This information contained herein is, to the best of our knowledge and belief accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all application federal, state, and local laws and regulations.

SPECIAL PRECAUTIONS: Empty containers will retain some of the product residue. When handling or disposing of them, follow all label warnings, other instructions and waste disposal procedures.

EXPLANATION AND DISCLAIMER: Wherever such words or phrases as “hazardous,” “toxic,” carcinogen,” appear herein, they are used as defined or described under state employee right-to-know laws, Federal OSHA laws or the direct sources for these laws such as the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), etc. The use of such words or phrases should not be taken to mean that we deem or imply any substance or exposure to be toxic, hazardous or otherwise harmful. **ANY EXPOSURE CAN ONLY BE UNDERSTOOD WITHIN THE ENTIRE CONTEXT OF ITS OCCURRENCE, WHICH INCLUDES SUCH FACTORS AS THE SUBSTANCE’S CHARACTERISTICS AS DEFINED IN THE MSDS, AMOUNT AND DURATION OF EXPOSURE, OTHER CHEMICALS PRESENT AND PREEXISTING INDIVIDUAL DIFFERENCES IN RESPONSE TO THE EXPOSURE.**

The data provided is bases on the information received from our raw material suppliers and other sources believed to be reliable. **THIS DATA DOES NOT CONSTITUTE A GUARANTEE (EXPRESSED OR IMPLIED), WARRANTY (INCLUDING WARRANTY WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) OR REPRESENTATION (INCLUDING FREEDOM FROM PATENT LIABILITY) BY US WITH RESPECT TO THE DATA, THE PRODUCT DESCRIBED OR IT’S USE FOR ANY SPECIFIC PURPOSE, EVEN IF THAT PURPOSE IS KNOWN TO US. WE DISCLAIM LIABILITY FOR DAMAGE OR INJURY INCURRING DIRECTLY OR INDIRECTLY FROM THE USE OF THIS PRODUCT.**

APPROVED AND AUTHORIZED BY: *Edward R. Fyfe*