

**2017 STARTUP and SHUTDOWN INSTRUCTIONS FOR THE
PATRIOT JR™. MOBILE ADHESIVE CART.
(ENGLISH VERSION - FOR SPANISH TRANSLATION, SEE ADDITIONAL SHEETS)
plus FLUSH & SOLVENTS MSDS SHEETS**



Startup Procedures:

- A) Open drums and insert fittings. Fittings for drum should correspond to fitting on PJR Reactor. Be sure to set drums up to match stickers, labels and colors. Never change product once designated and used in lines and PJR Reactor.
- B) Mount PJR Reactor on PJR Cart. **MAKE SURE ALL CLIPS AND HOLD DOWNS ARE SECURE!!!!**
- C) Stand PJR Cart upright with the help of another person. **DO NOT ATTEMPT ON YOUR OWN.**
- D) Line drums up according to labels and fitting location. Small cam lock fittings should face the bottom of the cart.
- E) Make sure valves are closed and vents remain plugged.
- F) Secure drums using the provided ratchet straps. Make sure drum straps are in the locked position and the drums are firmly against the deck.
- G) Connect cam lock fitting to drums. Ensure all fittings are connected securely and are in the locked position.
PLEASE DOUBLE CHECK ALL FITTINGS AND CLIPS.
- H) With the help of another person, pull PJR Cart down from the upright position, so the drums are parallel with the roof deck and the wheels and rear legs are on the surface securely.
- I) Place Generator in tray.
- J) Connect all hoses and gun making sure that the hoses are in the proper place. Hose fittings will only fit in one way.
- K) Make sure all fittings are secure and firm.
- L) Start Generator and plug PJR Reactor into power. Allow time to warm up. **DO NOT USE IDLE CONTROL!** Generator should run at full throttle all the time to prevent damage to PJR Reactor.
- M) Install Driers into vent fittings. It may be necessary to use bleed lines into vent fittings first.
- N) Put bleed valves in "spray" position. and turn dial to 1-2 with gun open.
- O) Make sure fluids are flowing through clear tubing.
- P) Run until even flow comes through gun end. When in use to prevent clogging at tip. Purge gun every 2-3 mins/or as necessary so adhesive does not clog.
- Q) Install Static Nozzle and begin spraying.

NOTE:

To change drums reverse procedure. Reverse procedure and change one drum at a time to prevent "crossing" drums.

Overnight shut down checklist

(lunch breaks, overnight, 3-5 days)

- A) Turn off rocker switch on pump. Unplug Unit.
- B) Turn down pressure knob to off position on pump.
- C) Close PJR VEE Manifold
- D) Grease gun to point of having 3" - 4" of grease in nozzle
- E) Turn off both ball valves at inlet hoses from drums.
- F) Take recirculation hoses out of vents and let hang down.
- G) Screw caps back on vent tubes.
- I) Cover Patriot Jr. with green stock cover provided.

Fusion overnight shut down checklist:

- A) Turn off rocker switch on pump. Unplug Unit.
- B) Turn down pressure knob to off position on pump.
(Shut off valves on gunblock)
- C) Allow air to blow through gun for 2 - 3 minutes. Trigger gun a few times to help clear tip.
- D) Shut off air compressor. Remove air line from gun. Remove cap from top of grease fitting on gun until it comes out of gun end. Replace cap.
- E) Store gun in a dry bag.
- F) Turn off both ball valves at inlet hoses from drums.
- G) Take recirculation hoses out of vents and let hang down.
- H) Screw caps back on vent tubes. I) Cover Patriot Jr. with green stock cover provided.

