GREENGUARD ENVIRONMENTAL INSTITUTE

CONGRATULATES

Perfix

FOR ACHIEVING GREENGUARD CERTIFICATION FOR LOW EMITTING PRODUCTS AND MATERIALS UNDER THE STANDARDS OF THE INSTITUTE.

Children & Schools
GREENGUARD®
Indoor Air Quality Certified

January 13, 2010	*90235*	
CERTIFICATION DATE	CERTIFICATION NUMBER	EXECUTIVE OFFICER

FOR DISPLAY PURPOSES ONLY

CERTIFICATE OF COMPLIANCE

GREENGUARD

PRODUCT CERTIFIED FOR LOW CHEMICAL EMISSIONS
UL.COM/GG
UL 2818

GOLD

Perfix

Steel Lockers

Restrictions:

9745-420
Certificate Number

01/13/2010 - 01/13/2022
Certificate Period

Certified
Status

UL 2818 - 2013 Gold Standard for Chemical Emissions for Building Materials, Finishes and Furnishings

Classroom furniture and furnishings are modeled to the classroom environment with a room volume of 231 m^3 and 0.82 air changes per hour (ACH) accommodating 27 students.

Product tested in accordance with UL 2821 test method to show compliance to emission limits on UL 2818. Section 7.1 and 7.2.

UL investigated representative samples of the identified Product(s) to the identified Standard(s) or other requirements in accordance with the agreements and any applicable program service terms in place between UL and the Certificate Holder (collectively "Agreement"). The Certificate Holder is authorized to use the UL Mark for the identified Product(s) manufactured at the production site(s) covered by the UL Test Report, in accordance with the terms of the Agreement. This Certificate is valid for the identified dates unless there is non-compliance with the Agreement.

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Perfix

Steel Lockers

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9745-410
Certificate Number

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GREENGUARD

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UL.COM/GG
UL 2818

GOLD

Perfix

Steel Filing Cabinets

Restrictions:

9744-420
Certificate Number

01/13/2010 - 01/13/2022
Certificate Period

Certified
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LOW CHEMICAL EMISSIONS
UL.COM/GG
UL 2818

GOLD

Perfix

Steel Storage Cabinets

Restrictions:

9747-420
Certificate Number

01/13/2010 - 01/13/2022
Certificate Period

Certified
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CERTIFICATE OF COMPLIANCE

GREENGUARD

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UL.COM/GG
UL 2818

GOLD

Perfix

Steel Bookcases

Restrictions:

9743-420
Certificate Number

01/13/2010 - 01/13/2022
Certificate Period

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Status

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9743-410
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UL.COM/GG
UL 2818

GOLD

Perfix

Steel Magazine Display Cabinets

Restrictions:

9746-420
Certificate Number

01/13/2010 - 01/13/2022
Certificate Period

Certified
Status

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Perfix

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9746-410
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GREENGUARD Gold Certification Criteria for Furniture and Mattresses

Criteria	CAS Number	Maximum Allowable Predicted Concentration	Units
TVOC (A)	-	0.22	mg/m³
Formaldehyde	50-00-0	9 (7.3 ppb)	µg/m³
Total Aldehydes (B)	-	0.043	ppm
4-Phenylcyclohexene	4994-16-5	6.5	µg/m³
1-Methyl-2-pyrrolidinone (C)	872-50-4	160	µg/m³
Individual VOCs (D)	-	1/2 CREL or 1/100th TLV	-

(A) Defined to be the total response of measured VOCs falling within the $C_6 - C_{16}$ range, with responses calibrated to a toluene surrogate.

(B) The sum of all measured normal aldehydes from formaldehyde through nonanal, plus benzaldehyde, individually calibrated to a compound specific standard. Heptanal through nonanal are measured via TD/GC/MS analysis and the remaining aldehydes are measured using HPLC/UV analysis.

(C) Based on the CA Prop 65 Maximum Allowable Dose Level for inhalation of 3,200 µg/day and an inhalation rate of 20 m^3/day.

(D) Allowable levels for chemicals not listed are derived from the lower of 1/2 the California Office of Environmental Health Hazard Assessment (OEHHA) Chronic Reference Exposure Level (CREL) as required per the CDPH/EHLB/Standard Method v1.2 and BIFMA level credit 7.6.2 and 1/100th of the Threshold Limit Value (TLV) industrial work place standard (Reference: American Conference of Government Industrial Hygienists, 6500 Glenway, Building D-7, and Cincinnati, OH 45211-4438).

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GREENGUARD Certification Criteria for Furniture and Mattresses

Criteria	CAS Number	Maximum Allowable Predicted Concentration	Units
TVOC (A)	-	0.50	mg/m³
Formaldehyde	50-00-0	61.3 (50 ppb)	µg/m³
Total Aldehydes (B)	-	0.10	ppm
4-Phenylcyclohexene	4994-16-5	6.5	µg/m³
Individual VOCs (C)	-	1/10th TLV	-

(A) Defined to be the total response of measured VOCs falling within the $C_6 - C_{16}$ range, with responses calibrated to a toluene surrogate.

(B) The sum of all measured normal aldehydes from formaldehyde through nonanal, plus benzaldehyde, individually calibrated to a compound specific standard. Heptanal through nonanal are measured via TD/GC/MS analysis and the remaining aldehydes are measured using HPLC/UV analysis.

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