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# LEED RELATED DOCUMENTS

# FIREBOND Concentrate

LEED Letter	Page 2
Volatile Organic Compounds (VOCs) Content Report	Page 4
Volatile Organic Compounds (VOCs) Emissions Report	Page 6



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March 10, 2020

RE: Monokote® Fireproofing Materials and sustainability.

GCP Applied Technologies is proud to participate in a number of sustainability programs that can help you design and construct a more sustainable building.

#### **Contribution to LEED**

Monokote® Fireproofing materials are shipped in recyclable packaging and contain recycled content. We also have publicly available transparency reports to provide insight into our products. Choosing Monokote® Fireproofing can potentially help projects achieve the following LEED® 2009 and LEED® v4 credits under the Building Design + Construction and Interior Design + Construction rating systems:

LEED® 2009				
Construction Waste Management	Regional Materials			
Recycled Content	Acoustic Environment (Healthcare)			
Low-Emitting Materials—Paints and Coatings	Enhanced Acoustical Performance (Schools)			
LEE	D® v4			
Building Product Disclosure and Optimization—	Building Product Disclosure and Optimization—			
Material Ingredients	Environmental Product Declarations			
Low Emitting Materials	Acoustic Performance			
Building Product Disclosure and Optimization—	Construction and Demolition Waste			
Sourcing of Raw Materials	Management			

#### **Environmental Product Declaration:**

All Monokote® Fireproofing materials have a Type III environmental product declaration prepared in accordance with ISO 14025, ISO 21930, ISO 14040/44, ASTM Product Category Rule (PCR) for Spray-applied Fire-Resistive Materials (SFRM) and ASTM General Program Instructions for Type III EPDs.

**Regional Materials**: Depending on your project location, you may also be eligible to claim a 100-mile regional sourcing multiplier for LEED® V4. Monokote® Fireproofing materials are produced in the following cities in North America:

Ajax, Ontario, Canada Irondale, Alabama

Santa Ana, California Andover, Massachusetts (Firebond Concentrate only)

### **Contribution to the Living Building Challenge**

GCP Applied Technologies has developed Declare **RED LIST FREE** labels for several Monokote® Fireproofing products, all of which are available on the Declare website.

**VOC – Content and Emissions**; The majority of Monokote® Fireproofing products have been tested per the CDPH - **CA Section 01350** Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources using Environmental Chambers Version 1.2.

The **VOC** Content of our Monokote® Fireproofing products are as follows:

Monokote® Product Volatile Organic Compounds (VOC) reported per the Emission Standards

Monokote® Fireproofing 0 g/L
Firebond® Concentrate 0.60 g/L

The **recycled contents of** Monokote® Fireproofing are shown below:

	% Weight	% Weight
<u>Monokote</u>	Post-Consumer	Post- Industrial
MK-6/HY	7.13	0.00
MK-6s	5.13	0.00
MK-6 ES	5.13	0.00
MK-6/GF	7.05	0.00
RG	8.27	0.00
MK-10/HB	6.99	0.00
MK-10/HB ES	5.01	0.00
MK-1000/HB	5.10	0.00
MK-1000/HB ES	5.09	0.00
Z-106s	1.44	0.00
Z-106/HY	5.05	0.00
Z-106G	5.13	0.00
Z-146	1.93	0.00
Z-3306	4.51	0.00
SK-III	0.00	0.00
Z-146PC	1.91	0.00
Z-146T	1.91	0.00
Z-156	1.25	0.00
Z-156PC	1.23	0.00
Z-156T	1.23	0.00
Firebond Concentrate	0.00	0.00
MK Accelerator	0.00	0.00

All of the claims made by GCP Applied Technologies with respect to the claims made above have been verified by independent 3<sup>rd</sup> parties.

Please feel free to contact me or any member of the Monokote® Fireproofing team should you require a project specific letter, additional information or clarification. Additionally a project specific letter may be obtained <a href="here">here</a>.

We look forward to Monokote® Fireproofing being your product of choice when sustainability is important to you.

Sincerely,

John Dalton

Technical Service Manager Fire Protection Products GCP Applied Technologies

The Calo



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# Volatile Organic Compounds (VOCs) Content Report



July 7, 2014

Cole Stanton, VP Fiberlock Technologies, Inc. 150 Dascomb Road Andover, MA 01810

RE: Hand Calculated Volatile Organic Compound (VOC)

# **CERTIFICATION**

This is to certify that the hand-calculated Volatile Organic

Compound (VOC) composition for Fiberlock Firebond

Concentrate No. 7460 is 0.60 grams per liter (0.60 g/l).

