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Mold And Mildew Resistance

PermaBase was designed to provide extra protection against mold and mildew. When tested by an independent laboratory, PermaBase received the highest possible ratings on ASTM G21 and D3273. The use of PermaBase in actual installations may not produce the same results as were achieved in controlled laboratory conditions. No material can be considered "mold-proof," nor is it

certain that any material will resist mold or mildew indefinitely. When used in conjunction with good design, handling and construction practices, PermaBase can provide increased mold resistance. As with any building material, avoiding water exposure during handling, storage and installation, and after installation is complete, is the best way to avoid the formation of mold or mildew.



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

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UNIFIX INC. 
A SUBSIDIARY OF NATIONAL GYPSUM COMPANY

Section 1: Product and Company Identification**Product Name**

PermaBase® BRAND Cement Board Products

Product Identifiers**PermaBase****PermaBase UltraBacker****PermaBase DEK****PermaBase Flex****PermaBase Plus****Other means of identification**

Tile Backer Board, Cementitious Backer Board (CBU)

Recommended Use

Underlayment for ceramic tile on floors, countertops, EIFS systems. Use per manufacturer's recommendations.

Restrictions on Use

Use in well-ventilated area and avoid breathing dust.

Avoid skin contact.

Manufacturer/Supplier Details

National Gypsum Company

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Charlotte, NC 28211

In Canada:

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Bromont, QC J2L 1N5 CANADA

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e-mail: info@unifixinc.comWebsite: www.unifixinc.com**Section 2: Hazards Identification****United States (US)**

According to OSHA 29CFR 1910.1200 (HCS)

GHS Classification of the substance or mixture

Carcinogenicity - Category 1A - (H-350)

Specific target organ toxicity, repeated exposure – Category 1 (H-372)

Acute toxicity, inhalation - Category 4 (H-332)

Skin corrosion/irritation Category 2 (H315)

Serious eye irritation – Category 2A (H-319)

GHS Label Elements**Pictogram****Signal Word****Danger****Hazard Statements**

H-350

May cause cancer.

H-332, 372

Harmful if inhaled. Causes damage to organs (lungs) through prolonged or repeated exposure.

H-315, 319

Causes skin irritation and serious eye irritation

Precautionary Statements**Prevention**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust.

Use personal protective equipment as required. (See Section 8)

Use engineering controls and wet methods to minimize dust.

Section 2: Hazards Identification (Continued)

Response

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

If on skin, wash with plenty of soap and water. If skin irritation occurs, get medical attention.

If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Get medical attention if exposed or concerned.

Storage

Store material in a cool, dry, ventilated area, away from excessive heat or sunlight.

Disposal

Dispose of material in accordance with federal, state, and local regulations.

Section 3: Composition/Information on Ingredients

Chemical Name	Common name/ Synonym	Identifiers CAS Number	% (weight)	Impurities
Silicon Dioxide (SiO ₂)	Sand, quartz	14808-60-7	<50	
In CANADA- Calcium Carbonate	Limestone, industrial sand	1317-65-3	<50	Crystalline silica (CAS # 14808-60-7)
Mixture-calcium and aluminum silicates	Portland Cement	65997-15-1	<25	Crystalline silica (CAS # 14808-60-7)
Mixture-silicates, aluminates	Pozzolan, fly ash	68131-74-8	<25	Crystalline silica (CAS # 14808-60-7)
Mixture-calcium aluminates	High Alumina Cement	65997-16-2	<6	Crystalline silica (CAS # 14808-60-7)
Mixture-calcium, aluminum silicates, amorphous silica	Fiberglass scrim or fiberglass mat laminate	65997-17-3	<5	
Calcium Hydroxide	Hydrated lime	1305-62-0	<2	Crystalline silica (CAS # 14808-60-7)

Section 4: First-Aid Measures

Inhalation Remove exposed individual to fresh air immediately. If breathing difficulty persists, seek medical attention.

Eye contact Do not rub or scratch eyes. Immediately flush eyes with water for 15 minutes.

Remove contact lenses (if applicable). Seek medical attention if irritation persists.

Skin contact Flush and wash skin with soap and water. Utilize lotions to alleviate dryness if present. Seek medical attention if irritation persists.

Ingestion This product is not expected to be hazardous and no harmful effects are expected upon ingestion of small amounts. Larger amounts may cause abdominal discomfort or possible obstruction of the digestive tract. Seek medical attention if problems persist.

Medical Conditions aggravated by exposure

Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.

Most important symptoms/effects, acute and delayed: See Section 11. (Toxicological Information)

Section 5: Fire-Fighting Measures

Extinguishing Media

Dry chemical, foam, water, or extinguishing media appropriate for surrounding fire.

Unusual Fire and Explosion Hazards

Mixture poses no fire-related hazard.

Special hazards arising from the mixture

None known

Special Protective Equipment and Precautions for Firefighters

A SCBA is recommended to limit exposures to combustion products when fighting any fire.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Product is an article composite.

General recommendations:

Wear appropriate Personal Protective Equipment. (See Section 8)

Maintain proper ventilation.

Environmental precautions

This product could be toxic to fish due to its high alkalinity from the Portland Cement.

Dispose of in accordance with applicable federal, state, and local regulations.

Methods and materials for containment and cleaning up

Pick-up larger pieces to avoid a tripping hazard.

Sweep or vacuum remaining material into a waste container for disposal.

Use a light water spray to minimize dust generation.

Section 7: Handling and Storage

Precautions for safe handling

Avoid breathing dust.

Minimize generation of dust.

Provide appropriate exhaust ventilation at places where dust is formed.

Avoid contact with eyes, skin and clothing.

Wear recommended personal protective equipment when handling. (See Section 8)

Conditions for safe storage, including any incompatibilities

Store material in a cool, dry, ventilated area, away from excessive heat or sunlight.

Store panels flat to minimize damage.

Do not stack panels too high when storing to minimize the risk of falling.

Avoid contact with strong acids.

Section 8: Exposure Controls/Personal Protection

Control Parameters

	Exposure Limits	
Component	OSHA PEL (mg/m ³)	ACGIH TLV (mg/m ³)
Portland Cement	15 ^(T) 5 ^(R)	10 ^(T)
High Alumina Cement	15 ^(T) 5 ^(R)	10 ^(T)
Pozzolan	15 ^(T) 5 ^(R)	10 ^(T)
Sand	$\left[\frac{(10)}{(30)} / (\%SiO_2+2)\right]^{(R)}$; $\left[\frac{(10)}{(30)} / (\%SiO_2+2)\right]^{(T)}$	0.025 ^(R)
Crystalline Silica (Quartz) ¹	$\left[\frac{(10)}{(30)} / (\%SiO_2+2)\right]^{(R)}$; $\left[\frac{(10)}{(30)} / (\%SiO_2+2)\right]^{(T)}$	0.025 ^(R)
Fiberglass Scrim	15 ^(T) 5 ^(R)	1 f/cc ^(R)
Calcium Hydroxide (Hydrated Lime)	15 ^(T) 5 ^(R)	5 ^(R)
Calcium Carbonate	15 ^(T) 5 ^(R)	10 ^(T)

1 – Present as an impurity in raw materials

T- Total Dust

R- Respirable Dust

Exposure Controls**Appropriate Engineering Controls**

Work/Hygiene Practices: Utilize methods to minimize dust production. Utilize wet methods, when appropriate, to reduce generation of dust.

Ventilation: Provide local and general exhaust ventilation sufficient to maintain a dust level below the PEL/TLV.

Personal Protective Equipment**Respiratory Protection**

A NIOSH approved particulate respirator is recommended in poorly ventilated areas or if the PEL/TLV is exceeded. OSHA's 29 CFR 1910.134 (Respiratory Protection Standard) must be followed whenever work conditions require respirator use.

Eye Protection

Safety glasses or goggles.

Skin

Gloves, protective clothing and/or barrier creams may be utilized if conditions warrant.

Section 9: Physical and Chemical Properties

- (a) **Appearance:** Gray solid
- (b) **Odor:** Slight organic odor upon opening that dissipates quickly.
- (c) **Odor threshold:** Not available
- (d) **pH :** ~12
- (e) **Melting point/freezing point:** Not Available
- (f) **Initial boiling point and boiling range:** Not Available
- (g) **Flash point:** Not available
- (h) **Evaporation rate:** Not available
- (i) **Flammability (solid, gas):** Not flammable
- (j) **Upper/lower flammability or explosive limits:** Not available
- (k) **Vapor pressure:** Not available
- (l) **Vapor density:** Not available
- (m) **Relative density:** ~1.2
- (n) **Solubility(ies):** Slightly soluble in water
- (o) **Partition coefficient: n-octanol/water:** Not available
- (p) **Auto-ignition temperature:** Not available
- (q) **Decomposition temperature:** Unknown
- (r) **Viscosity:** Not available
- (s) **VOC (Volatile Organic Compound):** N/A

Section 10: Stability and Reactivity

- (a) **Reactivity:** No data available
- (b) **Chemical stability:** Stable in dry environments
- (c) **Possibility of hazardous reactions:** None known
- (d) **Conditions to avoid (e.g., static discharge, shock, or vibration):** Contact with strong acids.
- (e) **Incompatible materials:** Strong acids
- (f) **Hazardous decomposition products:** None known.

Section 11: Toxicological Information**Information on Toxicological effects****Information on likely routes of exposure**

- | | |
|---------------------|--|
| Ingestion | May cause gastrointestinal irritation. |
| Inhalation | Dust may irritate respiratory system. Chronic exposure may result in lung disease. (See below) |
| Skin contact | May cause irritation, itching or dermatitis. (See below) |
| Eye contact | Contact with dust may cause mechanical irritation. |

Symptoms related to the physical, chemical and toxicological characteristics

Acute exposure to airborne dust concentrations in excess of the PEL/TLV may result in coughing, dyspnea, wheezing, and a burning irritation of the nose, throat, and upper respiratory tract, along with possible impaired pulmonary function. Chronic exposures may result in lung disease. (Silicosis and/or lung cancer)

Contact with wet Portland Cement may cause severe irritation, redness, and possible burns. Continued and prolonged contact may result in drying of the skin. Contact with dust or glass fibers may produce itching, rash and/or redness. Repeated or prolonged exposure may result in dermatitis.

Toxicological data

No toxicological data is available for this product. Toxicological information for components of this product listed below.

Acute toxicity	Not available
Skin corrosion/irritation	Not available
Serious eye damage/eye irritation	Not available
Skin sensitization	Not available
Respiratory sensitization	Not available
Sensitization	Not available
Mutagenicity	Not available
Carcinogenicity	Not available

This product contains crystalline silica. (quartz) The International Agency for Research on Cancer (IARC) classifies crystalline silica inhaled in the form of quartz or cristobalite from occupational sources as carcinogenic to humans, Group 1. The National Toxicology Program (NTP) classifies respirable crystalline silica as a substance which may be reasonably anticipated to be a carcinogen. OSHA does not regulate crystalline silica as a human carcinogen.

Reproductive effects	Not available
Specific target organ toxicity – single exposure	Not available
Aspiration toxicity	Not available

Section 12: Ecological Information

(a) Ecotoxicity (aquatic and terrestrial, where available): This product could be toxic to fish due to its high alkalinity from the Portland Cement. No studies are available.

(b) Persistence and degradability: Unknown

(c) Bioaccumulative potential: Unknown.

(d) Mobility in soil: Unknown

(e) Other adverse effects (such as hazardous to the ozone layer): None known

Section 13: Disposal Considerations

This material is not considered a hazardous waste. Dispose of according to Local, State, Federal, and Provincial Environmental Regulations.

Section 14: Transport Information

This product is not a DOT hazardous material

Shipping Name: Same as product name

ICAO/IATA/IMO: Not applicable

Section 15: Regulatory Information

All ingredients are included on the TSCA inventory.

Federal Regulations

SARA Title III: Not listed under Sections 302, 304, and 313

CERCLA: Not listed

RCRA: Not listed

OSHA: Dust and potential respirable crystalline silica generated during product use may be hazardous.

State Regulations

California Prop 65: Respirable crystalline silica is known to the state of California to cause cancer.

Canada WHMIS

All components of this product are included in the Canadian Domestic Substances List (DSL).

Crystalline silica: WHMIS Classification D2A

Section 16: Other Information

SDS Prepared by: National Gypsum Company
2001 Rexford Road
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Phone Number: (704) 551-5820

Date of Preparation: July 16, 2015

Revision indicators and Date

Effective Date Change: 7/16/2015

Supersedes: 6/1/2015

Format Changes: Conforms to OSHA 29CFR 1910.1200 (HCS)
Compliant with the 2015 Canadian Workplace Hazardous Materials Information System (WHMIS 2015), the Canadian Hazardous Products Act, and the Controlled Products Regulations. (CPR)

Key to Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Services Number
CFR	Code of Federal Regulations
DOT	Department of Transportation
EPA	Environmental Protection Agency
HEPA	High Efficiency Particulate Air
HCS	Hazard Communications Standard
HMIS	Hazardous Material Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMO	International Maritime Organization
NIOSH	National Institute for Occupational Safety and Health
NFPA	National Fire Protection Association
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PPE	Personal Protective Equipment
TLV	Threshold Limit Value
TSCA	Toxic Substance Control Act
TWA	Time Weighted Average
WHMIS	Workplace Hazardous Materials Information System

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein. This safety data sheet was prepared to comply with the OSHA Hazard Communication Standard (29 CFR 1910.1200).

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Spécification

Pratique standardisé

Proposé à :

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A/S : Guillaume Gauthier

Préparé et présenté par :

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admin@distributiones.com

1. Système standard

Primer :

ARP Primer Époxy (Kits Gallon)

- Gris pâle
- Satiné

Finition :

Supershield Uréthane (Kits Gallon)

- Toutes les couleurs
- Standard Lustré 80-90% lustre
- Disponible en différents lustres sur demande.