Patriot Jr. Long Term Shut Down Checklist:

(end of each job or when not using for more than 2 weeks)

- A) Close inlet ball valves
- B) Disconnect inlet hoses from drums.
- C) Using the open end of the additional set of connector hoses provided, connect the appropriate hose to the A & B side inlet camlocks.
- D) Place hose into containers of ISO Flush .
- E) Open both ball valves inlet - allow ISO Flush to run through both A + B sides.
- F) Have both residual materials left in hoses to be pumped into a container that can be discarded after foam has hardened.
- G) Once all materials have been purged from lines and ISO Flush is present, allow the ISO Flush to refill the same container from which you are pumping from. Recirculate for approximately 10-15 minutes.
- H) Pull hose from containers allowing ISO Flush in hose to run back into containers.
- I) Now insert same inlet hose into containers of lube.
- J) Flush out ISO Flush until lube is present.
- K) Pump lube through system until it comes out gun.
- L) Close off inlet ball valves.
- M) Install dust caps and covers in cam locks.
- N) Turn off pump and close gun.
- O) Add grease into guns through grease nozzle inlets. (fill 2" - 3" into tip)

If you have questions, please don't hesitate to call us at 800.620.7928 or visit us online at www.patriotjr.com

Startup Procedures:	Procedimientos de arranque:
A) Open drums and insert fittings. Fittings for drum should correspond to fitting on PJR Reactor. Be sure to set drums up to match stickers , labels and colors. Never change product once designated and used in lines and PJR Reactor.	A) Abrir los tambores e insertar las conexiones. Cada conexión debe corresponder a la conexión del reactor en el Patriot Jr. Asegúrese de configurar los tambores hasta partido pegatinas, etiquetas y colores. Nunca cambio de producto una vez señalado y utilizado en las líneas y Reactor de PJR.
B) Mount PJR Reactor on PJR Cart. MAKE SURE ALL CLIPS AND HOLD DOWNS ARE SECURE!!!!	B) Montas el reactor de PJR en el carro de PJR. ¡ASEGÚRESE DE QUE TODOS LOS CLIPS Y ANCLAS SON SEGURAS!
C) Stand PJR Cart upright with the help of another person. DO NOT ATTEMPT ON YOUR OWN.	C) Pare el carro con la ayuda de otra persona. NO INTENTE POR SU CUENTA.
D) Line drums up according to labels and fitting location. Small cam lock fittings should face the bottom of the cart.	D) Alinearse los tambores para arriba según las etiquetas y el lugar de montaje. Conexiones de la cerradura de leva pequeña deben quedar hacia la parte inferior del carro.
E) Make sure valves are closed and vents remain plugged	E) Asegurarse que todas las válvulas estén cerradas y las rejillas de ventilación permanece tapado
F) Secure strap drums into place. Make sure drum straps are in the locked position and the drums are firmly against the deck.	F) Utilizase correas para asegurar los tambores en su lugar. Asegúrese que las correas estén en la posición de cerrada y los tambores estén firmemente colocadas sobre la estructura.
G) Connect cam lock fitting to drums. Make sure all fittings are connect securely and are in the locked position. PLEASE DOUBLE CHECK ALL FITTINGS AND CLIPS.	G) Conecte la cerradura de la leva a los tambores. Asegúrese de que todas las conexiones se conecten de forma segura y en la posición de bloqueo. POR FAVOR VERIFIQUE TODAS LAS CONEXIONES Y CLIPS.
H) With the help of another person pull PJR Cart down so the drums are parallel to roof deck and wheels and rear legs are on the surface securely.	H) Con la ayuda de otro persona jala el Patriot Jr. hasta abajo así que los tambores son paralelos a los soportes anteriores y ruedas son seguramente en la losa.
I) Place Generator in tray.	I) Situar el generador en bandeja.
J) Connect all hose and gun making sure that the hoses are in the proper place. Hose fittings will only fit in one way.	J) Conecte todas las mangueras y la pistola, asegurándose de que las mangueras estén en el lugar correcto. Las conexiones de manguera solamente encajarán en una manera.
K) Make sure all fittings are secure and firm.	K) Asegúrese de que todas las conexiones son seguras y firmes.