(Signed)

Ronald B. Child, VP

**Compiance and Regulatory** 

**Affairs** 

California Products

Corporation\*

\*Fiberlock Technologies, Inc. is a wholly-owned subsidiary of California Products Corporation, 150 Dascomb Rd., Andover, MA 01810

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CIGIES

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Phone: 800.342.3755 Fax: 978.475.6205 www.fiberlock.com

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Disaster Restoration
Mobile Containment



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# Volatile Organic Compounds (VOCs) Emissions Report

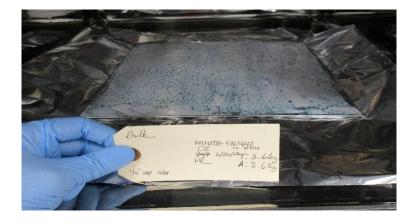


INDOOR AIR	INDOOR AIR QUALITY EVALUATION FOLLOWING THE REQUIREMENTS OF CDPH/EHLB/STANDARD METHOD					
Product Description	Firebond Concentrate					
Customer Information	ICP GROUP KEVIN PERRY 150 DASCOMB ROAD ANDOVER MA 01810					
Testing Laboratory	UL Environment - Marietta, 2211 Newmarket Parkway, Marietta, GA 30067-9399 USA					
Product Category	Paints and Coatings					
Date Received	February 3, 2023					
Test Description	The product was received by UL Environment as packaged and shipped by the customer. The package was visually inspected and stored in a controlled environment immediately following sample check-in. Just prior to loading, the product was unpackaged, and 3.63 g of product were applied to a foil-wrapped metal tray using a 1/4" nap roller. The sample was placed inside the environmental chamber and tested according to the specified protocol.					
Test Date	February 8, 2023 - February 22, 2023					
Product Area Exposed	one-sided area = 0.0853 m <sup>2</sup>					
Environmental Chamber ID and Volume	SD2 - 0.0874 m³					
Product Loading Ratio	0.98 m²/m³					
Test Chamber Conditions	Air change rate: $1.00 \pm 0.05$ 1/h Inlet air flow rate: $0.0874 \pm 0.004$ m³/h Temperature: $21.9^{\circ}$ C - $23.2^{\circ}$ C Relative Humidity: $50\%$ RH $\pm 5\%$ RH					
Test Method	CDPH - CA Section 01350 Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources using Environmental Chambers Version 1.2.					
Authorized by	allum Mcfor					

The temperature range specification is  $23^{\circ}C \pm 1^{\circ}$ . The actual temperature range listed above may vary slightly. If the range is outside this specification, data was reviewed to ensure a negative impact did not occur.

This test is accredited and meets the requirements of ISO/IEC 17025 as verified by ANSI National Accreditation Board. Refer to certificate and scope of accreditation AT-1297.

# PHOTOGRAPH OF SAMPLE



February 27, 2023 1001830780-5765642 1001830780-5765642

#### **RESULTS SUMMARY**

Product Des	cription	Firebo	nd Concentrate			
Environment	Prod Usa		Product Surface Area	Room Volume	Ventilation Rate (ACH)	Product Compliance?
Classroom	Wa	II	94.6 m²	231 m³	0.82	Yes
Office	Wa	ıll	33.4 m²	30.6 m <sup>3</sup>	0.68	Yes

# PROJECT DESCRIPTION

The product was monitored for emissions of TVOC, individual VOCs, formaldehyde and other aldehydes over the 96-hour test period. Measurements were made and predicted exposures were calculated according to the CA Section 01350 protocol. As specified in this protocol, the results at 96 hours, after 10 days of conditioning, were compared to ½ (one-half) the current Chronic Reference Exposure Levels (CRELs), as adopted from the California OEHHA list. All identified VOCs were also compared to the California-EPA OEHHA Proposition 65 list and the California-EPA Air Resource Board list of Toxic Air Contaminants (TACs).

# Report Outline:

Table 1	Comparison of Data To Method Requirements
Table 2	Chamber Concentrations and Emission Factors
Table 3	Most Abundant Compounds
Table 4	VOC Predicted Air Concentrations And Regulatory Information
Chain of Custody	Chain of Custody

Download more information regarding UL's technical references and resources, product evaluation methodologies information, quality control program, and environmental chamber evaluations from our website <u>click here</u> or https://www.ul.com/offerings/greenguard-certification

For RSD, Quality Assurance Report or other quality documents, Request here or contact ULE.