2. Système salin

Projets résistance saline – 3000 heures

Primer :

Guertin EF75122 Époxy (Kits 4 Gallons)

- Gris Charcoal
- Semi-Lustre

Finition :

Supershield Uréthane (Kits Gallon)

- Toutes les couleurs
- Standard Lustré 80-90% lustre
- Disponible en différents lustres sur demande.



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PRIMER – Système 1 – Projet standard

Époxy de finition sans sablage ARP 2.1VOC Primer

Ratio : 3 :1 → vendus en kits 1x GALLONS

Partie-A : 83030A01 @ format 2.84 litres

Partie-B : 83030B01 @ format 950 ml

NE PAS DILUER ; PRÊT À L'USAGE

NE PAS PIGMENTER

Résistance saline : >1500hrs

Préparation :

- Bien lire la fiche technique avant d'appliquer
- Le nettoyage au solvant (SSPC-SP1) est nécessaire
- Arrondir tous les coins et adoucir les soudures, retirer les bavures de soudage, contaminants louses (SSPC-SP2 ET SSPC-SP3)
- Pour acier autre que satiné, effectuer un grenaillage conformément la norme SSPC-SP6

Application :

- Mélanger la Partie A et Partie B indépendamment avant de les mélanger ensemble.
- Combiner les 2 parties ensemble en ratio 3 :1 en mélangeant mécaniquement à basse révolution pendant au moins 2 minutes jusqu'à ce que le mélange ait une consistance uniforme
- Utiliser un mesh 100 pour le filtre
- S'assurer que le taux d'humidité ambiante est en dessous de 80%.

ÉPAISSEURS :

Appliquer entre 4 et 6 mils humide

Vous obtiendrez entre 2.4 et 3.6 mils sec (DFT)

APPLIQUER LA FINITION SUPERSHIELD LA JOURNÉE MÊME, ENTRE 1h et 6h
APRÈS



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PRIMER – Système 2 – Résistance Saline

Époxy Haute Performance EF75122

Ratio : 4 :1

Partie-A : EF75112P1-12L @ format 12 litres

Partie-B : EF75061P2-3L @ format 3 litres

NE PAS DILUER ; PRÊT À L'USAGE

NE PAS PIGMENTER

Résistance saline >3000h.

Préparation :

- Bien lire la fiche technique avant d'appliquer
- Le nettoyage au solvant (SSPC-SP1) est nécessaire
- Arrondir tous les coins et adoucir les soudures, retirer les bavures de soudage, contaminants louses (SSPC-SP2 ET SSPC-SP3)
- Pour acier autre que satiné, effectuer un grenaillage conformément la norme SSPC-SP6

Application :

- Mélanger la Partie A et Partie B indépendamment avant de les mélanger ensemble.
- Combiner les 2 parties ensemble en ratio 4 :1 en mélangeant mécaniquement à basse révolution pendant au moins 3 minutes jusqu'à ce que le mélange ait une consistance uniforme
- Utiliser un mesh 100 pour le filtre
- S'assurer que le taux d'humidité ambiante est en dessous de 80%.

ÉPAISSEURS :

Appliquer entre 7 et 8 mils humide

Vous obtiendrez entre 4.2 et 4.8 mils sec (DFT)

APPLIQUER LA FINITION SUPERSHIELD LA JOURNÉE MÊME, ENTRE 1h et 6h
APRÈS



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FINITION URÉTHANE – Système Universel (1 et 2)

Uréthane Supershield sans Isocyanates formule 3 :1

Ratio : 3 :1

Partie-A : Supershield Intermix @ format 2.83l

Partie-B : SI25002P214 @ format 946ml

NE PAS DILUER ; PRÊT À L'USAGE

Préparation :

- Bien lire la fiche technique avant d'appliquer
- Aucun temps d'induction nécessaire

Application :

- Mélanger la Partie A et Partie B indépendamment avant de les mélanger ensemble.
- Combiner les 2 parties ensemble en ratio 3 :1 (vendu en kits) en mélangeant mécaniquement à basse révolution pendant au moins 2 minutes jusqu'à ce que le mélange ait une consistance uniforme
- Utiliser un mesh 100 pour le filtre
- S'assurer que le taux d'humidité ambiante est en dessous de 80%.
- Appliquer sur le primer en système « wet-on-wet » après 1 heure seulement, et dans un maximum de 6 heures sinon il y aura délamination entre les 2 produits.
- Le produit sera prêt à manipuler après 1 à 3 heures dépendant de la chaleur ambiante.

ÉPAISSEURS :

Appliquer entre 4 et 5 mils humide

Vous obtiendrez entre 2.6 et 3.2 mils sec (DFT)



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MÉTHODE DE PRISE DE MESURE D'ÉPAISSEUR DE PEINTURE SELON SSPC-PA2

STANDARD DE BASE

- 3 relevés dans un rayon de 4cm à 5 endroits différents pour chaque surface de 100pi²
- Les relevés doivent être mesurés à maximum de 1po d'un rebord
- Total de 15 relevés individuels pour établir 1 mesure
- Un minimum de 5 relevés doit être dans le spectre de DFT requis par la spécification
- Aucun relevé peut représenter une valeur de :
 - Moins de 80% du DFT requis par la spécification
 - Plus de 120% du DFT requis par la spécification
- Si la moyenne des relevés indique une mesure acceptée par la spécification, passer à une autre pièce
- Si la moyenne des relevés indique une mesure hors spécification, la pièce ne doit pas être acceptée par le chargé de projet.

STANDARD SELON GRANDEUR DES SURFACES

- Pour les surfaces de moins de 1000pi², sélectionner au hasard 3 endroits de 100pi² et effectuer les prises de mesures conformément au standard de base mentionné ci-haut (45 relevés)
- Pour les surfaces de plus de 1000pi², mesurer le premier 100pi² conformément au standard de base mentionné ci-haut (45 relevés), et effectuer par la suite 1 seule mesure (15 relevés) pour chaque section de 100pi² suivante.
- Lorsqu'une anomalie est détectée, reculer de section (100pi²) et prendre des relevés conformément au standard de base pour les surfaces de moins de 1000pi² (5 spots de 3 relevés à 3 endroits différents = 45 relevés) jusqu'à ce que les sections respectent la spécification.
- Refaire les pièces défectueuses et recommencer.

LEXIQUE :

Relevé : Prise de mesure individuelle avec la jauge électronique à un endroit précis

Mesure : C'est la mesure du DFT utilisé pour le résultat final. Il est calculé en faisant moyenne des relevés.

DFT : Épaisseur de peinture sèche (dry film thickness)



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INTEGRITY
INNOVATION
PERFORMANCE



TECHNICAL DATA EF75122

Description

EF75122 is a grey, high solids, 2.8 VOC, epoxy primer. It is designed to fill blast profiles in a single coat. No induction time is required.

Mixed Coating Properties

Mix Ratio	4 Parts base to 1 Part epoxy part 2
VOC	
EF75060P2	3.00 lbs / gal or 360 grams / litre
EF75061P2	2.80 lbs / gal or 336 grams / litre
Volume Solids	
EF75060P2	57.61%
EF75061P2	60.64%
Sag	
Airless	12 - 15 mils
Air Assist Airless	12 - 15 mils
Air Spray	12 - 15 mils
HVLP	12 - 15 mils
Viscosity @ 70°F (21°C)	25 - 30 Seconds Zahn#2 / 300 cps
Pot Life @ 77°F (25°C)	
EF75060P2	5.00 hours
EF75061P2	4.00 hours
Salt Spray (B1000)	3000 hours @ 4 mils DFT
Theoretical Coverage	
EF75060P2	924 ft ² / gal (22.6 m ² / litre) @ 1 mil DFT
EF75061P2	972 ft ² / gal (23.8 m ² / litre) @ 1 mil DFT

DFT = Dry Film Thickness

Product Weight - Container weight not included

EF75122P1 base	13.82 lbs / gallon or 1.656 kg / litre
EF75060P2 standard cure	7.58 lbs / gallon or 0.909 kg / litre
EF75061P2 fast cure	7.76 lbs / gallon or 0.930 kg / litre

Shelf Life

Shelf Life is applicable only for material stored in unopened and undamaged original factory filled containers at 4° to 38°C (39° to 100°F).

EF75122P1	1 year	EF75060P2	2 years
		EF75061P2	2 years

Subject to reinspection. Store unused material in tightly closed containers. Contents of partially filled containers may show surface skinning after storage. If skinning forms, remove by straining before use.

BENEFITS

- excellent edge coverage
- exceptional corrosion resistance
- excellent adhesion
- excellent sprayability
- humidity resistance

USES

- power transmission & distribution equipment
- containment tanks
- OEM - chemical tankers & trailers
- OEM - oil patch applications
- OEM - fleet applications



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TECHNICAL DATA EF75122

Surface Preparation

SSPC – SP6 Commercial Blast minimum recommended or a minimum of 3-stage to 7-stage phosphate cleaning system.

Mixing Instructions

- 1) Pre-Mix EF75122P1 Base for 2 minutes with an air-operated Jiffy Mixer®, or equivalent, to produce a uniform consistency within its container
- 2) Properly ratio material at 4:1 (by volume):

4 Parts EF75122P1 Base to
1 Part EF75060P2 Standard Cure Epoxy Part 2 or
1 Part EF75061P2 Fast Cure Epoxy Part 2
- 3) Mix material for 3 minutes with an air-operated Jiffy Mixer®, or equivalent, to a uniform consistency before use
- 4) No induction time required
- 5) No Thinning required
- 6) Filter through 100 mesh in line filter

Application Instructions

Application Temperature

Minimum	55°F (10°C)
Maximum	100°F (38°C)

Equipment Settings

Air Spray:	pot pressure:	10 – 20 psi
	atomizing air:	45 – 65 psi
	nozzle set:	1.4 – 1.8
Airless Spray:	fluid pressure:	2000 - 2500 psi
	tip size:	.013 – .019
Air Assist Airless:	fluid pressure:	700 - 1500 psi
	atomizing air:	20 – 60 psi
	tip size:	.013 - .019

- Precision plural component equipment is recommended. All spray equipment including lines and filters must be kept clean at all times to avoid nozzle plugging. When hand mixing follow /Mixing Instructions/ procedures.
- Apply in wet coats making even parallel passes. Overlap each pass 50% to minimize holidays, bare areas and pinholes.
- Excess wet film will cause sags and runs.

Recommended dry film thickness is 3 mils above profile.

If thinners are required: *Please contact your Guertin Representative for recommendations.*

Note: Successful application requires following the recommended temperature, humidity conditions and film thickness ranges.

Recoat Window for best D.O.I.

Substrate Temp	70°F (21°C)
Over Itself	up to 3 days
With Urethane Topcoat	4 hours up to 24 hours
With Super-Shield® Topcoat	1 hour to 4 hours

Flash times:

Allow a minimum of 4.0 hours flash off time before applying a two-component urethane topcoat. Higher film builds (>4mils) and/or cooler temperatures will require longer flash times.

The epoxy primer can be recoated with itself up to 3 days. After 3 days the epoxy primer must be scuff sanded.

It can be topcoated with 2K urethane and Super-Shield® topcoats up to 24 hours. After 24 hours the epoxy primer must be scuff sanded.

It is recommended to apply at ambient air and surface temperatures between 55° - 100°F (10° - 38°C). Apply at a relative humidity level below 80%.

Surface temperature must be at least 5°F (3°C) above the dew point to ensure that moisture condensation does not occur during application and the drying period.

Higher/lower temperatures & humidity, film thickness, improper activator range and poor air movement will affect the dry time and recoat window.

Equipment Cleanup

Clean application equipment with Guertin's SP02859T0 or SP05127T0.

Safety Precautions

FOR INDUSTRIAL USE ONLY. To be used by professionally trained personnel using proper safety equipment. Use only with adequate ventilation. Warning: this product is flammable, keep away from heat, sparks and open flame. Please refer to material safety data sheets.

Warranty

Guertin Coatings warrants its product to be free from defects in materials and workmanship and will REPLACE ANY PRODUCT PROVED TO BE DEFECTIVE, OR REFUND OF THE ORIGINAL PURCHASE PRICE OF THE QUANTITY PROVED TO BE DEFECTIVE. Requests for refund or replacement of product must be made in writing within one year from the original date of purchase. This Warranty does not apply to defects due, directly or indirectly, to misuse, abuse, negligent application, or acts of God.

GUERTIN COATINGS WILL NOT BE LIABLE FOR DEATH, INJURIES TO PERSONS OR PROPERTY, OR FOR INCIDENTAL, CONTINGENT, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF OUR PRODUCT, INCLUDING DOWNTIME OR LOSS OF USE OF PRODUCT.

All data, statements, and recommendations made herein are based upon information we believe to be reliable, but are made without any representation, guarantee or warranty of accuracy. Our products are sold on the condition that the user himself will evaluate them, as well as our recommendations, to determine their suitability for his own purpose before adoption. Also, statements regarding the use of our products or processes are not to be construed as recommendations for their use in violation of any patent rights or in violation of any applicable laws or regulations.