L) Start Generator and plug PJR Reactor into power. Allow time to warm up. DO NOT USE IDLE CONTROL! Generator should run at full throttle all the time to prevent damage to PJR Reactor.	L) Arranque generador y conectan el reactor a la electricidad. Deje tiempo que se caliente la maquina. NO ADJUSTE EL CONTROL DE RALENTÍ. El generador debe funcionar a velocidad maxima todo el tiempo para evitar daños en el Reactor de Patriot Jr.
M) Install Driers into vent fittings. It may be necessary to use bleed lines into vent fittings first.	M) Instalarse los secadores en conectores de ventilación. Puede ser necesario utilizar las líneas de purga en las conexiones de ventilación antes de instalar el secador.
N) Put bleed valves in “spray” position. and turn dial to 1-2 with gun open.	N) Colocar las válvulas de purga en posición de "spray" y gire el dial a 1-2 con la pistola abierta.
O) Make sure fluids are flowing through clear tubing.	O) Asegúrese que los fluidos están fluyendo a través de tubería clara.
P) Run until even flow comes through gun end. When in use to prevent clogging at tip. Purge gun every 2-3 mins/or as necessary so adhesive does not clog.	P) Corren el reactor hasta que tienes un flujo uniforme a través del extremo de la pistola. Para evitar que se atasque en la punta, purga la pistola cada 2-3 minutos o como sea necesario para no tapa el punto del adhesivo.
Q) Install Static Nozzle and GO!	Q) Instale la boquilla estática y GO!

Overnight shut down checklist	Patriot Jr. - Procedimiento para apagar la maquina a corto plazo
(lunch breaks, overnight, 3-5 days)	(tiempos de descanso y almuerzo, cerrarla anoche, cerrarla hasta 5 días)
A) Turn off rocker switch on pump. Unplug Unit.	A) Apague el interruptor en la bomba. Desenchufela.
B) Turn down pressure knob to off position on pump.	B) Gire la perilla de presión a posición "OFF" en la bomba.
C) Open gun to relieve pressure in hoses.	C) Abrir la pistola para aliviar la presión en las mangueras.
D) Grease gun to point of having 3" - 4" of grease in nozzle	D) Añades grasa a la pistola hasta el punto de tener 3"- 4" de grasa en la boquilla
E) Turn off both ball valves at inlet hoses from drums.	E) Apague ambas válvulas de bola en las mangueras de entrada de los tambores
F) Take recirculation hoses out of vents and let hang down	F) Retiran las mangueras de recirculación de respiraderos y déjelas a colgar
G) Screw caps back on vent tubes	G) Meten los tapones en los tubos de ventilación
H) Cover Patriot Jr. with green stock cover provided.	H) Cubres el Patriot Jr. con cubierta verde incluida.
Fusion Gun overnight shut down checklist	Patriot Jr. - Pistola de Fusión lista de verificación para cerrarla anoche.
A) Turn off rocker switch on pump. Unplug Unit.	A) Apague el interruptor en la bomba. Desenchufe la unidad.
B) Turn down pressure knob to off position on pump (Shut off valves on gunblock) help clear tip.	B) Apagan la perilla de presión en la bomba (cierre de válvulas en el marco de la pistola) para limpiar la punta.
C) Allow air to blow through gun for 2 - 3 minutes. Trigger gun a few times to help clear tip.	C) Permitir que el aire sople a través de la pistola de 2 a 3 minutos. Dispare la pistola unas veces a limpiar la punta.
D) Shut off air compressor. Remove air line from gun. Remove cap from top of grease fitting on gun until GREASE? comes out of gun end. Replace cap.	D) Apague el compresor de aire. Retire la línea de aire de la pistola. Retire la tapa al parte superior de inyector de grasa hasta que grasa salga por fin de pistola de grasa. Reemplace la tapa.
E) Store gun in a dry bag.	E) Guarde la pistola en una bolsa seca.
F) Turn off both ball valves at inlet hoses from drums.	F) Apague ambas válvulas de bola en las mangueras de entrada de los tambores.