February 27, 2023 1001830780-5765642 1001830780-5765642

# **TABLE 1**

Product Description Firebond Concentrate							
COMPARISON O	F DATA TO	METHOD	REQUIREMENTS A	AT 96 HOURS FO	DLLOWING 10 DAY	S OF CONDITION	ING
Compound	CAS Number	½ CREL (µg/m³)	Chamber Concentration (µg/m³)	Emission Factor <sup>††</sup> (µg/m²•hr)	Classroom Predicted Concentration (µg/m³)**	Office Predicted Concentration (µg/m³)**	Meets ½ CREL? (Classroom/ Office)
Acetaldehyde	75-07-0	70	BQL	BQL	BQL	BQL	Yes
Benzene	71-43-2	1.5	BQL	BQL	BQL	BQL	Yes
Carbon disulfide*	75-15-0	400	BQL	BQL	BQL	BQL	Yes
Carbon tetrachloride*	56-23-5	20	BQL	BQL	BQL	BQL	Yes
Chlorobenzene	108-90-7	500	BQL	BQL	BQL	BQL	Yes
Chloroform*	67-66-3	150	BQL	BQL	BQL	BQL	Yes
Dichlorobenzene (1,4-)	106-46-7	400	BQL	BQL	BQL	BQL	Yes
Dichloroethylene (1,1)*	75-35-4	35	BQL	BQL	BQL	BQL	Yes
Dimethylformamide (N,N-)*	68-12-2	40	BQL	BQL	BQL	BQL	Yes
Dioxane (1,4-)	123-91-1	1,500	BQL	BQL	BQL	BQL	Yes
Epichlorohydrin	106-89-8	1.5	BQL	BQL	BQL	BQL	Yes
Ethylbenzene	100-41-4	1,000	BQL	BQL	BQL	BQL	Yes
Ethylene glycol	107-21-1	200	BQL	BQL	BQL	BQL	Yes
Ethylene glycol monoethyl ether acetate*	111-15-9	150	BQL	BQL	BQL	BQL	Yes
Ethylene glycol monoethyl ether*	110-80-5	35	BQL	BQL	BQL	BQL	Yes
Ethylene glycol monomethyl ether acetate*	110-49-6	45	BQL	BQL	BQL	BQL	Yes
Ethylene glycol monomethyl ether*	109-86-4	30	BQL	BQL	BQL	BQL	Yes
Formaldehyde	50-00-0	9.0***	BQL	BQL	BQL	BQL	Yes

CDPH2

February 27, 2023 1001830780-5765642 1001830780-5765642

Product Description | Firebond Concentrate

Froduct Description   Firebond Concentrate									
COMPARISO	COMPARISON OF DATA TO METHOD REQUIREMENTS AT 96 HOURS FOLLOWING 10 DAYS OF CONDITIONING								
Compound	CAS Number	½ CREL (μg/m³)	Chamber Concentration (µg/m³)	Emission Factor <sup>††</sup> (µg/m²•hr)	Classroom Predicted Concentration (µg/m³)**	Office Predicted Concentration (μg/m³)**	Meets ½ CREL? (Classroom/ Office)		
Hexane (n-)	110-54-3	3,500	BQL	BQL	BQL	BQL	Yes		
Isophorone*	78-59-1	1,000	BQL	BQL	BQL	BQL	Yes		
Isopropanol	67-63-0	3,500	BQL	BQL	BQL	BQL	Yes		
Methyl chloroform*	71-55-6	500	BQL	BQL	BQL	BQL	Yes		
Methyl t-butyl ether	1634-04-4	4,000	BQL	BQL	BQL	BQL	Yes		
Methylene chloride*	75-09-2	200	BQL	BQL	BQL	BQL	Yes		
Naphthalene	91-20-3	4.5	BQL	BQL	BQL	BQL	Yes		
Phenol	108-95-2	100	BQL	BQL	BQL	BQL	Yes		
Propylene glycol monomethyl ether*	107-98-2	3,500	BQL	BQL	BQL	BQL	Yes		
Styrene	100-42-5	450	BQL	BQL	BQL	BQL	Yes		
Tetrachloroethylene (perchloroethylene)	127-18-4	17.5	BQL	BQL	BQL	BQL	Yes		
Toluene	108-88-3	150	BQL	BQL	BQL	BQL	Yes		
Trichloroethylene	79-01-6	300	BQL	BQL	BQL	BQL	Yes		
Vinyl acetate	108-05-4	100	BQL	BQL	BQL	BQL	Yes		
Xylenes (m-, o-, p-)	1330-20-7	350	BQL	BQL	BQL	BQL	Yes		

BQL denotes below quantifiable level of 0.04 µg for individual VOCs, with the exceptions benzene and epichlorohydrin which have a QL of 0.02 µg, based on a standard 18 L air collection volume.

<sup>&</sup>lt;sup>††</sup>The emission factor (EF) is calculated from the chamber concentration (CC), the chamber air change rate (N<sub>C</sub>), the chamber volume (V<sub>C</sub>), and the product area exposed in the chamber (A<sub>C</sub>) as: EF = (CC\*V<sub>C</sub>\*N<sub>C</sub>)/A<sub>C</sub>.

<sup>\*\*</sup>The predicted building exposure concentration (BC) is calculated from the emission factor (EF), the building air change rate (N<sub>B</sub>), the building room volume (V<sub>B</sub>), and the product area exposed in the building room (A<sub>B</sub>) as: BC = (EF\*A<sub>B</sub>)/(V<sub>B</sub>\*N<sub>B</sub>). For more information on Predicted Concentration modeling parameters, click here.