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FICHE SIGNALÉTIQUE

SECTION I - RENSEIGNEMENTS SUR LE PRODUIT

Identificateur du Produit: GREY HIGH BUILD ANTICORROSIVE
Numéro du Produit: EF75122P1
Usage du Produit: PEINTURE
NOM DU FABRICANT: Cloverdale Paint Inc.
50 PANET ROAD
WINNIPEG, MB
R2J 0R9 204/237-0241
PREPARE PAR: Mr Robert Tinsley, 204-237-0241
DATE: 04/10/15
WHMIS CATEGORIE: B2 D2A D2B
NOM DU FOURNISSEUR: Cloverdale Paint Inc.
50 PANET ROAD
WINNIPEG, MB
R2J 0R9 204/237-0241

SECTION II - INGREDIENTS DANGEREUX

INGREDIENTS	NUMERO CAS	POURCENTAGE	LIMITES D'EXPOSITION	LC50	LD50
TITANIUM DIOXIDE	13463-67-7	5.0-10.0	10 MG/M3	6.82MG/L RAT	>25G/KG ORAL RAT
MAGNESIUM SILICATE (TALC)	13776-74-4	10.0-30.0	5 mg/m3 DUST	N/AV	N/AV
CARBON BLACK	1333-86-4	0.1-1.0	3.5mg/m3DUST	>156 MG/M3 RAT	>240 MG/KG IP
BISPHENOL A DIGLYCIDYL ETHER	25068-38-6	1.0-5.0	NO INFO	N/AV	N/AV
XYLENE; MIXED ISOMERS	1330-20-7	1.0-5.0	100 ppm	5000 PPM RAT	4G/KG RAT ORAL
METHYL AMYL KETONE	110-43-0	1.0-5.0	50 ppm	2000 PPM RAT	1600 MG/KG RAT
METHYL ISOBUTYL KETONE	108-10-1	1.0-5.0	50 ppm	5700 PPM RAT	2080MG/KG RAT
METHYL ETHYL KETONE	78-93-3	5.0-10.0	200 ppm	2000 PPM RAT	2737 MG/KG RAT
N-BUTYL ACETATE	123-86-4	1.0-5.0	150 ppm	2000 PPM RAT	14.0 G/KG RAT
GLYCOL ETHER PM ACETATE	108-65-6	1.0-5.0	50 ppm	N/AV	8532MG/KG RAT
PROPYLENE GLYCOL MONOMETHYL ETHER	107-98-2	1.0-5.0	100 ppm	13000 MG/KG RAT	5660 MG/KG RAT
ETHYLBENZENE	100-41-4	1.0-5.0	100 ppm	>4000 PPM RAT	3.5 G/KG RAT

N.A. - SANS OBJET

SECTION III - PROPRIETES PHYSIQUES

POINT D'EBULLITION : 79-260 C
ODEUR : ODEUR PIQUANTE
APPARENCE : LIQUIDE GRIS
SOLUBILITE : 2% EAUABLEE
VOLATILES EN VOLUME: 40.0%
PH @ 0.00 % : 7.0
TENSION DE VAPEUR : 77.5 mm Hg
DENSITE DE LA VAPEUR: PLUS LOURD QUE L'AIR
TAUX D'EVAPORATION : PLUS RAPIDE QUE
ACETATE BUTYLE
DENSITE SPECIFIQUE : 1.584
POINT DE CONGELATION: -40 C



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SECTION IV - RISQUES D'INCENDIE OU D'EXPLOSION

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POINT D'ECLAIR: -6 C
(TAGLIABUE C. C.)
CLASS 3, DIV. 1

LEL: 1.0%
UEL: 13.8%

MOYENS D'EXTINCTION: CHIMIQUES SECS CO2 LA MOUSSE BROUILLARD DE L'EAU

RISQUE PARTICULIERE DE LUTTE CONTRE L'INCENDIE: LIQUIDE COMBUSTIBLE (POINT ECLAIR EST INFÉRIEUR A 100 F/38 C). PEUT FORMER DES MÉLANGES INFLAMMABLES. LES VAPEURS PEUVENT ÊTRE EXPLOSIVE DANS L'AIR. ÉLIMINER TOUTE SOURCE D'IGNITION. TOUT ÉQUIPEMENT DOIT ÊTRE MIS À LA TERRE. GARDER LE RÉCIPENT FERMÉ.

PROCÉDURE D'EXTINCTION: LES POMPIERS DOIVENT PORTER UN APPAREIL RESPIRATOIRE AUTONOME ET DES VÊTEMENTS DE PROTECTION COMPLETS. UTILISER DE L'EAU PULVÉRISÉE POUR REFROIDIR LES STRUCTURES ET LES CONTENANTS EXPOSÉS AU FEU.

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SECTION V - DANGERS POUR LA SANTÉ

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EFFETS DE LA SUREXPOSITION: *** INHALATION: LES VAPEURS PEUVENT IRRITER. L'EXPOSITION À DES VAPEURS TRÈS CONCENTRÉES PEUVENT CAUSER DES MAUX DE TÊTES, DES ÉTOURDISSEMENTS, DES NAUSEES, UNE DÉPRESSION DU SYSTÈME NERVEUX CENTRAL. L'EXPOSITION PROLONGÉE À DES VAPEURS TRÈS CONCENTRÉES PEUT CAUSER L'ÉVANOUISSEMENT OU LA MORT. *** INGESTION: MODÉRÉMENT TOXIQUE. LE PRODUIT EST NOCIF LORSQU'IL EST INGÉRÉ. L'INGESTION DE GRANDES QUANTITÉS PEUT CAUSER DES MAUX DE TÊTES, DES NAUSEES, DES VOMISSEMENTS, UNE DÉPRESSION DU SYSTÈME NERVEUX CENTRAL. UNE PETITE QUANTITÉ DE CE LIQUIDE ASPIRÉE DANS LES POUMONS SOIT PAR INGESTION OU PAR VOMISSEMENT, RISQUE D'AVOIR DE GRAVE EFFETS NOCIF POUR LA SANTÉ (P.EX., PROVOQUER UN ŒDÈME PULMONAIRE). *** PEAU: PEUT CAUSER DE L'IRRITATION MODÉRÉE. PEUT CAUSER LE DÉGRAISSEMENT ET LA DERMATITE. UNE EXPOSITION PROLONGÉE PEUT RÉSULTER À UNE SENSIBILITÉ DANS LA PEAU. PEUT PROVOQUER DES BRÛLURES CHIMIQUES. PEUT ÊTRE ABSORBÉ PAR LA PEAU ET PROVOQUER UN RISQUE POUR LA SANTÉ. *** YEUX: LES VAPEURS PEUVENT IRRITER. LE LIQUIDE ET LES BRUINES IRRITENT LES YEUX ET PEUVENT CAUSER DES BRÛLURES. *** EFFETS DE LA SUREXPOSITION: CONTIENT SILICE. LA SUREXPOSITION À LONG TERME AU SILICE CAUSE LA SILICOSE ET LA DÉTERIATION CARDIOPULMONAIRE. LA SUREXPOSITION À LONG TERME AU NOIR DE CARBONE PEUT ENTRAÎNER DES LÉSIONS CUMULATIVES AU CŒUR ET AUX POUMONS. L'EXPOSITION PROLONGÉE OU RÉPÉTÉE PEUT CAUSER UNE SENSIBILITÉ DE LA PEAU ET/OU UNE SENSIBILITÉ RESPIRATOIRE. L'EXPOSITION PROLONGÉE OU RÉPÉTÉE PEUT CAUSER UN MAUVAIS FONCTIONNEMENT DU FOIE, DES REINS, ET/OU DU SYSTÈME NERVEUX. L'EXPOSITION PROLONGÉE OU RÉPÉTÉE PEUVENT CAUSER À LA LONGUE DES DOMMAGES AU SYSTÈME SANGUIN, GASTRO-INTESTINAL, NERVEUX, ET/OU REPRODUCTEUR. LES EXPOSITIONS PROLONGÉES ET RÉPÉTÉES PEUVENT PROVOQUER DES EFFETS TOXIQUE. L'EXPOSITION À CE PRODUIT NE DEVRAIT CAUSER AUCUN PROBLÈME LORSQUE MANIPULÉ AVEC SOINS. LE CIRC A CLASSÉ L'ÉTHYLBENZÈNE PARMI LES SUBSTANCES DU GROUPE 2B EN SE FONDANT SUR DES DONNÉES SUFFISANTES DÉMONTRANT SA CANCÉROGÉNÉCITÉ POUR LES ANIMAUX DE LABORATOIRE, MAIS DE DONNÉES INSUFFISANTES SELON LES RÉSULTATS DE CERTAINES ÉTUDES MENÉES SUR DES ANIMAUX, DE TRÈS GRANDES EXPOSITIONS AUX XYLENES ON ENTRAÎNÉ DES EFFETS NÉFASTES SUR LE DÉVELOPPEMENT DES EMBRYONS/FOTUS. CES EFFETS SONT SOUVENT APPARUS À DES NIVEAUX D'EXPOSITION TOXIQUES POUR LA MÈRE. LA PORTÉE DE CES RÉSULTATS POUR LES HUMAINS N'A PAS ÉTÉ ÉTABLIE. LES EXPOSITIONS EXCESSIVES LONG TERME PEUT CAUSER TALCOSE, FIBROSE PULMONAIRE, QUI À SON TOUR PEUT ENTRAÎNER DES DOMMAGES GRAVES ET PERMANENTS AUX POUMONS. UNE ÉTUDE PORTANT SUR L'INHALATION DURANT TOUTE UNE VIE FAIT RESSORTIR QU'UNE EXPOSITION À DE LA POUSSIERE DE DIOXYDE DE TITANE À UNE CONCENTRATION DE 250 MG/M3 A ENTRAÎNÉ L'APPARITION DE TUMEURS AUX POUMONS CHEZ DES RATS. CES TUMEURS NE SONT APPARUES QU'À DES CONCENTRATIONS DE POUSSIÈRES QUI DÉPASSENT LA CAPACITÉ DES MÉCANISMES DE CLAIRANCE PULMONAIRE DES ANIMAUX ET SONT DIFFÉRENTES DES TUMEURS PULMONAIRES COMMUNES CHEZ L'ÊTRE HUMAIN TANT DANS LE TYPE QUE DANS

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SECTION V - DANGERS POUR LA SANTE

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L'EMPLACEMENT. LA PERTINENCE DE CES RÉSULTATS SURE LE CANCER (CIRC) A CLASSÉ LE DIOXYDE DE TITANE PARMI LES LES CANCÉROGENES PRÉSUMÉS POUR LES HUMAINS (GROUPE 2B) EN SE FONDANT SURE DES DONNÉES INSUFFISANTES DÉMONTRANT SA CANCÉROGÉNÉCITÉ CHEZ LES HUMAINS ET DE DONNÉES SUFFISANTES DÉMONTRANT SA

CONDITIONS MEDICALES GÉNÉRALEMENT AGGRAVÉES PAR L'EXPOSITION: LES PROBLÈMES CUTANÉS. LES PROBLÈMES OCULAIRES. LES PROBLÈMES RESPIRATOIRE CHRONIQUES. EN 1995 CIRC A CONCLUË EXISTE DES PREUVES SUFFISANTES CHEZ LES ANIMAUX EXPÉRIMENTAUX DE LA CANCÉROGÉNÉCITÉ DU NOIR DE CARBONE CLASSEMENT BLACK PROBABLEMENT CANCÉROGÈNE AUX HUMAINS.

VOIES PRIMAIRES DE PÉNÉTRATION: CONTACT DERMIQUE INHALATION INGESTION

MESURES DE PREMIERS SOINS: *** INHALATION: TRANSPORTER À L'AIR FRAIS. AIDER LA RESPIRATION SI NÉCESSAIRE. GARDER LA VICTIME AU CHAUD ET CALME. CONSULTER UN MÉDECIN. *** INGESTION: NE PAS FAIRE VOMIR OU BOIRE. FAIRE REPOSER. CONSULTER SANS DÉLAI UN MÉDECIN. SI LE VOMISSEMENT SE PRODUIT, GARDER LA TÊTE DE LA VICTIME BAISSÉE AU-DESSOUS DE SES HANCHES POUR ÉVITER L'ASPIRATION DANS LES POUMONS. *** PEAU: LAVÉ LA PEAU CONTAMINÉE AVEC DE L'EAU. CONSULTER SANS DÉLAI UN MÉDECIN. *** YEUX: RINCER DE L'EAU CLAIRE PENDANT AU MOINS 15 MINUTES ET FAIRE IMMÉDIATEMENT APPEL À UN MÉDECIN.

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SECTION VI - DONNÉES SUR LA REACTIVITE

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STABILITE: CE PRODUIT EST STABLE DANS DES CONDITIONS NORMALES D'ENTREPOSAGE.

POLYMERISATION DANGEREUSE: NE SE PRODUIRA PAS DANS DES CONDITIONS NORMALES.

PRODUITS DE DECOMPOSITION DANGEREUX: OXYDES DE CARBONE. VAPEURS TOXIQUES ET FUMÉE. FUMÉE INFLAMMABLES.

CONDITIONS À ÉVITER: CHALEUR, ÉTINCELLES, FLAMMES.

PRODUITS INCOMPATIBLES: AGENTS OXIDABLE. ACIDES. ALCALINS. AMINES. AGENTS REDUCTEURS. AGENTS D'AZOTES. LES SULFURES. HALOGENES. L'EAU. LES COMPOSÉS CHLORINÉS.

SENSIBILITE AUX DÉCHARGES ÉLECTROSTATIQUES: PRENDRE DES PRÉCAUTIONS CONTRE LES DÉCHARGES STATIQUES.

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SECTION VII - MESURES POUR FUITE OU DEVERSEMENT

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ACTION À PRENDRE EN CAS DE FUITE OU DE DEVERSEMENT: ÉLIMINER TOUTE SOURCE D'IGNITION. ARRÊTER LA SOURCE DE FUITE. ASSURER UNE VENTILATION ÉVACUER TOUT PERSONNEL NON-ESSENTIEL. PORTER LES VÊTEMENTS NÉCESSAIRE. ENDIGER L'ENDROIT POUR ÉMÉCHER PROPAGATION. ABSORBER LE LIQUIDE AVEC UN PRODUIT ABSORBANT INERTE. TRANSFÉRER DANS UN CONTENANT À L'ÉPREUVE D'IGNITION.

MÉTHODES D'ÉLIMINATION: NE PAS CONTAMINER LES COURS D'EAU POTABLE, LES LACS, LES ÉTANGS OU LES RUISSEAUX. SELON RÉGLEMENTS MUNICIPAUX, LES LOIS PROVINCIAL ET FÉDÉRALES APPLICABLE À VOTRE LOCALITE.