G) Take recirculation hoses out of vents and let hang down.	G) Retirensen las mangueras de recirculación de respiraderos y dejelas a colgar.
H) Screw caps back on vent tubes.	H) Meten los tapones de nuevo en los tubos de ventilación.
I) Cover Patriot Jr. with green stock cover provided.	I) Cubrense el Patriot Jr. con cubierta verde.
Patriot Jr. Long Term Shut Down Checklist (end of each job or when not using for over 2 weeks)	Patriot Jr. - Procedimiento para almacenaje de largo plazo
A) Close inlet ball valves	A) Cierre las válvulas de bola de entrada
B) Disconnect inlet hoses from drums.	B) Desconecte las mangueras de entrada de los tambores.
C) Using the open end of the additional set of connector hoses provide, connect the appropriate hose to the A + B side inlet camlocks.	C) Usando el lado abierto del juego de mangueras extra, conectase la manguera correspondiente al cierre de leva de la válvula de entrada lado "A ó B".
D) Place hose into container of ISO Flush .	D) Coloque la manguera dentro del envase de neutralizador (ISO Flush).
E) Open both ball valves inlet - allow ISO Flush to run through both A + B sides.	E) Abrir ambas válvulas de bola entrada y enjuages ambos lados (A y B) con (ISO FLUSH)
F) Have both residual materials left in hoses to be pumped into a container that can be discarded after foam has hardened.	F) Descargan ambos materiales residuales que queda en las mangueras en un contenedor que puede ser desechado después de que la espuma se ha endurecido.
G) Once all materials have been purged from lines and ISO Flush is present, allow the ISO Flush to refill the same container from which you are pumping out of. Recirculate for approximately 10-15 minutes.	G) Una vez que todos los materiales han sido vaciados de las líneas y neutralizador (ISO Flush) está presente, rellenas el contenedor original del neutralizador (ISO Flush). Recirculanse el neutralizador (ISO Flush) durante aproximadamente 10-15 minutos.
H) Pull hose from container allowing ISO Flush in hose to run back into container.	H) Permiten al neutralizador (ISO Flush) en manguera de correr nuevamente en el envase.
I) Now insert same inlet hose into container of Dynalube.	I) Ahora mismo insertan la manguera en envase de Dynalube.
J) Flush out ISO Flush until lube is present.	J) Enjuages el neutralizador (ISO Flush) hasta que el lubricante está presente.

K) Pump lube through system until it comes out gun.	K) Bomba el lubricante a través del sistema hasta que sale de la pistola.
L) Leave air in B side.	L) Deje el aire en el lado B.
M) Close off inlet ball valves.	M) Cierran las válvulas de bola de entrada.
N) Install dust caps and covers in cam locks.	N) Instale tapones antipolvo y tapas en las cerraduras de la leva.
O) Turn off pump and close gun.	O) Apague la bomba y cierre la pistola.
P) Add grease into guns through grease nozzle inlets. (fill 2" - 3" into tip)	P) Añades grasa en la pistola a través de boquillas de inyector de grasa. (llene 2"- 3" en la punta)
If you have questions, please don't hesitate to call us at 800.620.7928 or visit us online at www.patriotjr.com	Si tienes preguntas, no dude llamarnos al 800.620.7928 o visítenos en línea en www.patriotjr.com
secure drums using provided ratchet straps	Usandose las correas del trinquete para asegurar los tambores

NZD ISO FLUSH™

NZD ISO FLUSH™ Isocyanates Resin Cleaner

It is a mixture of Environmentally Sensible solvents, co-solvent, wetting agents and a corrosion inhibitor. It replaces Acetone, MEK, Methylene Chloride, and 1,1,1-trichloroethane. It offers high resin loading, therefore it can be used for an extended period. It is recyclable via vacuum distillation, result in reduced disposal costs.

NZD ISO FLUSH™ is highly effective in Flushing and Immersion cleaning of excess liquid Isocyanate from processing equipment (feed line, feed tanks, mixing and metering equipment), as well as, loosening and removing crystallized isocyanate residues and build-up from equipment and parts.

Effectively Removes:

- ~ Cured Polyurethane Reactive Hot Melt Urethane Adhesives from roll coating equipment & dispensing equipment, as well as, many other Industrial Adhesives.
- ~ **Industrial Resins** such as: Polyester, Vinylester, Epoxy and Pigmented Gel Coats, as well as, Fiberglass and Resin Mixture.
- ~ **Coatings** such as: High & Low Solid Aliphatic, Water Born Epoxy Primers, Polyurethane, Acrylic, Varnishes and Alkyl Enamel.

Flushing & Immersion: Use full strength at room temperature (do not add water).