<sup>\*\*\*</sup>Guidance value per CA Standard Method

CDPH2

February 27, 2023 1001830780-5765642 1001830780-5765642

# **TABLE 2**

Draduat Deceriation	-irahand Canaantrata					
Product Description Firebond Concentrate						
CHAMBER CONCENTRATIONS AND EMISSION FACTORS FOR TVOC AND FORMALDEHYDE AT 24, 48, AND 96 HOURS FOLLOWING 10 DAYS OF CONDITIONING						
Elapsed Exposure Hour After 10 Days Conditioning	Chamber Concentration (μg/m³)	Emission Factor <sup>††</sup> (μg/m²•hr)				
TVOC†						
24	12.3	12.5				
48	6.6	6.7				
96	9.5	9.8				
Formaldehyde <sup>‡</sup>						
24	BQL	BQL				
48	BQL	BQL				
96	BQL	BQL				

BQL denotes below quantifiable level of 2 µg/m<sup>3</sup>.

Exposure hours are nominal (± 1 hour).

 $<sup>^{\</sup>dagger}$ Defined as the sum of those VOCs that elute between the retention times of n-hexane ( $C_6$ ) and n-hexadecane ( $C_{16}$ ) on a non-polar capillary GC column quantified based on a toluene response factor.

<sup>&</sup>lt;sup>‡</sup> Compound identified and quantified by DNPH derivitization and HPLC/UV analysis.

<sup>&</sup>lt;sup>††</sup>The emission factor (EF) is calculated from the chamber concentration (CC), the chamber air change rate (N<sub>C</sub>), the chamber volume (V<sub>C</sub>), and the product area exposed in the chamber (A<sub>C</sub>) as: EF = (CC\*V<sub>C</sub>\*N<sub>C</sub>)/A<sub>C</sub>.

February 27, 2023 1001830780-5765642 1001830780-5765642

# TABLE 3

# **Product Description** Firebond Concentrate

# TEN MOST ABUNDANT IDENTIFIED INDIVIDUAL VOLATILE ORGANIC COMPOUNDS (VOCs) AND/OR ALDEHYDES AT 96 HOURS FOLLOWING 10 DAYS OF CONDITIONING

CAS Number	Compound	Chamber Concentration (µg/m³)	Emission Factor <sup>††</sup> (µg/m²•hr)	Exposure Co	d Predicted oncentration** g/m³)
				Classroom	Office
	TVOC##	9.5	9.8	4.9	15.7
112-53-8	1-Dodecanol*	9.5	9.8	4.9	15.7

Exposure hours are nominal (± 1 hour).

VOC data obtained by scanning GC/MS; identification of compound made by retention time and mass spectral characteristics.

<sup>†</sup>Quantified using multipoint authentic standard curve. Other VOCs quantified relative to toluene.

<sup>\*</sup>Identification based on NIST mass spectral database only.

<sup>&</sup>lt;sup>‡</sup>Compound identified and quantified by DNPH derivitization and HPLC/UV analysis.

<sup>&</sup>lt;sup>††</sup>The emission factor (EF) is calculated from the chamber concentration (CC), the chamber air change rate (N<sub>C</sub>), the chamber volume (V<sub>C</sub>), and the product area exposed in the chamber (A<sub>C</sub>) as: EF = ( $CC^*V_C^*N_C$ )/A<sub>C</sub>.

<sup>&</sup>lt;sup>‡‡</sup>Defined as the sum of those VOCs that elute between the retention times of n-hexane (C<sub>6</sub>) and n-hexadecane (C<sub>16</sub>) on a non-polar capillary GC column quantified based on a toluene response factor.

<sup>\*\*</sup>The predicted building exposure concentration (BC) is calculated from the emission factor (EF), the building air change rate (N<sub>B</sub>), the building room volume (V<sub>B</sub>), and the product area exposed in the building room (A<sub>B</sub>) as: BC = (EF\*A<sub>B</sub>)/(V<sub>B</sub>\*N<sub>B</sub>). For more information on Predicted Concentration modeling parameters, click here.

CDPH2

February 27, 2023 1001830780-5765642 1001830780-5765642

# **TABLE 4**

Pr	oduct Description	Firebond Concentrate										
VOC PREDICTED AIR CONCENTRATIONS AND REGULATORY INFORMATION AT 96 HOURS FOLLOWING 10 DAYS OF CONDITIONING												
CAS	0		Chamber	Emission	Predicted Exposure Concentration**		✓ Indicates Presence On List		ence			
Number	Compo	Concentration (μg/m³)	Concentration (µg/m³)			Consontiation	Factor <sup>††</sup> (µg/m²•hr)	• • • • • • • • • • • • • • • • • • • •	/m³)	CA PROP	CA AIR	CREL
			(10)	,	Classroom	Office	65	TOXIC				
	none											

<sup>&</sup>lt;sup>†</sup>Quantified using multipoint authentic standard curve. Other VOCs quantified relative to toluene.