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SECTION VIII - PRECAUTIONS D'EMPLOI

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PROTECTION RESPIRATOIRE: UTILISER UN MASQUE RESPIRATOIRE A HAUT RENDEMENT QUI PROTEGE CONTRE LES VAPEURS ORGANIQUES ET LES POUSSIÈRES TOXIQUES. POUR DES HAUTES CONCENTRATIONS, UTILISER UN MASQUE RESPIRATOIRE A ALIMENTATION D'

VENTILATION: VENTILATION EFFICACE SUR PLACE POUR EVACUER LA POUSSIÈRE. EMPLOYER UN APPAREILAGE DE VENTILATION ANTIDÉFLATION.

GANTS PROTECTEURS: PORTER DES GANTS/VETEMENTS RESISTANTS AUX PRODUITS CHIMIQUES AFIN DE PROTEGER LA PEAU POTENTIELLEMENT EXPOSEE.

PROTECTION YEUX: EVITER LE CONTACT AVEC LES YEUX. PORTER DES LUNETTES PROTECTRICES CONTRE LES PRODUITS CHIMIQUES ET UN ECRAN FACIAL.

AUTRE EQUIPMENT PROTECTEUR: TABLIER ET BOTTES IMPERMEABLES. DOUCHE OCULAIRE ET DOUCHE D'URGENCE.

AUTRE MESURES DE PROTECTION: EVITER TOUT CONTACT AVEC LES YEUX, LA PEAU ET LES VETEMENTS. EVITER DE RESPIRER. NE PAS INGERER. CONSERVER LOIN DE TOUS ALIMENTS. BIEN LAYER LES MAINS APRES AVOIR MANIPULER LA MATIERE. CHANGER ET LAYER LES VETEMENTS CONTAMINES.

RENSEIGNEMENTS SPECIAUX EN MATIERE D'EXPEDITION: PEINTURE. LIQUIDE INFLAMMABLE
CLASSE:3 UN# 1263 LE GROUPE D'EMBALLAGE II. CANUTEC 24 HOUR EMERGENCY NUMBER: (613) 996-6666

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SECTION IX - PRECAUTIONS SPECIALES

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PRECAUTIONS A PRENDRE A LA MANIPULATION ET L'ENTREPOSAGE: ENTREPOSER DANS UN ENDROIT FRAIS, SEC ET BIEN VENTILE, A L'ECART DES MATIERES INCOMPATIBLES. NE PAS LAISSER A PROXIMITE D'UNE SOURCE DE CHALEUR, D'ETINCELLES, OU D'UNE FLAMME. GARDER LE RECIPIENT FERME. TOUT EQUIPMENT DOIT ETRE MIS A LA TERRE.

AUTRES PRECAUTIONS: NE PAS COUPER, BROIER, SOUDER OU PERCER SUR OU PRES DE CE CONTENANT.

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SECTION X - HMIS INFORMATION

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HMIS RATIO: SANTE: 2 FLAMMABILITE: 3 REACTIVITE: 1 PROTECTION
PERSONNELLE: K

===== BASE 99001 ===== FORM 10393 =====



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INTEGRITY
INNOVATION
PERFORMANCE



TECHNICAL DATA

EF25000 SUPER-SHIELD® SERIES

3:1 & 4:1 Mix Ratio

Description

The EF25000 Series is a high performance, isocyanate free urethane system that is VOC compliant at $\leq 2.8 - 3.5$ lbs / gal ($\leq 335 - 420$ grams/litre). Each of Cloverdale's Super-Shield® coatings are custom formulated to customer specifications; application and cure properties vary to optimize performance.

Mixed Coating Properties

Mix Ratio	3 Parts base to 1 Part catalyst (faster cure, lower spray viscosity, excellent flow out) 4 Parts base to 1 Part catalyst (STD cure, higher sag resistance, longer open time)
VOC	$\leq 2.8 - 3.5$ lbs / gal or $\leq 335 - 420$ grams / litre
Volume Solids	50 - 65%
Sag	
Airless	4 – 5 mils
Air Assist Airless	4 – 5 mils
Air Spray	4 – 5 mils
HVLP	4 – 5 mils
Viscosity @ 70°F (21°C)	30 ± 3 Seconds Zahn#2 (3:1 Mixing) 35 ± 3 Seconds Zahn#2 (4:1 Mixing)
Pot Life @ 77°F (25°C)	2.00 hours
Gloss	
20°	Matte to ultra gloss (to customer specifications)
60°	Matte to ultra gloss (to customer specifications)
Impacts	160+ in/lbs @ 2 mils DFT
Pencil Hardness	HB – F
Theoretical Coverage @ 1 mil DFT	802 - 1042 ft ² / gal (19.7 – 25.6 m ² / litre)

DFT = Dry Film Thickness

Product Weight - Container weight not included

EF25000 base	8.76 – 11.26 lbs / gallon or 1.050 – 1.350 kg / litre
SI25002P2 catalyst	6.75 lbs / gallon or 0.810 kg / litre

Shelf Life

Shelf Life is applicable only for material stored in unopened and undamaged original factory filled containers at 39° - 100°F (4° to 38°C).

EF25000 series base	2 years	SI25002P2	6 months
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Subject to reinspection. Store unused material in tightly closed containers. Contents of partially filled containers may show surface skinning after storage. If skinning forms, remove by straining before use.

BENEFITS

- ISO Free
- outstanding appearance
- excellent DOI
- excellent color & gloss retention
- low VOC
- ultra low HAP's
- meets Canadian auto refinish single stage VOC requirement
- 4:1 meets AIM VOC spec for 'other industrial maintenance coatings'

USES

- fleet finishing applications
- oil field application
- ACE
- electrical transformers
- recreational vehicles
- plastics



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TECHNICAL DATA EF25000 Series

Surface Preparation

Properly prepared, primed surface following all application procedures and recoat instructions on primer technical data sheet.

Mixing Instructions

Mixing at 3:1 by volume:

3 Parts SI25000 series base to
1 Part SI25002P2 activator

Mixing at 4:1 by volume:

4 Parts SI25000 series base to
1 Part SI25002P2 activator

Mix thoroughly to uniform consistency before use. Filter through 100 mesh in line filter.

Application Instructions

Application Temperature

Minimum	55°F (10°C)
Maximum	100°F (38°C)

Equipment Settings

Air Spray:	pot pressure:	10 – 20 psi
	atomizing air:	45 – 65 psi
	nozzle set:	1.0 – 1.8
Airless Spray:	fluid pressure:	2000 - 2500 psi
	tip size:	.011 - .015
Air Assist Airless:	fluid pressure:	700 - 1500 psi
	atomizing air:	20 – 60 psi
	tip size:	.011 - .015

- Precision plural component equipment is recommended. All spray equipment including lines and filters must be kept clean at all times to avoid nozzle plugging. When hand mixing smaller quantities, stir thoroughly to a uniform consistency prior to use.
- Apply in wet coat making even parallel passes. Overlap each pass 50% to minimize holidays, bare areas and pinholes.
- Excess wet film will cause sags and runs.

Recommended dry film thickness is 2 – 3 mils.

Supershield® is only recommended to be a finish coat over two component epoxy primers. Never apply over one component or urethane primers.

If thinners are required: Please contact your Cloverdale Representative for recommendations.

Note: Successful application requires following the recommended temperature, humidity conditions and film thickness ranges.

Drying Schedule

To customer specifications

Recoat Window for Best DOI

Substrate Temp	70°F (21°C)
Over Itself	15 minutes to 1 day
Over Epoxy Primers	1 hour to 3 days

Flash times: Please refer to specific Cloverdale Primer Technical Data Sheet for appropriate flash times and recoat windows for this topcoat.

It is recommended to apply at ambient air and surface temperatures between 55° - 100°F (10° - 38°C). Apply at a relative humidity level between 33% - 85%.

Surface temperature must be at least 5°F (3°C) above the dew point to ensure that moisture condensation does not occur during application and the drying period.

Higher/lower temperatures & humidity, film thickness, improper activator range and poor air movement will affect the dry time and recoat window.

Equipment Cleanup

Clean application equipment with Cloverdale's SP03078T0.

Safety Precautions

FOR INDUSTRIAL USE ONLY. To be used by professionally trained personnel using proper safety equipment. Use only with adequate ventilation. Warning: this product is flammable, keep away from heat, sparks and open flame. Please refer to material safety data sheets.

Warranty

Cloverdale Paint Inc. warrants its product to be free from defects in materials and workmanship and will REPLACE ANY PRODUCT PROVED TO BE DEFECTIVE, OR REFUND OF THE ORIGINAL PURCHASE PRICE OF THE QUANTITY PROVED TO BE DEFECTIVE. Requests for refund or replacement of product must be made in writing within one year from the original date of purchase. This Warranty does not apply to defects due, directly or indirectly, to misuse, abuse, negligent application, or acts of God.

CLOVERDALE PAINT INC. WILL NOT BE LIABLE FOR DEATH, INJURIES TO PERSONS OR PROPERTY, OR FOR INCIDENTAL, CONTINGENT, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF OUR PRODUCT, INCLUDING DOWNTIME OR LOSS OF USE OF PRODUCT.

All data, statements, and recommendations made herein are based upon information we believe to be reliable, but are made without any representation, guarantee or warranty of accuracy. Our products are sold on the condition that the user himself will evaluate them, as well as our recommendations, to determine their suitability for his own purpose before adoption. Also, statements regarding the use of our products or processes are not to be construed as recommendations for their use in violation of any patent rights or in violation of any applicable laws or regulations.



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FICHE SIGNALÉTIQUE

SECTION I - RENSEIGNEMENTS SUR LE PRODUIT

Identificateur du Produit: SUPERSHIELD
Numéro du Produit: SI25000-12
Usage du Produit: PEINTURE
NOM DU FABRICANT: Cloverdale Paint Inc.
50 PANET ROAD
WINNIPEG, MB
R2J 0R9 204/237-0241
PREPARE PAR: Mr Robert Tinsley, 204-237-0241
DATE: 05/16/13
WHMIS CATEGORIE: B2 D2AD2B
NOM DU FOURNISSEUR: Cloverdale Paint Inc.
50 PANET ROAD
WINNIPEG, MB
R2J 0R9 204/237-0241

SECTION II - INGREDIENTS DANGEREUX

INGREDIENTS	NUMERO CAS	POURCENTAGE	LIMITES D'EXPOSITION	LC50	LD50
IRON OXIDE	1309-37-1	5.0-10.0	10 mg/m ³	N/AV	N/AV
ACRYLATED URETHANE OLIGOMER	N/AV	5.0-10.0	NO INFO	N/AV	N/AV
XYLENE; MIXED ISOMERS	1330-20-7	1.0-5.0	100 ppm	5000 PPM RAT	4G/KG RAT ORAL
METHYL AMYL KETONE	110-43-0	5.0-10.0	50 ppm	2000 PPM RAT	1600 MG/KG RAT
N-BUTYL ACETATE	123-86-4	10.0-30.0	150 ppm	2000 PPM RAT	14.0 G/KG RAT
ETHYL 3-ETHOXYPROPIONATE	763-69-9	1.0-5.0	50 ppm	>1000 PPM RAT	5000 MG/KG RAT
ETHYLBENZENE	100-41-4	1.0-5.0	100 ppm	>4000 PPM RAT	3.5 G/KG RAT
1,6 HEXANEDIOL DIACRYLATE	13048-33-4	1.0-5.0	NO INFO	N/AV	4.9 G/KG RAT
TRIMETHYLOLPROPANE TRIACRYLATE	15625-89-5	5.0-10.0	NO INFO	N/AV	>5 G/KG RAT

N.A. - SANS OBJET

SECTION III - PROPRIETES PHYSIQUES

POINT D'EBULLITION : 126-170 C
ODEUR : ODEUR PIQUANT
APPARENCE : LIQUIDE EPAIS
SOLUBILITE : NEGLIGEABLE
VOLATILES EN VOLUME: 32.7%
PH @ 0.00 % : 7.0
TENSION DE VAPEUR : 18.8 mm Hg
DENSITE DE LA VAPEUR: PLUS LOURD QUE L'AIR
TAUX D'EVAPORATION : PLUS RAPIDE QUE ACETATE BUTYLE
DENSITE SPECIFIQUE : 1.100
POINT DE CONGELATION: -40 C



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SECTION IV - RISQUES D'INCENDIE OU D'EXPLOSION

POINT D'ECLAIR: 15 C
(TAGLIABUE C. C.)
CLASS 3, DIV. 2

LEL: 1.0%
UEL: 12.1%

MOYENS D'EXTINCTION:

CO2 CHIMIQUES SECS LA MOUSSE

RISQUE PARTICULIER DE LUTTE CONTRE L'INCENDIE: LIQUIDE COMBUSTIBLE (POINT ECLAIR EST INFÉRIEUR A 100 F/38 C). PEUT FORMER DES MÉLANGES INFLAMMABLES. LES VAPEURS PEUVENT ÊTRE EXPLOSIVE DANS L'AIR. ÉLIMINER TOUTE SOURCE D'IGNITION. TOUT ÉQUIPEMENT DOIT ÊTRE MIS À LA TERRE. GARDER LE RÉCIPIENT FERMÉ.

PROCÉDURE D'EXTINCTION: LES POMPIERS DOIVENT PORTER UN APPAREIL RESPIRATOIRE AUTONOME ET DES VÊTEMENTS DE PROTECTION COMPLÈTS. UTILISER DE L'EAU PULVÉRISÉE POUR REFROIDIR LES STRUCTURES ET LES CONTENANTS EXPOSÉS AU FEU.