Pour NZD ISO FLUSH™ into isocyanates feed tank / feed line and circulate to mix with free isocyanate remaining in tank, pump, or other components. Use several gallons of NZD ISO FLUSH™ to purge the free isocyanate.

In addition, use NZD ISO FLUSH™ to flush spray/chopper guns, pumps and resin lines, or use in a clean and totally DRY (free of moisture) metal container with a fitted lid. Ultrasonic cavitation in an immersion tank will enhance the cleaning performance significantly. Be sure your ultrasonic tank is equipped with a temperature control thermostat.

Can also be applied by hand using **GO GREEN™ Saturated Wipes**.

Use Rubber Gloves when handling this product. Do not Heat or Atomize this product.

Typical Properties

Safety & Handling Precautions

Refer to Safety Data Sheet prior to use

Appearance:	Clear liquid
Flash Point:	147.50°F Seta Flash
Odor:	Mild
pH (50% solution in water @ 68 °F):	6.2 - 6.5
Surface Tension (dynes/cm 24) (water = 1.0):	24
Ideal Operating Temp (°F):	Room Temp. Only Do Not Heat or Atomize
Ideal Operating Concentration:	Full Strength
Specific Gravity:	0.895 - 0.900 (@68 °F)
Recycling Parameters (Vacuum Distillation):	300 °F and 27 mm Hg Pressure
VOC Content (ASTM D-2369, Method 24)	5.9 Lbs. / Gallon or 669.0 grams / Liter
Weight/Gal.	7.5 (lbs. /gal.)
Product #	02-W359585



RECOMMENDED MATERIALS TO USE FOR; O-Rings, Gaskets, Hoses And Pump Packaging

- | | | |
|----------------|--------------------------------|---------|
| * FEP-Teflon | * Ethylene-Propylene Copolymer | * Ryton |
| * Butyl Rubber | * Kalrez | |
| * Buna-S | * Fluorosilicone Rubber | |
| * Melamine | * Mild Steel | |
| * Nylon 101 | * Halar | |

Safety & Handling Precautions

Refer to Safety Data Sheet prior to use

Direct contact of NZD ISO FLUSH™ will cause a serious eye irritation or skin irritation. It is important to utilize recommended gloves (natural rubber), safety goggles and other suitable protective clothing your company recommends. Aspiration hazard if swallowed. Keep liquid and vapor away from heat, sparks and flames. Keep container closed. Use with adequate ventilation. DO NOT take internally. Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mist. Wash thoroughly after handling.

Refer to SDS for use, disposal or additional safe handling.

HMIS Rating

Health	2
Fire	2
Reactivity	0

Packaging & Storage

HDPE 1 & 5 gallon pails

55 gallon steel drums (closed cap)

GO GREEN™ Saturated Wipes 75 wipes/Re-Usable Canister

This product should be kept in its original container above freezing and less than 100 °F.
Store drums in a dry area.

MATERIAL TO AVOID LONG TERM

- | | | |
|----------------------|----------------|---------|
| * Viton | * PVC | * Valox |
| * ABS | * Buna-N | |
| * Durel | * Hypalon | |
| * Kynar | * Lexan | |
| * Lucite | * Noryl EN-265 | |
| * PET | * Noryl -731 | |
| * Phenolic Polyester | * Polysulfone | |
| * Polyurethane | * Ultem | |

Disposal

Even though NZD ISO FLUSH™ has a low order of toxicity, * with a low risk of environmental harm. Effluent analysis is required for proper waste disposal. The spent material can be recycled via vacuum distillation on site or by a mobile reclamation service. **Discharge your distill bottom and screened out solids according to Federal, State and Local Regulations.**

*Per OSHA & EPA regulations.

Global Specialty Products - USA, Inc.

10 Eagle Avenue, Suite 500 - Mount Holly, New Jersey 08060-1649
Phone: 609-518-7577 Fax: 609-518-5277 www.gsp-usa-inc.com

FEBRUARY 2017

Section 1: Product and Company Identification

Product Identifier

Product Form: Mixture

Product Name: NZD | ISO FLUSH™ Isocyanate Cleaner

Product #: 02-W359585

Intended Use of the Product: Commercial, Industrial and Professional use only. Use as directed

[Details of the supplier of the safety data sheet](#)

Manufacturer

Global Specialty Products - USA, Inc.