- CAL Prop. 65: California Health and Welfare Agency, Proposition 65 Chemicals
  - 1 = known to cause cancer
  - 2 = known to cause reproductive toxicity

#### CAL Toxic Air Contaminant:

- I) Substances identified as Toxic Air Contaminants, known to be emitted in California, with a full set of health values reviewed by the Scientific Review Panel.
- IIA) Substances identified as Toxic Air Contaminants, known to be emitted in California, with one or more health values under development by the Office of Environmental Health Hazard Assessment for review by the Scientific Review Panel.
- IIB) Substances NOT identified as Toxic Air Contaminants, known to be emitted in California, with one or more health values under development by the Office of Environmental Health Hazard Assessment for review by the Scientific Review Panel.
- III) Substances known to be emitted in California, and are NOMINATED for development of health values or additional health values.
- IVA) Substance identified as Toxic Air Contaminants, known to be emitted in California, and are TO BE EVALUATED for entry into Category III.
- IVB) Substance NOT identified as Toxic Air Contaminants, known to be emitted in California, and are TO BE EVALUATED for entry into Category III.
- V) Substance identified as Toxic Air Contaminants, and NOT KNOWN TO BE EMITTED from stationary source facilities in California based on information from the AB 2588 Air Toxic "Hot Spots" Program and the California Toxic Release Inventory.
- VI) Substances identified as Toxic Air Contaminants, NOT KNOWN TO BE EMITTED from stationary source facilities in California, and are active ingredients in pesticides in California.

<sup>&</sup>lt;sup>‡</sup>Compound identified and quantified by DNPH derivitization and HPLC/UV analysis.

<sup>&</sup>lt;sup>††</sup>The emission factor (EF) is calculated from the chamber concentration (CC), the chamber air change rate (N<sub>C</sub>), the chamber volume (V<sub>C</sub>), and the product area exposed in the chamber (A<sub>C</sub>) as: EF = (CC\*V<sub>C</sub>\*N<sub>C</sub>)/A<sub>C</sub>.

<sup>\*\*</sup>The predicted building exposure concentration (BC) is calculated from the emission factor (EF), the building air change rate ( $N_B$ ), the building room volume ( $V_B$ ), and the product area exposed in the building room ( $A_B$ ) as: BC = (EF\* $A_B$ )/( $V_B$ \* $N_B$ ). For more information on Predicted Concentration modeling parameters, click here.