SECTION V - DANGERS POUR LA SANTÉ

EFFETS DE LA SUREXPOSITION: *** INHALATION: LES VAPEURS PEUVENT IRRITER. L'EXPOSITION À DES VAPEURS TRÈS CONCENTRÉES PEUVENT CAUSER DES MAUX DE TÊTES, DES ÉTOURDISSEMENTS, DES NAUSEES, UNE DÉPRESSION DU SYSTÈME NERVEUX CENTRAL. L'EXPOSITION PROLONGÉE À DES VAPEURS TRÈS CONCENTRÉES PEUT CAUSER L'ÉVANOUISSEMENT OU LA MORT. *** INGESTION: MODÉRÉMENT TOXIQUE. LE PRODUIT EST NOCIF LORSQU'IL EST INGÉRÉ. L'INGESTION DE GRANDES QUANTITÉS PEUT CAUSER DES MAUX DE TÊTES, DES NAUSEES, DES VOMISSEMENTS, UNE DÉPRESSION DU SYSTÈME NERVEUX CENTRAL. UNE PETITE QUANTITÉ DE CE LIQUIDE ASPIRÉE DANS LES POUMONS SOIT PAR INGESTION OU PAR VOMISSEMENT, RISQUE D'AVOIR DE GRAVE EFFETS NOCIF POUR LA SANTÉ (P.EX., PROVOQUER UN ŒDÈME PULMONAIRE). *** PEAU: PEUT CAUSER DE L'IRRITATION MODÉRÉE. PEUT CAUSER LE DÉGRAISSEMENT ET LA DERMATITE. UNE EXPOSITION PROLONGÉE PEUT RÉSULTER À UNE SENSIBILITÉ DANS LA PEAU. PEUT PROVOQUER DES BRÛLURES CHIMIQUES. PEUT ÊTRE ABSORBÉ PAR LA PEAU ET PROVOQUER UN RISQUE POUR LA SANTÉ. *** YEUX: LES VAPEURS PEUVENT IRRITER. LE LIQUIDE ET LES BRÛNES IRRITENT LES YEUX ET PEUVENT CAUSER DES BRÛLURES. *** EFFETS DE LA SUREXPOSITION: L'EXPOSITION PROLONGÉE OU RÉPÉTÉE PEUT CAUSER UNE SENSIBILITÉ DE LA PEAU ET/OU UNE SENSIBILITÉ RESPIRATOIRE. L'EXPOSITION PROLONGÉE OU RÉPÉTÉE PEUVENT CAUSER À LA LONGUE DES DOMMAGES AU SYSTÈME SANGUIN, GASTRO-INTESTINAL, NERVEUX, ET/OU REPRODUCTEUR. LE CIRC À CLASSE L'ÉTHYLBENZÈNE PARMI LES SUBSTANCES DU GROUPE 2B EN SE FONDANT SUR DES DONNÉES SUFFISANTES DÉMONTRANT SA CANCÉROGÉNÉCITÉ POUR LES ANIMAUX DE LABORATOIRE, MAIS DE DONNÉES INSUFFISANTES DÉMONTRANT L'APPARITION DE CANCER CHEZ LES HUMAINS. SELON LES RÉSULTATS DE CERTAINES ÉTUDES MENÉES SUR DES ANIMAUX, DE TRÈS GRANDES EXPOSITIONS AUX XYLÈNES ON ENTRAÎNE DES EFFETS NÉFASTES SUR LE DÉVELOPPEMENT DES EMBRYONS/FETUS. CES EFFETS SONT SOUVENT APPARUS À DES NIVEAUX D'EXPOSITION TOXIQUES POUR LA MÈRE. LA PORTÉE DE CES RÉSULTATS POUR LES HUMAINS N'A PAS ÉTÉ ÉTABLIE.

CONDITIONS MÉDICALES GÉNÉRALEMENT AGGRAVÉES PAR L'EXPOSITION: LES PROBLÈMES CUTANÉS. LES PROBLÈMES RESPIRATOIRES CHRONIQUES.

VOIES PRIMAIRES DE PÉNÉTRATION: INHALATION CONTACT DERMIQUE

MESURES DE PREMIERS SOINS: *** INHALATION: TRANSPORTER À L'AIR FRAIS. AIDER LA RESPIRATION SI NÉCESSAIRE. GARDER LA VICTIME AU CHAUD ET CALME. CONSULTER UN MÉDECIN. *** INGESTION: NE PAS FAIRE VOMIR OU BOIRE. FAIRE REPOSER. CONSULTER SANS DÉLAI UN MÉDECIN. SI LE VOMISSEMENT SE PRODUIT, GARDER LA TÊTE DE LA VICTIME BAISSÉE AU-DESSOUS DE SES HANCHES POUR ÉVITER L'ASPIRATION DANS LES POUMONS. *** PEAU: LAVÉ LA PEAU CONTAMINÉE AVEC DE L'EAU. CONSULTER SANS DÉLAI UN MÉDECIN. *** YEUX: RINCER DE L'EAU CLAIRE PENDANT AU MOINS 15 MINUTES ET FAIRE IMMÉDIATEMENT APPEL À UN MÉDECIN.



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SECTION VI - DONNEES SUR LA REACTIVITE

STABILITE: CE PRODUIT EST STABLE DANS DES CONDITIONS NORMALES D'ENTREPOSAGE.

POLYMERISATION DANGEREUSE: NE SE PRODUIRA PAS DANS DES CONDITIONS NORMALES.

PRODUITS DE DECOMPOSITION DANGEREUX: OXYDES DE CARBONE. OXYDES D'AZOTE. VAPEURS TOXIQUES ET FUMEE.

CONDITIONS A EVITER: CHALEUR, ETINCELLES, FLAMMES.

PRODUITS INCOMPATIBLES: AGENTS OXIDABLE. ACIDES. ALCALINS. AGENTS REDUCTEURS. LES SULFURES. LES METAUX ACTIFS, IONS DE METAUX. LE CUIVRE. HALOGENES. L'EAU.

SENSIBILITE AUX DECHARGES ELECTROSTATIQUES: PRENDRE DES PRECAUTIONS CONTRE LES DECHARGES STATIQUES.

SECTION VII - MESURES POUR FUITE OU DEVERSEMENT

ACTION A PRENDRE EN CAS DE FUITE OU DE DEVERSEMENT: ELIMINER TOUTE SOURCE D'IGNITION. ARRETER LA SOURCE DE FUITE. EVACUER TOUT PERSONNEL NON-ESSENTIEL. PORTER LES VETEMENTS NECESSAIRE. ENDIGER L'ENDROIT POUR EMPECHER PROPAGATION. ABSORBER LE LIQUIDE AVEC UN PRODUIT ABSORBANT INERTE. TRANSFERER DANS UN CONTENANT A L'EPREUVE D'IGNITION.

METHODES D'ELIMINATION: NE PAS CONTAMINER LES COURS D'EAU POTABLE, LES LACS, LES ETANGS OU LES RUISSEAUX. SELON REGLEMENTS MUNICIPAUX, LES LOIS PROVINCIAL ET FEDERALES APPLICABLE A VOTRE LOCALITE.

SECTION VIII - PRECAUTIONS D'EMPLOI

PROTECTION RESPIRATOIRE: UTILISER UN MASQUE RESPIRATOIRE A HAUT RENDEMENT QUI PROTEGE CONTRE LES VAPEURS ORGANIQUES ET LES POUSSIERES TOXIQUES. POUR DES HAUTES CONCENTRATIONS, UTILISER UN MASQUE RESPIRATOIRE A ALIMENTATION D'AIR.

VENTILATION: VENTILATION EFFICACE SUR PLACE POUR EVACUER LA POUSSIERE. EMPLOYER UN APPAREILAGE DE VENTILATION ANTIDEFLATION.

GANTS PROTECTEURS: PORTER DES GANTS/VETEMENTS RESISTANTS AUX PRODUITS CHIMIQUES AFIN DE PROTEGER LA PEAU POTENTIELLEMENT EXPOSEE.

PROTECTION YEUX: EVITER LE CONTACT AVEC LES YEUX. PORTER DES LUNETTES PROTECTRICES CONTRE LES PRODUITS CHIMIQUES ET UN ECRAN FACIAL.

AUTRE EQUIPMENT PROTECTEUR: TABLIER ET BOTTES IMPERMEABLES. DOUCHE OCULAIRE ET DOUCHE D'URGENCE.

AUTRE MESURES DE PROTECTION: EVITER TOUT CONTACT AVEC LES YEUX, LA PEAU ET LES VETEMENTS. EVITER DE RESPIRER. NE PAS INGERER. CONSERVER LOIN DE TOUS ALIMENTS. BIEN LAVER LES MAINS APRES AVOIR MANIPULER LA MATIERE. CHANGER ET LAVER LES VETEMENTS CONTAMINES.

RENSEIGNEMENTS SPECIAUX EN MATIERE D'EXPEDITION: PEINTURE. LIQUIDE INFLAMMABLE
CLASSE:3 UN# 1263 LE GROUPE D'EMBALLAGE II. CANUTEC 24 HOUR EMERGENCY NUMBER: (613) 996-6666



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SECTION IX - PRECAUTIONS SPECIALES

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PRECAUTIONS A PRENDRE A LA MANIPULATION ET L'ENTREPOSAGE: ENTREPOSER DANS UN ENDROIT FRAIS, SEC ET BIEN VENTILE, A L'ECART DES MATIERES INCOMPATIBLES. NE PAS LAISSER A PROXIMITE D'UNE SOURCE DE CHALEUR, D'ETINCELLES, OU D'UNE FLAMME. GARDER LE RECIPIENT FERME. TOUT EQUIPMENT DOIT ETRE MIS A LA TERRE.

AUTRES PRECAUTIONS: NE PAS UTILISER DE PRESSION POUR VIDER LE CONTENANT. NE PAS COUPER, BROUER, SOUDER OU PERCER SUR OU PRES DE CE CONTENANT. TOUS LES CONTENANTS CONTIENNENT DES RESIDUS ET DES VAPEURS. MANIPULER LES CONTENANTS VIDES COMME S'ILS ETAIENT PLEINS.

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SECTION X - HMIS INFORMATION

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HMIS RATIO: SANTE: 2 FLAMMABILITE: 3 REACTIVITE: 1 PROTECTION PERSONNELLE: E

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DATA SHEET

2.1 VOC ARP Primer

Automotive Primer

Industry Approvals

Auto Refinish:	✓	Category 1
Env. Canada:		Exempt
MPI:		N/a
AWWA:		N/a

General Properties

A high performance epoxy primer for vehicle refinish applications requiring a primer with less than 250 gr/lit VOC. The 83030 primer has superior corrosion resistance when applied to prepared steel. No induction time required. 83030 has excellent sanding capability, but provides a finish so smooth that sanding is often not required.

Recommended Uses

For use in vehicle refinish applications, truck boxes & bodies, power distribution equipment, tanks, agricultural equipment, and general industrial priming.

Product Information

GENERIC TYPE	Amine Cured Epoxy
PIGMENT TYPE	Anti-corrosive
COLOR	Grey
BASES	N/a
FINISH	Flat
AVERAGE VOLUME SOLIDS	60.2%
AVERAGE WEIGHT SOLIDS	77.0%
RECOMMENDED FILM THICKNESS	Wet: 3.3-5.0 mils (82 - 125 microns) Dry: 2-3 mils (50 - 75 microns) <i>See your Cloverdale Representative for project recommendations.</i>
THEORETICAL COVERAGE	965 ft ² /gal @ 1 mil (25 microns) DFT 23.7 m ² /L @ 1 mil (25 microns) DFT <i>Actual coverage may vary depending on substrate and application methods.</i>

MIXED RATIO	3 Parts 83030A; 1 Part 83030B
INDUCTION TIME	No induction time required
POT LIFE	7 hours at 25°C (77°F) (less at higher temperatures)
VISCOSITY MIXED	57 - 63 KU
TEMPERATURE RESISTANCE (DRY)	93°C (200°F) Continuous 120°C (250°F) Intermittent
V.O.C. MIXED	250 gm./lit. (2.1 lb./gal.) <i>*refer to MSD sheet for current VOC values</i>
THINNER	Use as supplied.
ACCELERATOR	A-55

Methods of Application

AIRLESS SPRAY	1500 - 200 psi with tip sizes .011" - .013" or equivalent
H.V.L.P.	Tip size 1.4 - 1.6 mm. 8 - 10 psi cap pressure
CONVENTIONAL	40 - 50 psi gun pressure
BRUSH / ROLLER	Not recommended

Drying Time - Temperature, Relative Humidity, and Film Thickness will affect dry and re-coat times.

Substrate Temperature	Touch Dry	Hard Dry	Overcoat Interval with Armourshield		
			Minimum	Maximum	Normal
25°C (77°F)	3.5 hours	6 hours	2 hours	3 days	4 hours



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Recommended Topcoats

Most Cloverdale Conventional and High Performance Coatings. Note: Only the 837 and 839 series urethanes should be used for ARP applications.

Surface Preparation

Area to be painted should be thoroughly cleaned with a detergent solution in water followed by a wash using a wax and grease remover. Sand the bare metal areas using 80-180 grit abrasive. Old, existing finishes should be sanded using 320 – 400 grit paper. Sanded areas should be re-cleaned and primed as quickly as possible after drying.

Limitations

Not recommended for immersion service. For best results apply when substrate temperature is above 10°C (50°F), and at a minimum of 3°C (5°F) above the dew point. Do not apply when the relative humidity is above 85%.

Mixing Instructions

Mix 83030 base A component and curing agent 83030 activator B separately with good agitation. Add curing agent to base component and mix thoroughly until homogenous. If thinning is necessary or required proceed only after recommended induction time has passed.

Safety Precautions

This product is for industrial use only. **Refer to Material Safety Data Sheet for proper health and safety information.**

Storage and Handling

FLASH POINT	-20°C (-4°F) TCC
PRODUCT WEIGHT	1.435 kg/lit mixed (container extra)
STORAGE	Cool, dry, secure location. See your Cloverdale Paint Representative.
PACKAGE SIZE	1 gal kit - 3 qts 83030A and 1 qt. 83030B 4 gal kit - 3 gal 83030A and 1 gal 83030B

Some package sizes or colors may be by special order only. Please check with your Cloverdale Representative when ordering.