10 Eagle Avenue - Suite 500

Mount Holly, New Jersey 08060

www.gsp-usa-inc.com

Telephone: 609-518-7577 **Fax:** 609-518-5277 *Mon - Fri, 8am - 5 pm PST*

Email: support@gsp-usa-inc.com

Chemical Emergency Number: ChemTel: 1-800-255-3924

Section 2: Hazards Identification

Classification (GHS-US) Classification of the mixture

According to Regulation 2012 OSHA Hazard Communication Standards (29 CFR 1910.1200).

Label Elements

Hazard Pictograms (GHS-US)



Signal Word (GHS-US): Warning

	Class	Code	Category	Statement
Oral:	Acute	H302	4	Harmful if swallowed
Skin:	Acute	H313	5	May be harmful in contact with skin
		H316	3	Causes mild skin irritation
Eye:		H319	2A	Causes serious eye irritation
Inhalation:		H333	5	May be harmful if Inhaled

Precautionary Statements (GHS-US)

General precautionary statements

P101: If medical advice is needed, have product container or label at hand;

P102: Keep out of reach of children.

P103: Read label before use.

Prevention precautionary statements

P210: Combustible Liquid - Keep away from heat/sparks/open flames/hot surfaces. No smoking

P260: Do not breathe vapors, mist, or spray; **P261:** Avoid breathing dust/fume/gas/mist/vapours/spray; **P262:** Do not get in eyes, on skin, or on clothing; **P264:** Wash thoroughly after handling; **P270:** Do not eat, drink or smoke when using this product; **P271:** Use only outdoors or in a well ventilated area; **P272:** Contaminated work clothing must not be allowed out of the workplace; **P273:** Avoid release to the environment;

P280: Wear protective clothing, protective gloves, eye protection.

Section 2: Hazards Identification (cont'd)

Precautionary Statements (GHS-US) cont'd

P301+P330+P331 – IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor/physician. **P321** - See Section 4 on SDS (First aid measures)

P303+P313+P333+P353+P361+P363– IF ON SKIN (OR HAIR) Take off immediately all contaminated clothing. Wash skin with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.

P304+P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

P305+P310 +P338 +P351- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor.

Disposal: P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

Other Hazards: Exposure may irritate the respiratory tract (nose, throat, and lungs).

Section 3: Composition/Information on Ingredients

Mixture

Name	Product Identifier CAS #	% (w/w)	Exposure Limits
Dipropylene Glycol Monomethylether	34590-94-8	*Proprietary	NIOSH REL: : TWA 100 ppm (600 mg/m ³) ST 150 ppm (900 mg/m ³) [skin] OSHA PEL ±: TWA 100 ppm (600 mg/m ³) [skin]
Olefinic Hydrocarbon/Paraffin Mixture	64742-48-9	*Proprietary	Not Available
Terpene Hydrocarbon	68956-56-9	*Proprietary	Not Available

Contains no other hazardous components at 1% or more as listed or defined in 29 CFR 1910, Subpart Z. Contains no components that are reported to be carcinogenic by any reference source including IARC, OSHA, NTP and EPA. * The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret (29 CFR 1910.1200) This product contains other important & proprietary ingredients (co-solvents, wetting agents, corrosion inhibitor, rinsing agent, etc.) **California Prop 65 Components:** This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

DOES NOT contain raw materials listed on SECTION 112(b) OF HAZARDOUS AIR POLLUTANTS.

Section 4: First Aid Measures

Description of First Aid Measures

GENERAL: Never give anything to an unconscious person. If Exposed or Concerned; Get medical advice/attention immediately.

INHALATION: When symptoms occur remove to fresh air immediately. Keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a POISON CENTER, doctor or physician immediately.

Ventilate suspected area. **SKIN CONTACT:** Wear natural rubber gloves to protect your skin. Wash with plenty of soap and water. If skin irritation or rash occurs, get medical advice and attention immediately. Wash contaminated clothing before reuse.