February 27, 2023 1001830780-5765642 1001830780-5765642

<b>Product Description</b>	Firebond Concentrate				
CHAIN OF CUSTODY					

Post Testing Sample Disposition (Sample will be disposed of 30 days after report is issued if information below is not provided)  Return Shipping Co.  Receiver Name Condition Upon Arrival Condition Notes  Receive Time Receiver Time Condition Notes  Receiver Time						5765642	
Product # 5765 L # 2		INTER	NAL Use Only			Description	5765642
Content   14665835	Project #	10018307	01830780			Firebond Concentrate	
Received Date:   Content   14665855   Content   Conten	Product #	# 5765642			Customer ICP Group		
Task Line   1,1	Order#	Order # 14665835				Received Date:	Labware Project No: 1001830780 Order No.: 14665835
Of	Task Line	1.1	UL BU			14.00.56	
Product Category   Section   Product Category   Comments   Product Category	l of	1	1/3	003409	3		1 of 4
Test Type Request (These options have   Odor Evaluation   MRT UL 2824   GLP (24 hour)   GLP (336 hour)    GREENGUARD Screening (24 hr TVOC, VOCs, & aldehydes w/ modeling)   Modeling:    Other Test Type Request   GREENGUARD Screening (24 hr TVOC, VOCs, & aldehydes w/ modeling)   Modeling:    Other Test Type Request   GREENGUARD Screening (24 hr TVOC, VOCs, & aldehydes w/ modeling)   Modeling:    Other Test Type Request   GREENGUARD Screening (24 hr TVOC, VOCs, & aldehydes w/ modeling)   Modeling:    Other Test Type Request   GREENGUARD Screening (24 hr TVOC, VOCs, & aldehydes w/ modeling)   Modeling:    Other Test Type Request   GREENGUARD Screening (24 hr TVOC, VOCs, & aldehydes w/ modeling)   Modeling:    Other Test Type Request   GREENGUARD Screening (24 hr TVOC, VOCs, & aldehydes w/ modeling)   Modeling:    Other Test Type Request   GREENGUARD Screening (24 hr TVOC, VOCs, & aldehydes w/ modeling)   Modeling:    Other Test Type Request   GREENGUARD Screening (24 hr TVOC, VOCs, & aldehydes w/ modeling)   Modeling:    Other Test Type Request   GREENGUARD Screening (24 hr TVOC, VOCs, & aldehydes w/ modeling)   Modeling:   Other Bridging Agent   Green Brid	Rush Re	quest - Sub		-	st confi	rı IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	oduct.
Company Name   Company Name   Company Name   Contact Name   Nam				Product Emissi	ons T	est Información CUWFBI915	
Cher Test Type Request   Comments   Commen	Test Tv	ne Pegueet	⊠CA01350 CDPH	/EHLB □Office		□Classroom	Residential
Other Test Type Request Comments Specify test method, non-standard sample preparation, modeling parameters, etc.  Product Category Application   Floor/Celling   Panel   Wall   Work Surface   Woher: Bridging Agent   Wet Products Only   Coverage Rate   100nft2/gal   Density   8.8lbs/gal   Specific Gravity   1.06   Product Description   Firebond Concentrate Manufacture ID# 7460   Product Commercial Name   Firebond Concentrate Manufacture ID# 7460   Product Commercial Name   Firebond Concentrate  Manufacture ID# 7460   Product Commercial Name   Firebond Concentrate  Manufacture ID# 7460   Product Commercial Name   Firebond Concentrate  Manufacture ID# 7460   Product Commercial Name   Firebond Concentrate  Manufacture ID# 7460   Product Commercial Name   Firebond Concentrate  Manufacture ID# 7460   Octate Manufactured   9/14/2022   Company Name   CP   Date Manufactured   9/14/2022   Contact Name   Kevin Perry   Contact Phone   (603)913-3978   Contact Email   Kevin Perry   Collector Name   Kevin Perry   Date Collected   10:00AM EST   Collector Signature   Collected   Collected   10:00AM EST   Collector Signature   Collected   Collected   Collected   Collected   Collected   Shipper Phone   Shipper Phone   Sample Submitted to   Shipper Signature   Collected   Collected   Collected   Collected   Collected    Manufacture ID# 7460   Collected   Collected   Collected   Collected   Collected   Air Bill #   Collected   Colle	(The	se options have	☐Odor Evaluation	□ MRT U	JL 2824	☐ GLP (24 hour)	☐ GLP (336 hour)
Request   Comments   Specify test method, non-standard sample preparation, modeling parameters, etc.	sı	pecific protocol)	□GREENGUARD	Screening (24 hr T	VOC, V	OCs, & aldehydes w/ modelir	ng) Modeling:
Request   Comments   Specify test method, non-standard sample preparation, modeling parameters, etc.	Othe	r Test Type					
Product Category   Product Category   Product Subcategory   Product Company   Product Content   Product Company   Product Company   Product Company   Product Content   Product Company   Product Compan		Request				1	
Application		Comments	Specify test method,	non-standard sample	prepara	tion, modeling parameters, etc.	
Application							
Application	Produc	ct Category	Building Scale	h		Subcategory Prints and	1 confined
Wet Products Only   Coverage Rate   1000ft2/gal   Density   8.8lbs/gal   Specific Gravity   1.06				Contract of the last of the la	□Wall		
Product Description   Firebond Concentrate   Manufacture ID#   7460   Product Commercial Name   Firebond Concentrate   Manufacture ID#   7460   Date Manufactured   9/14/2022   Section   9/14/2022   Date Manufactured   9/14/2022   Section   9/				000ft2/gal		Density 8.8lbs/gal	
Product Description   Firebond Concentrate   Manufacture ID# 7460   Product Commercial Name   Firebond Concentrate   Date Manufactured   9/14/2022   Contact Name   Kevin Perry   Technical Director   Contact Phone   (603)913-3978   Technical Director   Contact Phone   (603)913-3978   Contact Email   kperry@icpgroup.com   Collector Name   Kevin Perry   Date Collected   1/30/2023   Collector Phone   (603)913-3978   Time Collected   1/30/2023   Collector Signature   Collector Signa	***************************************	audio Ciny	Gorolago Hato H		omnai		
Manufacture ID#   7460	Product I	Description	Firebond Concer		ompai	iy ililoimution	
Company Name    CP				iliato	P	roduct Commercial Name	Firebond Concentrate
Company Name   CP							
Address Andover, MA Contact Phone (603)913-3978   Contact Email   kperry@icpgroup.com    Collector Name   Kevin Perry   Date Collected   1/30/2023   Collector Phone (603)913-3978   Time Collected   1/30/2023   Collector Signature   Collector	Com	pany Name	ICP				
Address Andover, MA Contact Phone (603)913-3978  O1810 Collection Information  Collector Name Kevin Perry Collector Phone (603)913-3978  Collector Phone (603)913-3978  Time Collected 1/30/2023  Collector Signature Condition Vivor Signature Condition Vivor Signature Condition Notes Collector Information Collector Information Collector Information Collector Information Collector Information Collector Signature Collector Signature Collector Information Co			150 Dascomb R	d			