Warranty Disclaimer

Cloverdale Paint manufactures quality products. In the event that this product is defective or in any way unsuitable for the application for which it is sold, Cloverdale Paint Inc. will replace the product free of charge. The warranty provided by this data sheet is the only warranty or guarantee of quality made in respect of this product by Cloverdale Paint Inc. By purchasing this product the customer accepts this warranty in lieu of all others, and waives all claims to any other remedy arising from any warranty or guarantee of quality, whether such warranty or guarantee of quality was made expressly to the customer or implied by any applicable law.

Cloverdale Paint Inc.

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PERFORMANCE CRITERIA

1. Abrasion Resistance

Method: ASTM D4060 Abrasion Resistance of Organic Coating by Taber Abrader, 1000 gram load, CS-17 Wheel, 1000 Cycles
Coating System: 1 coat 83030
Results: 161 mg.

2. Adhesion

Method: ASTM D4541, method "E"

Coating System: 83030 primer, 839 Armourshield topcoat
Results: >900 psi

3. Chemical Resistance

Method: Covered spot test for 1 week at room temperature

Coating System: 1 coat 83030

Coating was exposed to - 5% Sodium Hydroxide Solution; 5% Sulfuric Acid Solution; 5% Hydrochloric Acid; 5% Mono Basic Sodium Phosphate Solution; 5% Sodium Hypochlorite Solution; Heavy Duty Liquid Detergent

Results: Unaffected - slight discoloration permitted

4. Recoating Window

Method: Internal method - Minimum = the time to >80% gloss @ 20 degree angle. Maximum = longest time tested with 5B adhesion of topcoat

Coating System: 83030 primer, 839 Armourshield topcoat
Results: 2 hrs to >72 hrs

5. Salt Spray (Fog)

Method: ASTM B117
Coating System A: 1 coat 83030
Results: >1000 hrs
Coating System B: 1 coat 83030, 1 coat 83904
Results: >1500 hrs

6. Flexibility

Method: ASTM D522 Cylindrical Mandrel Bend

Coating System: 1 coat 83030
Results: Not less than 9% elongation

7. Pencil Hardness

Method: ASTM D3363
Coating System A: 1 coat 83030
Results: pass 2H

Check for recent amendments to this data sheet at www.cloverdalepaint.com



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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: 2.1 VOC ARP PRIMER BASE
Identification Number: 83030A
Product Use: PAINT
MANUFACTURER: Cloverdale Paint Inc.
50 PANET ROAD
WINNIPEG, MB
R2J 0R9 204/237-0241
PREPARED BY: Mr Robert Tinsley, 204-237-0241
WHMIS Class: B2 D1B D2A
SUPPLIER: Cloverdale Paint Inc.
50 PANET ROAD
WINNIPEG, MB
R2J 0R9 204/237-0241
DATE: 03/19/14

SECTION II - HAZARDOUS INGREDIENTS

CHEMICAL NAME	CAS NUMBER	WT. PERCENT		EXPOSURE LIMIT	LC50	LD50
		RANGE				
TITANIUM DIOXIDE	13463-67-7	10.0-30.0		10 MG/M3	6.82MG/L RAT	>250/KG ORAL R
MAGNESIUM SILICATE (TALC)	13776-74-4	10.0-30.0		5 mg/m3 DUST	N/AV	N/AV
BISPHENOL A DIGLYCIDYL ETHER	25068-38-6	10.0-30.0		NO INFO	N/AV	N/AV
ALKYL GLYCIDYL ETHER	68609-97-2	1.0-5.0		NO INFO	N/AV	>19.2 G/KG RA
XYLENE, MIXED ISOMERS	1330-20-7	1.0-5.0		100 ppm	5000 PPM RAT	4G/KG RAT ORA
METHYL ISOBUTYL KETONE	108-10-1	1.0-5.0		50 ppm	5700 PPM RAT	2080MG/KG RAT
METHYL ETHYL KETONE	78-93-3	5.0-10.0		200 ppm	2000 PPM RAT	2737 MG/KG RA
ACETONE	67-64-1	1.0-5.0		750 ppm	16000 PPM RAT	7400 MG/KG RA
PROPYLENE GLYCOL MONOMETHYL ETHER	107-98-2	1.0-5.0		100 ppm	13000 MG/KG RAT	5660 MG/KG RA
FURFURYL ALCOHOL	98-00-0	1.0-5.0		NO INFO	233 MG/KG RAT	177 MG/KG RAT
TER-BUTYL ACETATE	504-88-5	1.0-5.0		NO INFO	2230 MG/M3 RAT	4100 MG/KG RA

N.A. - NOT APPLICABLE

SECTION III - PHYSICAL DATA

BOILING RANGE : 56-260 C
ODOR : AROMATIC
APPEARANCE : GREY LIQUID
VOLATILE BY WEIGHT: 18.6%
VOLATILE BY VOLUME: 35.7%
PH @ 0.00 % : 7.0
VAPOR PRESSURE : 184 mm Hg
VAPOR DENSITY : IS HEAVIER THAN AIR
EVAPORATION RATE: IS FASTER THAN BUTYL ACETATE
SOLUBILITY : 8% WATER SOLUBLE
SPECIFIC GRAVITY: 1.483
FREEZING POINT : -40 C



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SECTION IV - FIRE AND EXPLOSION DATA

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FLASH POINT: -18 C LEL: 1.0%
(TAGLIABUE C. C.) UEL: 16.3%
CLASS 3, DIVISION 1

EXTINGUISHING MEDIA: DRY CHEMICAL CARBON DIOXIDE FOAM WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLAMMABLE LIQUID (FLASH POINT LESS THAN 100 F/38 C). MAY FORM FLAMMABLE 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: VAPORS MAY BE IRRITATING. EXPOSURE TO HIGH VAPOR CONCENTRATIONS MAY CAUSE HEADACHES, DIZZINESS, NAUSEA, AND CENTRAL NERVOUS SYSTEM DEPRESSION. PROLONGED EXPOSURE TO HIGH VAPOR CONCENTRATIONS MAY CAUSE UNCONSCIOUSNESS OR DEATH. *** INGESTION: MODERATELY TOXIC. HARMFUL IF SWALLOWED. SWALLOWING LARGE QUANTITIES CAUSES HEADACHES, NAUSEA, VOMITING, AND CENTRAL NERVOUS SYSTEM DEPRESSION. MAY CAUSE LIVER AND/OR KIDNEY DAMAGE. SMALL AMOUNTS OF LIQUID DRAWN INTO THE LUNGS FROM SWALLOWING OR VOMITING MAY CAUSE SEVERE HEALTH EFFECTS (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 EFFECTS OF OVEREXPOSURE: CONTAINS SILICA. LONG TERM EXPOSURE TO SILICA DUST MAY CAUSE SILICOSIS AND CARDIOPULMONARY IMPAIRMENT. REPEATED OR PROLONGED EXPOSURES MAY CAUSE SKIN AND/OR RESPIRATORY SENSITIZATION. REPEATED OR PROLONGED EXPOSURES MAY CAUSE LIVER, KIDNEY, AND/OR NEURAL DYSFUNCTION. REPEATED OR PROLONGED EXPOSURES MAY CAUSE DELAYED EFFECTS INVOLVING BLOOD, GASTRO-INTESTINAL, NERVOUS AND/OR REPRODUCTIVE SYSTEMS. LONG TERM EXPOSURE TO DUSTS CAN LEAD TO RESPIRATORY IMPAIRMENT. HIGH EXPOSURES TO XYLENES IN SOME ANIMAL STUDIES HAVE BEEN REPORTED TO CAUSE HEALTH EFFECTS ON THE DEVELOPING EMBRYO/FETUS. THESE EFFECTS WERE OFTEN AT LEVELS TOXIC TO THE MOTHER. THE SIGNIFICANCE OF THESE FINDINGS TO HUMANS HAS NOT BEEN DETERMINED. LONG-TERM EXCESSIVE EXPOSURES MAY CAUSE TALCOSIS, PULMONARY FIBROSIS, WHICH IN TURN MAY LEAD TO SEVERE AND PERMANENT DAMAGE TO THE LUNGS. 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. ACCORDING TO THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC), METHYL ISOBUTYL KETONE IS POSSIBLY CARCINOGENIC TO HUMANS (GROUP 2B)

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

PRIMARY ROUTE(S) OF ENTRY: DERMAL INHALATION INGESTION

EMERGENCY AND FIRST AID PROCEDURES: *** INHALATION: REMOVE TO FRESH AIR. ASSIST

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SECTION V - HEALTH HAZARD DATA

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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: FLUSH CONTAMINATED SKIN WITH WATER. GET PROMPT MEDICAL ATTENTION. *** 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. TOXIC FUMES AND SMOKE.
FLAMMABLE FUMES.

CONDITIONS TO AVOID: HEAT, SPARKS OR FLAME.

INCOMPATIBILITY: OXIDIZING AGENTS. ACIDS. ALKALIES. AMINES. SULFIDES.
ALDEHYDES. HALOGENS. CHLORINATED COMPOUNDS.

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

=====

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 A COMBINATION ORGANIC VAPOR/TOXIC PARTICULATE HIGH EFFICIENCY FILTER RESPIRATOR. FOR HIGH CONCENTRATIONS, USE AIR SUPPLIED RESPIRATOR.

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 SAFETY GLASSES/GOGGLES OR A FACE SHIELD.

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



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SECTION VIII - SAFE HANDLING AND USE INFORMATION

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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.

SPECIAL SHIPPING INFORMATION: PAINT. FLAMMABLE LIQUID CLASS:3 UN#1263
PACKING GROUP II. CANUTEC 24 HOUR EMERGENCY NUMBER: (613) 996-6666

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SECTION IX - SPECIAL PRECAUTIONS

=====

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. DO NOT PUNCTURE, INCINERATE, BURN OR STORE ABOVE 45 C. 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: 2 FLAMMABILITY: 3 REACTIVITY: 1 PERSONAL
PROTECTION: K

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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: 2.1 VOC ARP PRIMER ACTIVATOR
Identification Number: 83030B
Product Use: PAINT ADDITIVE
MANUFACTURER: Cloverdale Paint Inc.
50 PANET ROAD
WINNIPEG, MB
R2J 0R9 204/237-0241
PREPARED BY: Mr Robert Tinsley, 204-237-0241
WHMIS Class: B2 D1AD2AE
SUPPLIER: Cloverdale Paint Inc.
50 PANET ROAD
WINNIPEG, MB
R2J 0R9 204/237-0241
DATE: 02/03/16

SECTION II - HAZARDOUS INGREDIENTS

CHEMICAL NAME	CAS NUMBER	WT. PERCENT		EXPOSURE LIMIT	LC50	LD50
		RANGE				
XYLENE; MIXED ISOMERS	1330-20-7	1.0-5.0		100 ppm	5000 PPM RAT	4G/KG RAT ORAL
METHYL ISOBUTYL KETONE	108-10-1	1.0-5.0		50 ppm	5700 PPM RAT	2080MG/KG RAT
ACETONE	67-64-1	5.0-10.0		750 ppm	16000 PPM RAT	7400 MG/KG RAT
N-BUTYL ALCOHOL	71-36-3	1.0-5.0		100 ppm	8000 PPM RAT	790 MG/KG RAT
2-BUTOXYETHANOL	111-76-2	1.0-5.0		50 ppm SKIN	925 PPM MOUSE	470 MG/KG RAT
DIMETHYLAMINOMETHYL PHENOL	90-72-2	1.0-5.0		NO INFO	N/AV	1200 MG/KG RAT
ETHYLBENZENE	100-41-4	1.0-5.0		100 ppm	>4000 PPM RAT	3.5 G/KG RAT
BENZYL ALCOHOL	100-51-6	10.0-30.0		NO INFO	1400 PPM RAT	1230 MG/KG RAT
ALIPHATIC POLYAMIDE	106906-26-1	10.0-30.0		NO INFO	N/AV	N/AV

N.A. - NOT APPLICABLE

SECTION III - PHYSICAL DATA

BOILING RANGE : 56-206 C
ODOR : AROMATIC
APPEARANCE : CLEAR LIQUID
VOLATILE BY WEIGHT: 13.2%
VOLATILE BY VOLUME: 20.8%
PH @ 0.00 % : 7.0
VAPOR PRESSURE : 184 mm Hg
VAPOR DENSITY : IS HEAVIER THAN AIR
EVAPORATION RATE: IS FASTER THAN BUTYL ACETATE
SOLUBILITY : 7% WATER SOLUBLE
SPECIFIC GRAVITY: 1.295
FREEZING POINT : -40 C



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SECTION IV - FIRE AND EXPLOSION DATA

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FLASH POINT: -18 C
(TAGLIABUE C. C.)
CLASS 3, DIVISION 1