EYE CONTACT: This product is non-corrosive and water miscible. In case of eye contact, immediately flush eyes with plenty of water (for at least 15 minutes), remove contact lenses, if present and easy to do so. Continue rinsing until the irritation stops. Call a physician if the irritation persists. **INGESTION:** If swallowed, rinse mouth do not induce vomiting. Get medical advice and attention. Never give anything by mouth to an unconscious person. **NOTE TO PHYSICIANS:** To prepare activated charcoal slurry suspend 50 g activated charcoal in 400 ml water in plastic bottle and shake well. Administer 5 ml/kg, or 350 ml for an average adult.

Most Important Symptoms and Effects Both Acute and Delayed

According To MSDSs supplied by the Raw Material Suppliers™, the ingredients are moderate to strong skin and eye irritant. They may affect the central nervous system causing dizziness, headache or nausea. They may affect eye, skin and respiratory tract irritation. The product will be harmful if inhaled. **INHALATION:** Moderate to strong hazard for usual Industrial handling.

INGESTION: Toxicity reports from raw material suppliers described from repeated exposure include weight gain, but there have been no pathological abnormalities noted. According to the suppliers of the raw materials in this product, the ingredients do not produce genetic damage in animals or in bacterial cell cultures, and do not have developmental or reproductive effects.

CARCINOGENS: None of the components in this product are listed by IARC, OSHA, NTP, EPA or ACGIH as a carcinogen.

SIGNS AND SYMPTOMS OF EXPOSURE: Skin irritation or dermatitis, eye irritation or Inflammation, pallor nausea, lack of coordination.

Indication of Any Immediate Medical Attention and Special Treatment Needed:

If medical advice is needed, have product container or label at hand.

Section 5: Fire Fighting Measures

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire. Water Spray, CO₂, Dry Chemical, Foam

Unsuitable Extinguishing Media: Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable - this product is Combustible

Explosion Hazard: Product is not explosive

Reactivity: Hazardous reactions will not occur under normal conditions. May react vigorously with strong acids, Oxidizers or Reducing agents. Dangerous fire hazard when exposed to heat or flame.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire condition, hazardous fumes will be present.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Irritating or toxic vapors.

Special Fire Fighting Procedures: Keep personnel removed and upwind of fire. Firefighters should wear protective clothing to prevent contact with skin and eyes. Wear positive pressure self contained breathing apparatus

Reference to Other Sections - Refer to section 9 for flammability properties. Refer to section 16 for NFPA information.

Section 6: Accidental Release Measures

Steps To Take If Material Is Released/Spilled/Leaks

NOTE: Review Fire And Explosion Hazards and Safety Precautions before proceeding with clean up.

Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean up. Remove source of heat, sparks, flame, impact, friction or electricity.

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist or spray. Spilled material may present a slipping hazard.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect one-self and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

Environmental Precautions Prevent liquid from entering sewers, waterways or low areas. Recover free liquid for reuse or reclamation.

Recover undamaged and minimally contaminated material for reuse or reclamation. Contact competent authorities after a spill.

Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Keep in suitable, closed containers for disposal.

Reference to Other Sections

See Section 8, Exposure Controls and Personal Protection. See Section 13, Disposal Considerations.

Section 7: Handling and Storage

Precautions for Safe Handling

Additional Hazards When Processed: Provide general ventilation. Where adequate ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls. Do Not Heat or Atomize this product. If this material is handled under mist forming conditions, approved respiratory protection equipment should be used.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Container remains hazardous when empty. Continue to observe all precautions.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container tightly closed. Keep in original container.

Incompatible Materials: Strong Oxidizers. Reducing agents. Strong Acid.

Specific End Use(s): Commercial use. For professional use only.

Section 8: Exposure Controls/Personal Protection

Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government

Exposure Controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Materials for Protective Clothing: Chemically resistant materials and fabrics (apron, boots or whole bodysuit made from butyl rubber as appropriate)

Hand Protection: Wear chemically resistant protective gloves.

Eye / Face Protection: Safety glasses with side shields, or goggles, are recommended.

Insufficient ventilation: Wear respiratory protection.