Collector Name Kevin Perry  Collector Phone (603)913-3978  Collector Signature  Carrier Fedex  Shipper Name Shipper Name Shipper Phone Shipper Signature  Shipper Signature  UL Verification Services (Guangzhou) Building A1, 3F. Nansha Science and Technology Involved Incoration (Sample will be disposed of 30 days after report is issued if information  Receiver Name Carrier Fedex  Shipper Name Shipper Name Shipper Name Shipper Phone Shipper Signature  Sample Submitted to  UL Verification Services (Guangzhou) Building A1, 3F. Nansha Science and Technology Involved Incoration Cir. No. 25, South Huanshi Avenue, Nansha District, Guangzhou 511458, China  Post Testing Sample Disposition  (Sample will be disposed of 30 days after report is issued if information below is not provided)  Receiver Name Condition Notes  Receiver Date Receive Date Receive Date Receive Date Receive Time			Andover, MA	70		Contact Phone	(603)913-3978
Collector Name Kevin Perry  Collector Phone (603)913-3978  Collector Signature  Collector Signature  Carrier Fedex  Shipper Name  Shipper Phone Shipper Phone Shipper Signature  Sample Submitted to  SulL Environment (Marietta) Sult 106 Sult 108 Su						Contact Emai	kperry@icpgroup.com
Collector Phone (603)9,3-3978  Collector Signature  Shipping Information  Carrier Fedex  Shipper Name Shipper Phone Shipper Signature  Sample Submitted to  Sull Environment (Marietta) Sull 106 Marietta, GA 30067, USA  Post Testing Sample Disposition (Sample will be disposed of 30 days after report is issued if information  Receiver Name Condition Upon Arrival Condition Notes  Time Collected Collection Location Andover, MA  Date Shipped  Marietta, Date Shipped  Time Shipped  Air Bill #  Dult International Italia S.r.I  Other  ATTN: IAO Laboratory Via Europa, 9  Information below is not provided  Customer Shipping Acct #  Internal Use Only – Receiving Information  Receiver Signature  Condition Notes  Receive Time  Receive Time  Receive Time				Collection	on Info	rmation	
Collector Phone (603)913-3978  Collector Signature  Shipping Information  Carrier Fedex Shipper Name Shipper Phone Shipper Phone Shipper Signature  Sample Submitted to  UL Lenvironment (Marietta) Sulte 106 Warietta, GA 30067, USA  Post Testing Sample Disposition (Sample will be disposed of 30 days after report is issued if information  Receiver Name Condition Notes  Time Collected 10:00AM EST Collection Location Andover, MA  Shipper Information  Date Shipped Time Shipped Air Bill #  Date Shipped Time Shipped Air Bill #  Dut Unternational Italia S.r.I  Other  ATTN: IAO Laboratory Via Europa, 9 Information Via Europa, 9 Information  Receiver Signature  Condition Upon Arrival  Acceptable Not Acceptable Receiver Date Receive Time  Receiver Time	Collector Name		Kevin Perry			Date Collected	1/30/2023
Collector Signature  Shipping Information  Carrier Fedex Shipper Name Shipper Name Shipper Phone Shipper Signature  Sample Submitted to  UL Environment (Marietta) E211 Newmarket Pkwy Suite 106 Marietta, GA 30067, USA  Post Testing Sample Disposition (Sample will be disposed of 30 days after report is issued if information  Receiver Name Condition Upon Arrival Condition Notes  Carrier Fedex Shipping Information  Date Shipped Date Shipped Date Shipped Date Shipped Mmr/dd/yyyy 23  Time Shipped Air Bill #  Dul Unternational Italia S.r.l Air Bill #  Dots OD 3 2 2 2  Time Shipped Air Bill #  Dots OD 3 2 2 2  Air Bill #  Dots OD 3 2 2 2  Time Shipped Air Bill #  Dots OD 3 2 2 2  Air Bill #  Dots OD 3 2 2 2  Time Shipped Air Bill #  Dots Od 3						Time Collected	10:00AM EST
Carrier Fedex  Shipper Name  Charles 5 Fein Bill ECH Fill Date Shipped mm/dd/yyyy 3 73  Shipper Phone Shipper Signature  Shipper Signature  Supple Submitted to  UL Environment (Marietta) Sull Environment (Marietta) Sull Environment (Marietta) Sull Sull 106  Will Environment (Marietta) Sumple Submitted to  UL Verification Services (Guangxhou) Building A1, 3F, Nansha Science and Technology Sulle 106 Marietta, GA 30067, USA  Post Testing Sample Disposition  (Sample will be disposed of 30 days after report is issued if information below is not provided)  Return Shipping Co.  Receiver Name  Condition Upon Arrival Condition Notes  Receive Time  Receive Time  Receive Time  Receive Time	Collecto	r Signature	Kliu			Collection Location	Andover, MA
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Shipper Phone Shipper Signature  Sample Submitted to  Sult Environment (Marietta)  Sult International Italia S.r.I  Alt TIN: IAO Laboratory  VIa Europa, 9  VIA E		Carrier	Fedex			4.9	1 0 1 0 2
Shipper Signature    Sample Submitted to   Sample Submitted to	Shipper Name		CHARLES 5	TEIN BIZECH	HR	Date Shipped	mm/dd/yyyy - 21-73
Sample Submitted to    UL Environment (Marietta)			mula 9	78-623-995	0		
□ UL Verification Services (Guangzhou) Building A1, 3F, Nansha Science and Technology Suite 106 Marietta, GA 30067, USA  □ Post Testing Sample Disposition (Sample will be disposed of 30 days after report is issued if information below is not provided) Return Shipping Co.  □ Receiver Name  Condition Upon Arrival  Condition Notes  □ UL International Italia S.r.I   Other ATTN: IAO Laboratory Value (Day De Jacoba (Como), Italia  □ UL International Italia S.r.I   Other ATTN: IAO Laboratory Value (Day De Jacoba (Como), Italia  □ UL International Italia S.r.I   Other ATTN: IAO Laboratory Value (Day De Jacoba (Como), Italia  □ UL International Italia S.r.I   Other ATTN: IAO Laboratory Value (Day De Jacoba (Como), Italia  □ Customer Shipping Acct #  □ International Italia S.r.I   Other ATTN: IAO Laboratory Value (Como), Italia  □ Customer Shipping Acct #  □ International Italia S.r.I   Other ATTN: IAO Laboratory Value (Como), Italia  □ Customer Shipping Acct #  □ International Italia S.r.I   Other ATTN: IAO Laboratory Value (Como), Italia  □ Customer Shipping Acct #  □ International Italia S.r.I   Other ATTN: IAO Laboratory Value (Como), Italia  □ Customer Shipping Acct #  □ International Italia S.r.I   Other ATTN: IAO Laboratory Value (Como), Italia  □ Customer Shipping Acct #  □ International Italia S.r.I   Other ATTN: IAO Laboratory Value (Como), Italia  □ Customer Shipping Acct #  □ International Italia S.r.I   Other ATTN: IAO Laboratory Value (Como), Italia  □ Customer Shipping Acct #  □ International Italia S.r.I   Other ATTN: IAO Laboratory Value (Como), Italia  □ Customer Shipping Acct #  □ International Italia S.r.I   Other ATTN: IAO Laboratory Value (Como), Italia  □ Customer Shipping Acct #  □ Customer Shipping Acct #  □ International Italia S.r.I   Other ATTN: IAO Laboratory Value (Como), Italia  □ Customer Shipping Acct #  □ Customer Shippin	Shippe	r Signature	Charly I	tenbecher			1 6000 00 10 782
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Return Shipping Co.  Receiver Name Condition Upon Arrival Condition Notes  (Sample will be disposed of 30 days after report is issued if information below is not provided)  Customer Shipping Acct #  Internal Use Only – Receiving Information  Receiver Signature Receive Date Receive Time  Receive Time	Marietta, GA 300	67, USA	Nansha District, Gua				
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Completed By Based On Date	Cor				_		- 10