LEL: 1.0%
UEL: 12.8%

EXTINGUISHING MEDIA: DRY CHEMICAL CARBON DIOXIDE FOAM WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLAMMABLE LIQUID (FLASH POINT LESS THAN 100 F/38 C). MAY FORM FLAMMABLE 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: VAPORS AND MISTS ARE EXTREMELY CORROSIVE. BRONCHITIS, PULMONARY EDEMA, AND CHEMICAL PNEUMONITIS MAY OCCUR. *** INGESTION: HIGHLY TOXIC. MAY BE FATAL. SWALLOWING LARGE QUANTITIES CAUSES HEADACHES, NAUSEA, VOMITING, AND CENTRAL NERVOUS SYSTEM DEPRESSION. MAY CAUSE LIVER AND/OR KIDNEY DAMAGE. VAPORS, MISTS, AND LIQUID ARE CORROSIVE. SWALLOWING CAN CAUSE DEATH. SMALL AMOUNTS OF LIQUID DRAWN INTO THE LUNGS FROM SWALLOWING OR VOMITING MAY CAUSE SEVERE HEALTH EFFECTS (E.G. PULMONARY EDEMA). *** SKIN: VAPORS, MISTS AND LIQUID ARE EXTREMELY CORROSIVE. 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, LIQUID AND MISTS ARE EXTREMELY CORROSIVE. BRIEF CONTACT WILL BE SEVERELY IRRITATING AND MAY DAMAGE THE EYES AND CAUSE PERMANENT INJURY OR BLINDNESS. *** CHRONIC EFFECTS OF OVEREXPOSURE: REPEATED OR PROLONGED EXPOSURES MAY CAUSE SKIN AND/OR RESPIRATORY SENSITIZATION. REPEATED OR PROLONGED EXPOSURES MAY CAUSE LIVER, KIDNEY, AND/OR NEURAL DYSFUNCTION. REPEATED OR PROLONGED EXPOSURES MAY CAUSE DELAYED EFFECTS INVOLVING BLOOD, GASTRO-INTESTINAL, NERVOUS AND/OR REPRODUCTIVE SYSTEMS. ETHYL BENZENE HAS BEEN CLASSIFIED BY THE IARC AS A GROUP 2B SUBSTANCE ON THE BASIS OF SUFFICIENT EVIDENCE FOR CARCINOGENICITY IN LABORATORY ANIMALS BUT INADEQUATE EVIDENCE FOR CANCER IN HUMANS. HIGH EXPOSURES TO XYLENES IN SOME ANIMAL STUDIES HAVE BEEN REPORTED TO CAUSE HEALTH EFFECTS ON THE DEVELOPING EMBRYO/FETUS. THESE EFFECTS WERE OFTEN AT LEVELS TOXIC TO THE MOTHER. THE SIGNIFICANCE OF THESE FINDINGS TO HUMANS HAS NOT BEEN DETERMINED. CARCINOGENICITY IN EXPERIMENTAL ANIMALS. ACCORDING TO THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC), METHYL ISOBUTYL KETONE IS POSSIBLY CARCINOGENIC TO HUMANS (GROUP 2B) 2-BUTOXYETHANOL MAY CAUSE REPRODUCTIVE EFFECTS BASED ON STUDIES IN LABORATORY ANIMALS AT HIGH GENERALLY TOXIC DOSES. 2-BUTOXYETHANOL MAY CAUSE TERATOGENIC/EMBRYOTIC EFFECTS BASED ON IN STUDIES IN LABORATORY ANIMALS

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: ALLERGIES. SKIN DISORDERS. EYE DISORDERS. CENTRAL NERVOUS SYSTEM DISORDERS. CHRONIC RESPIRATORY DISORDERS.

PRIMARY ROUTE(S) OF ENTRY: INHALATION DERMAL 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: FLUSH CONTAMINATED SKIN WITH WATER. GET PROMPT MEDICAL ATTENTION. *** EYES: FLUSH

=====



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SECTION V - HEALTH HAZARD DATA

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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: DIRECT SUNLIGHT AVOID EXTENDED CONTACT WITH AIR OR OXYGEN HEATING IN AIR MAY PRODUCE IRRITATING ALDEHYDES, ACIDS AND KETONES BASES. SODIUM HYDROXIDE ALUMINUM AND ITS ALLOYS OXIDIZING AGENTS. ACIDS. ALKALIES. AMINES. CYANIDES, ISOCYANATES. SULFIDES. ALDEHYDES. HALOGENS. WATER

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

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SECTION VII - SPILL OR LEAK PROCEDURES

=====

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.

=====

SECTION VIII - SAFE HANDLING AND USE INFORMATION

=====

RESPIRATORY PROTECTION: USE A COMBINATION ORGANIC VAPOR/TOXIC PARTICULATE HIGH EFFICIENCY FILTER RESPIRATOR. FOR HIGH CONCENTRATIONS, USE AIR SUPPLIED RESPIRATOR.

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 SAFETY GLASSES/GOGGLES OR A FACE SHIELD.

OTHER PROTECTIVE EQUIPMENT: OVERALLS, APRON. EYE BATH AND SAFETY SHOWER.

HYGENIC PRACTICES: DO NOT GET IN EYES, SKIN OR CLOTHING. AVOID INHALING. DO NOT

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SECTION VIII - SAFE HANDLING AND USE INFORMATION

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SWALLOW. KEEP AWAY FROM FOOD PRODUCTS. WASH HANDS THOROUGHLY AFTER HANDLING. CHANGE AND WASH CONTAMINATED CLOTHING.

SPECIAL SHIPPING INFORMATION: PAINT RELATED MATERIAL. FLAMMABLE LIQUID
CLASS:3 UN#1263 PACKING GROUP II. CANUTEC 24 HOUR EMERGENCY NUMBER: (613) 996-6666

=====

SECTION IX - SPECIAL PRECAUTIONS

=====

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. GROUND ALL EQUIPMENT.

OTHER PRECAUTIONS: DO NOT CUT, GRIND, WELD OR DRILL ON OR NEAR THIS CONTAINER.
DO NOT PUNCTURE, INCINERATE, BURN OR STORE ABOVE 45 C.

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SECTION X - HMIS INFORMATION

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HMIS: HEALTH: 3 FLAMMABILITY: 3 REACTIVITY: 1 PERSONAL
PROTECTION: K

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PRODUCT DATA SHEET

DESCRIPTION

Johns Manville AP™ Foil-Faced Foam Sheathing board consists of a uniform closed-cell polyisocyanurate foam core bonded on each side to a foil facer. One side has a reflective foil facer and the other side has a white non-reflective foil facer to suit your building needs.

Polyiso provides one of the highest R-values per inch of any rigid insulation (R-6.0 at 1 inch). Furthermore, when properly installed, AP Foil-Faced Foam Sheathing functions as a water-resistive barrier, vapor barrier and air barrier, eliminating the need to install additional components.

AP Foil-Faced Foam Sheathing is produced with an EPA-compliant hydrocarbon-based blowing agent that has zero Ozone Depletion Potential (ODP) and virtually no Global Warming Potential (GWP); it also meets both CFC- and HCFC-free specification requirements. Polyiso is one of North America's most widely used insulation products and has been cited by the EPA for its responsible impact on the environment.

AP Foil-Faced Foam Sheathing provides exceptional heat, moisture and air control to protect your building's exterior wall assembly.

INSTALLATION

AP Foil-Faced Foam Sheathing is lightweight and can be easily cut with a utility knife or saw. Use maximum board lengths to minimize the number of joints. Vertical joints should be staggered. Butt joints should be centered over framing. To create a water-resistive barrier or an air barrier, treat seams and penetrations as instructed in the installation guide and in accordance with manufacturer's guidelines. Once installed, AP Foil-Faced Foam Sheathing may be left exposed for up to 60 days. Consult your local building department for code requirements.

COMPLIANCES

- ASTM C1289 Type 1, Class 1
- CAN/ULC S704, Type 1, Class 1
- ICC-ES Evaluation Report ESR-3398
- Canadian Construction Materials Centre 13104-L
- Air Barrier Association of America Evaluated Air Barrier Material, Assembly & Water Resistive Barrier
- International Building Code
- International Residential Code
- International Energy Conservation Code
- ENERGY STAR
- ASHRAE 90.1
- California State Insulation Quality Standards

PERFORMANCE STANDARDS

- ASTM C1289, Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board
- CAN/ULC-S704, Standard for Thermal Insulation, Polyurethane and Polyisocyanurate, Boards, Faced
- ASTM E84, Test for Surface Burning Characteristics of Building Materials
- CAN/ULC S102, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies
- NFPA 259, Standard Test Method for Potential Heat of Building Materials
- NFPA 285, Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components
- AC 71, Acceptance Criteria for Foam Plastic Sheathing Panels Used as Water-Resistive Barriers
- ASTM E331, Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference
- AATCC Test Method 127, Water Resistance: Hydro Static Pressure Test
- ASTM E1233, Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Cyclic Air Pressure Differential
- ASTM E2178, Standard Test Method for Air Permeance of Building Materials
- ASTM E2357, Standard Test Method for Determining Air Leakage of Air Barrier Assemblies

AVAILABILITY

AP Foil-Faced Foam Sheathing is available in the sizes shown in Table 1 (see reverse). For additional information or special size inquiries, please consult a sales representative at 800-654-3103.



PERFORMANCE ADVANTAGES

Thermal Insulation: inch for inch, polyiso has one of the highest energy efficiencies. R-values for AP Foil-Faced Foam Sheathing are shown in Table 1, and physical properties are shown in Table 2 (see reverse). R means resistance to heat flow. The higher the R-value, the greater the insulating power.

Water-Resistive Barrier: when properly installed as part of a Johns Manville Wall System, AP Foil-Faced Foam Sheathing meets the ICC-ES AC71 acceptance criteria for foam plastic sheathing used as a water-resistive barrier. Please see the installation guide for qualifying assemblies and detailed instructions.

Vapor Barrier: at a minimum thickness of one inch, AP Foil-Faced Foam Sheathing has a vapor permeance of 0.05 perms and qualifies as a Class I vapor retarder.

Air Barrier: when properly installed as part of a Johns Manville Wall System, AP Foil-Faced Foam Sheathing meets the Air Barrier Association of America boardstock criteria for materials and assemblies. Please see installation guide for qualifying assemblies and detailed instructions.

Noncorrosive: does not accelerate corrosion of pipes, wiring or metal studs.

Lightweight: easy to handle, can be cut with a utility knife or saw.

ENERGY, QUALITY & ENVIRONMENT





Polyisocyanurate Foam Sheathing Continuous Insulation



PRODUCT DATA SHEET

AP™ FOIL-FACED

STORAGE

Store AP Foil-Faced Foam Sheathing elevated above the floor or ground and standing water. If stored outdoors, keep dry by covering completely with a waterproof tarpaulin.

LIMITATIONS

AP Foil-Faced Foam Sheathing is nonstructural. The walls must be braced in accordance with the requirements of the applicable code.

WARRANTY

All Johns Manville products are sold subject to Johns Manville's Limited Warranty and Limitation of Remedy. For a copy of these documents, call 800-654-3103.

WARNING

AP Foil-Faced Foam Sheathing is combustible and shall only be used as specified by the local building code with respect to flame spread classification and to the use of a suitable thermal barrier when required.

TECHNICAL SERVICES

Johns Manville can provide technical information to assist in addressing questions regarding AP Foil-Faced Foam Sheathing. Please call 800-654-3103 for technical assistance.

PERFORMANCE DATA

Table 1: Thermal Performance

THERE ARE 2 LAYERS OF 2" THICK INSULATING PANELS, FOR A TOTAL OF 4" ALL AROUND. APPLIED ON WALLS, CEILING AND FLOOR.

THICKNESS (inches)	R-VALUE U.S. ¹ (°F•ft ² •h/BTU)	THICKNESS (mm)	RSI-VALUE ¹ (°K•m ² /W)	BOARD SIZE (ft)	R-VALUE WITH REFLECTIVE AIR SPACE ²		
					½" Air Space	¾" Air Space	1" Air Space
0.50	2.7	13	0.48	4 x 8, 9, or 10	5.2	5.5	5.4
0.625	3.5	16	0.62	4 x 8, 9, or 10	6.0	6.3	6.2
0.75	4.4	19	0.77	4 x 8, 9, or 10	6.8	7.1	7.0
0.85	5.0	22	0.91	4 x 8, 9, or 10	7.4	7.7	7.6
1.00	6.0	25	1.06	4 x 8, 9, or 10	8.5	8.8	8.7
1.50	9.3	38	1.63	4 x 8, 9, or 10	11.7	12	12
1.65	10	42	1.82	4 x 8, 9, or 10	12	12	12
2.00	13	51	2.21	4 x 8, 9, or 10	15	15	15
2.50	16	64	2.79	4 x 8, 9, or 10	18	19	19
3.00	19	76	3.36	4 x 8, 9, or 10	22	22	22
3.50	22	89	3.94	4 x 8, 9, or 10	25	25	25
4.00	26	102	4.52	4 x 8, 9, or 10	28	28	28
4.50	28	114	5.09	4 x 8, 9, or 10	30	31	31

¹Aged R-value at 75° F in accordance with ASTM C1289.

²Only applies when an ideal reflective air space and horizontal heat flow conditions exist. The shiny foil side of product must face the air space.

Determined in accordance with FTC 16 CFR Part 460 requirements and published ASHRAE air space R-values. Refer to the 2009 ASHRAE Handbook of Fundamentals, Chapter 26, Table 3, for details.

Table 2: Physical Properties

PROPERTY	UNITS	TEST METHOD	RESULT
Thermal Resistance, 1 inch	°F•ft ² •hr/BTU	ASTM C518*	6.0
Compressive Strength	psi	ASTM D1621	≥ 16
Flexural Strength	psi	ASTM C203	≥ 40
Water Absorption	% by volume	ASTM C209	0.1
Water Vapor Permeance	perms	ASTM E96	0.05
Surface Burning Characteristics**			
Flame Spread*	index	ASTM E84	≤ 25
Smoke Developed*	index	ASTM E84	≤ 450
Service Temperature	°F		-100 to 250

*Aged R-value at 75° F in accordance with ASTM C1289.

**Numerical ratings are not intended to reflect hazards present in actual fire conditions.

¹Foam core tested at 4 inches.



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Data as shown in this literature is intended to be used as a general guideline only. The physical and chemical properties of AP Foil-Faced Polyisocyanurate Foam Sheathing listed herein represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Any references to numerical flame spread or smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions. Check with the sales office nearest you for current information. All Johns Manville products are sold subject to Johns Manville's Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville Limited Warranty and Limitation of Remedy or for information on other Johns Manville thermal and acoustical insulation and systems, visit the website or call the 800 number above. 717 17th Street Denver CO, 80202

BID-0151 7/15

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Manufacturier de produits CVAC sur mesure

Project : 6515-403, Electrical room
Client : Promec

3. Fabrication characteristics (continued)



Manufacturier de produits CVAC sur mesure

Project : 6515-403, Electrical room

Client : Promec

Fabrication characteristics (continuation)

Identification tag

FABRICATION MEP	
TAG NO:	6515-403, Electrical room
MODEL:	AMP-PFB-2-160-E
SERIE:	AMP00379

Pedestrian door

Description:

(1x) 42" x 84"

4" insulated freezer style

Warning informations

☒ Risk of electrocution



The high performance entrance door!

The Glace-Guard™ Entrance door combines insulation performance and durability, while being attractive and virtually maintenance free. This entrance door, available in 3" or 4" thickness, is made of high quality metal skins. Its panels are insulated with a rigid polyurethane foam core, providing the highest insulation value. Its hardware is engineered to withstand an intensive usage, while providing safety and smoothness of operation.

The Glace-Guard™ Entrance door is operated by industrial cam-lift hinges, heavy duty pull handle and heavy gauge steel automatic door closer, ensuring trouble-free operation and effortless firm closing.

The Glace-Guard™ Entrance door is suitable for coolers and freezers, for both interior and exterior applications. It is your best door investment when performance, durability and low maintenance costs are criteria of selection.

The Glace-Guard™ Entrance door is ideal for applications such as:

- Supermarkets
- Restaurants
- Cold storage distribution warehouses
- Grocery distribution warehouses
- Food processing plants



Entrance® / Glace-Guard™

ET-300, ET-400 Series

Section 08326

Well insulated:

The Glace-Guard™ Entrance ET-300 (3" thick) and ET-400 (4" thick) doors are insulated with a rigid polyurethane foam core.

Designed for energy savings:

Full perimeter magnetic vinyl gasket and bottom double U-shaped rubber gasket to ensure airtight joints.

Built to last with superior quality materials:

Proven experience and expertise achieve a perfect adherence of the polyurethane foam to the metal skins, ensuring panel strength, rigidity and preservation of insulation value over time. The high quality 26 gauge galvanized steel with superior 25-micron polyester top coat, ensures durability and resistance to corrosion.

Heavy duty hardware for long lasting use and smooth operation:

Industrial cam-lift hinges, heavy duty pull handle and heavy gauge steel door closer, combined with a variety of accessories, provide trouble-free operation, safety and durability.

THERMOSTOP
Tradition of quality



Technical specifications

Section 08326

Reference product:

Glance-Guard™ Entrance ET-300 or
Glance-Guard™ Entrance ET-400,
as manufactured by Thermostop Inc.,
www.thermostop.com

Temperature range:

-20°F to +120°F (-29°C to +49°C)

Standard dimensions:

- 36" x 84" (914mm x 2134mm)
 - 60" x 84" (1524mm x 2134mm)
- Other dimensions available upon request.

Thickness:

- Glance-Guard™ Entrance ET-300:
3" (75mm) thick
- Glance-Guard™ Entrance ET-400:
4" (100mm) thick

Panels:

Insulated with rigid polyurethane, foamed in place under high pressure between two metal skins. Standard 26ga. steel skins, white stucco finish. For other skin options, please consult **Metal skins options**. Panel frame is made with heavy duty aluminum extrusions.

Door frame and thermal barrier:

Door frame is made of shock-proof 5/32" (4mm) thick exterior and interior extruded aluminum angles. The exterior aluminum angle has an incorporated resin thermal break.

Hinges:

- For doors with width under 60" (1524mm): Self-closing and reversible high pressure die-cast zinc hinges with self-lubricating nylon cams. Brushed chrome finish.



- For doors with width of 60" (1524mm) and greater: Heavy duty self-closing and reversible high pressure die-cast zinc flanges, 3/16" (5mm) thick steel strap. Gray finish.



Pull handle:

High pressure die-cast zinc cylinder locking handle, complete with emergency inside release system. Brushed chrome finish.



Door closer:

Heavy gauge steel mechanical door closer, complete with extra-wide hook. Chrome finish.

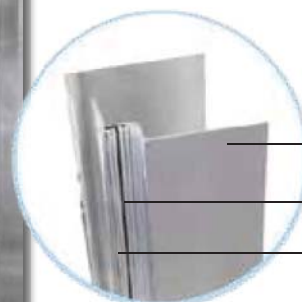


Perimeter magnetic gasket:

A full perimeter magnetic vinyl gasket insures that the door is airtight and vapour-proof on the perimeter joint.

Bottom door gasket:

Extruded aluminum retainer with two U-shaped rubber gaskets to insure airtight joints.



Door frame details

Heat trace (optional):

For freezer applications, the door is equipped with a heat trace on four (4) sides of the door, preventing ice or frost accumulation and eliminating the need to have a heated threshold.

Kick plate (optional):

36" (914mm) high steel kick plate, on full door width, to protect the door bottom against forklift impacts.

- 16ga. galvanized steel, smooth finish
- 18ga. stainless steel, #304 finish

Metal skins options:

Steel	Finish
26ga. (0.41mm)	stucco, white
20ga. (0.86mm)	smooth, white
16ga. (1.42mm)	smooth, painted

Aluminum	Finish
24ga. (0.60mm)	stucco, white or grey RAL-9006
16ga. (1.30mm)	smooth, clear anodized

THERMOSTOP
Tradition of quality

3775 Losch Blvd.
Longueuil (Quebec)
Canada
J3Y 5T7

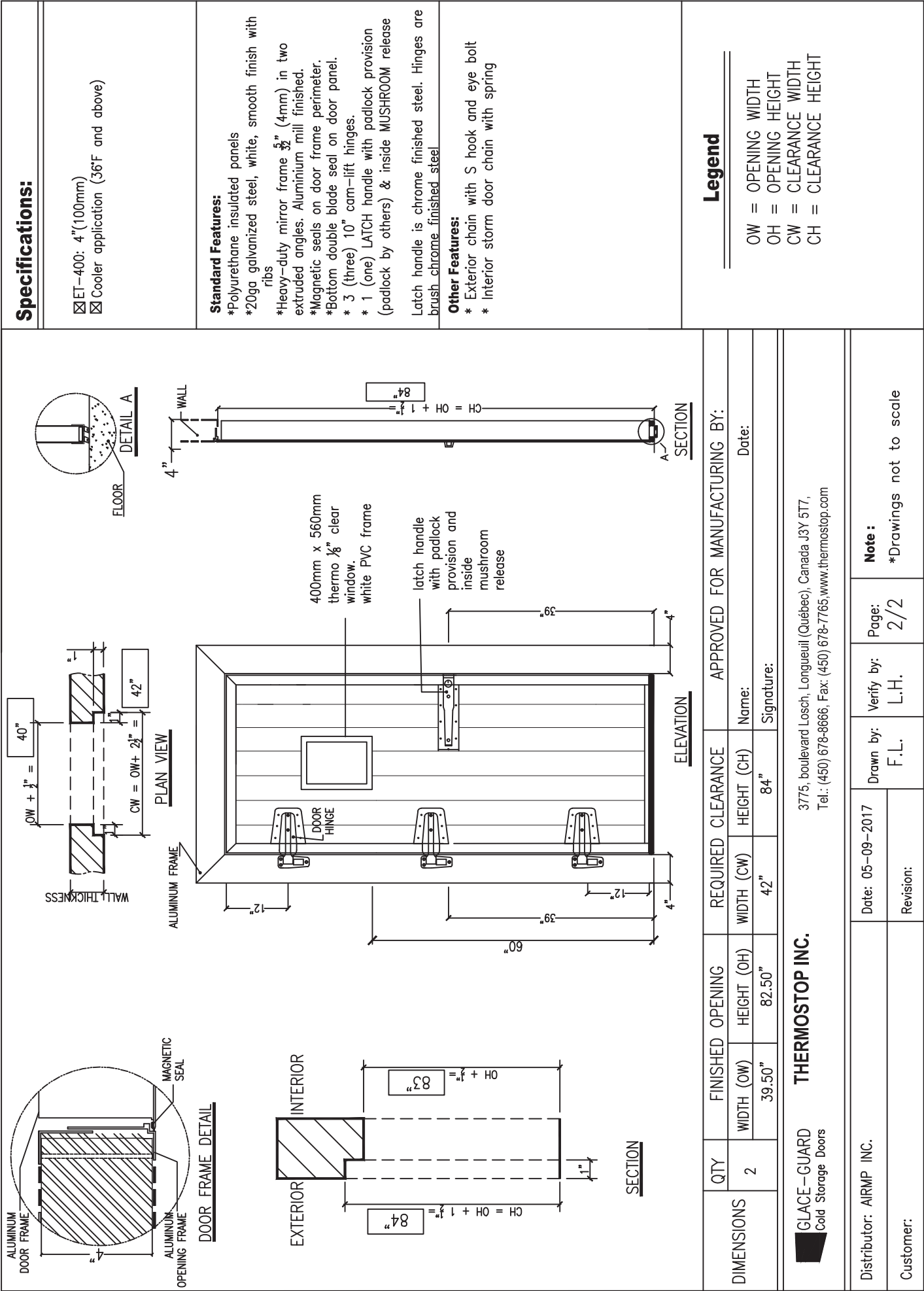
Phone: 450.678.8666
Toll free: 866.678.0123
Fax: 450.678.7765
thermostop.com

Warranty

Thermostop doors and hardware carry a warranty of one (1) year against any defects or faulty workmanship. The door panels carry a ten (10) year limited warranty against perforation due to rusting, and a five (5) year limited warranty on delamination, under normal operational conditions.

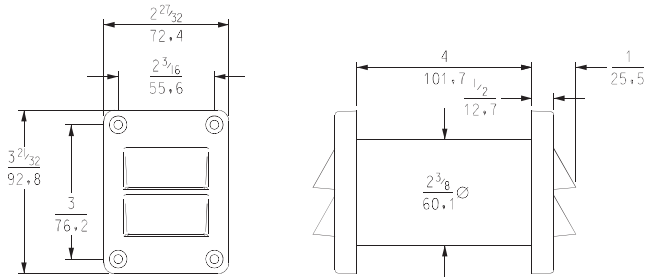
THERMOSTOP

SHOP DRAWING - COOLER ENTRANCE DOOR GLACE-GUARD ET-400

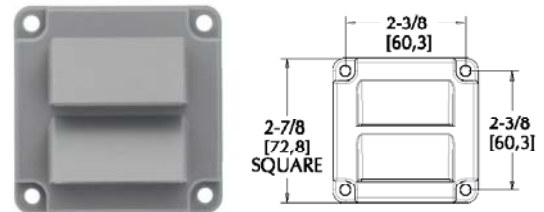




STANDARD LOUVER



SQUARE LOUVER



US Patent No. 6,176,776

PERFORMANCE TESTED

Comprehensive performance tests show that Kason 1825 pressure relief ports provide better air flow at lower pressure and greater frost resistance than competitive ventilators.

1825 NARROW JAMB HEATED VENT

- Exclusive, patented Kason ventilator seals tight and opens at lowest pressure of any competitive vent.
- Lightweight, springless valves provide greater air flow at lower pressure than spring-loaded valves.
- Lower pressure allows doors to open and close with ease and reduces stress on walk-in enclosure joints, reducing chance of leaks.
- Computer-designed heater eliminates valve freezing.
- Narrow profile unit mounts in door jamb.
- Port installs through 2 1/2" (63.5mm) diameter hole with minimal wiring.
- Poppet valves close tightly to prevent air leakage.
- Engineered to optimize the self-closing potential of Kason Walk-in hinges, latches and door closers.

SPECIFICATIONS

MATERIAL:
Gray ABS plastic
valve body and
louvers, PVC tube,
internal aluminum
and stainless steel
parts.

POWER:
.04 amp @ 120 VAC;
4W heater.
.02 amp @ 230 VAC;
4W heater.

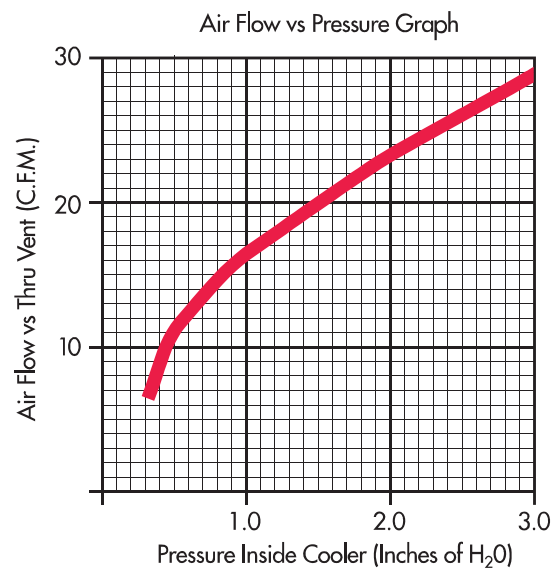
UL LISTING:
File No. E57306

SELECTION:
See Quantity Selector Chart, page
B-59.

MOUNTING:
No. 1825 only mounts horizontally.
Drilled for No. 10 (5.0mm) screws.
Requires 2-1/2" (63.5mm) diameter
hole.

Model No.	Item	Qty/Carton	Wgt./Carton
11825000004	Heated Vent, 120 VAC, 4" Wall	10	7 lb. (3.2 kg)
11825000006	Heated Vent, 230 VAC, 4" Wall	10	7 lb. (3.2 kg)
11825S00004	Heated Square Louver Vent, 120 VAC, 4" Wall	10	7 lb. (3.2 kg)
11825S00006	Heated Square Louver Vent, 230 VAC, 4" Wall	10	7 lb. (3.2 kg)
11825000008	Unheated Vent, 4" Wall	10	7 lb. (3.2 kg)

*Other thicknesses available. Contact factory.





Manufacturier de produits CVAC sur mesure

Project : 6515-403, Electrical room
Client : Promec

4. General arrangement drawings