# **VOC EMISSION RESULTS COMPARISON TO STANDARD**

Standard referenced: CDPH/EHLB/Standard Method V1.2 (January 2017) "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers" (aka CA Section 01350).

# PRODUCT SAMPLE INFORMATION

Manufacturer	ICP Group
Product Description	Firebond Concentrate
Product Type	Paints and Coatings
UL Sample Identification	1001830780-5765642
Manufactured Date	September 14, 2022
Test Completed Date	February 15, 2023
UL Report #	1001830780-5765642
Report Date	February 27, 2023

#### TEST RESULTS COMPARISON TO STANDARD CRITERIA

Environment	Classroom		Office	
Surface Area	94.6 m²		33.4 m²	
	Criterion	Meets?	Criterion	Meets?
Individual VOC	≤ ½ CREL	Yes	≤ ½ CREL	Yes
Formaldehyde	≤ 9.0 µg/m³	Yes	≤ 9.0 µg/m³	Yes

Environment	Classroom	Office	
Surface Area	94.6 m²	33.4 m²	
TVOC 0.5 mg/m³ or less		0.5 mg/m³ or less	

TVOC comparison is based on LEED BD+C: New Construction v4 (LEED v4), Indoor environmental quality (EQ) category/Low-emitting materials credit/Emissions and content requirements/General emissions evaluation. http://www.usgbc.org/node/2614095?return=/credits/new-construction/v4/indoor-environmental-quality

Authorized by

Allyson McFry

Chemistry Laboratory Manager

Complete testing and data results are presented in UL Environment Report

Disclaimer: This Comparison affirms that: 1) the product sample was tested according to the referenced standard; 2) the measured VOC emissions were evaluated for the defined exposure scenario(s); and 3) if so indicated above that the results meet the criteria of the referenced standard(s). UL Environment did not select the samples, determine if the samples were representative of production samples, witness the production of test samples, or were we provided with information relative to the formulation or identification of component materials used in the test samples. The test results apply only to the actual samples tested. The issuance of this Comparison in no way implies Listing, Classification or Recognition by UL and does not authorize the use of UL Listing, Classification or Recognition Marks or any other reference to UL on the product or system. UL Environment authorizes the above named company to reproduce this Comparison provided it is reproduced in its entirety. The name, brand or marks of UL cannot be used in any packaging, advertising, promotion or marketing relating to the data in this Comparison, without UL's prior written permission. UL, its subsidiaries, employees and agents shall not be responsible to anyone for the use or nonuse of the information contained in this Comparison, and shall not incur any obligation or liability for damages, including consequential damages, arising out of or in connection with the use of, or inability to use, the information contained in this Comparison.