Respirators - A NIOSH/MSHA approved air purifying respirator with a organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Section 9: Physical and Chemical Properties

Appearance	Clear Liquid
Odor	Mild
Odor Threshold	N/A
pH (50% solution in water @ 68 °F):	6.2 - 6.5
Melting point/Freezing point	N/A
Initial boiling point and boiling range (@ 760 [mm Hg])	385 - 485 °F
Flash point	147.50 °F (Tag Closed Cup)
Evaporation rate (nBuAc = 1.00)	N/A
Specific Gravity (@ 68 °F):	0.895 - 0.9000
Flammability (solid, gas)	N/A
Upper/lower flammability or explosive limits	N/A
Vapor pressure (@ 25 °C [mm Hg])	0.8000
Vapor density	N/A
Relative density	N/A
Solubility (ies)	Partially Miscible
Partition coefficient: n-octanol/water	N/A
Auto-ignition temperature	N/A
Decomposition temperature	N/A
Viscosity @68°F (water=1.0)	Water thin
Weight/Gallon	7.5 (lbs. / gal.)
Normal Working Concentrations/Temperature	Full Strength @ Room Temperature Only - Do Not Heat or Atomize
VOC Content (ASTM D-2369, Method 24)	5.9 lbs./gal or 669.0 grams/liter
Recycling Parameters (Vacuum Distillation)	300 °F and 27 mm Hg Pressure

Section 10: Stability and Reactivity

Reactivity: Hazardous reactions will not occur under normal conditions. May react vigorously with strong acids.

Chemical Stability: The product is stable at normal handling and storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Moisture. Extremely high or low temperatures. Incompatible materials.

Incompatible Materials: Acids. Oxidizers. Reducing agents.

Hazardous Decomposition Products: Thermal decomposition generates: Carbon oxides (CO, CO₂). Irritating or toxic vapors.

Section 11: Toxicological Information

Information on Toxicological Effects - Components

Dipropylene Glycol Monomethylether

CAS # 34590-94-8

Acute Toxicity

Ingestion

LD50, rat > 5,000 mg/kg

Dermal LD50, rabbit 9,510 mg/kg

Inhalation No deaths occurred at this concentration. LC50, 7 h, Vapor, rat 3.35 mg/l

Eye damage/eye irritation May cause slight temporary eye irritation. Corneal injury is unlikely.

Skin corrosion/irritation Prolonged exposure not likely to cause significant skin irritation.

Sensitization Skin Did not cause allergic skin reactions when tested in humans.

Respiratory No relevant data found. Repeated Dose Toxicity Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

Chronic Toxicity and Carcinogenicity For similar material(s): Did not cause cancer in laboratory animals.

Developmental Toxicity Did not cause birth defects or any other fetal effects in laboratory animals. Reproductive Toxicity For similar material(s): In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

Genetic Toxicology In vitro genetic toxicity studies were negative.

Olefinic Hydrocarbon/Paraffin Mixture

CAS# 64742-48-9

Acute toxicity:

LD/LC50 values that are relevant for classification: 64742-48-9 Naphtha (petroleum), hydrotreated heavy

Oral LD50 >5000 mg/kg (rat)

Dermal LD50 >3000 mg/kg (rab)

Primary irritant effect:

On the skin: No irritant effect. **On the eye:** No irritating effect.

Sensitization: No sensitizing effects known.

Additional toxicological information:

Carcinogenic categories IARC (International Agency for Research on Cancer) Substance is not listed.

NTP (National Toxicology Program) Substance is not listed

Terpene Hydrocarbon

68956-56-9

RTECS#: CAS# 68956-56-9 unlisted. **LD50/LC50:** Not available.

Carcinogenicity: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found

Teratogenicity: No information found

Reproductive Effects: No information found

Mutagenicity: No information found

Neurotoxicity: No information found

Other Studies: No information found

Section 12: Ecological Information

Information on Ecological Effects - Components

Dipropylene Glycol Monomethylether

CAS # 34590-94-8

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity LC50, *Poecilia reticulata* (guppy), static test, 96 h: > 1,000 mg/l

Aquatic Invertebrate Acute Toxicity LC50, *Daphnia magna* (Water flea), static test, 48 h, lethality: 1,919 mg/l LC50, *Crangon crangon* (shrimp), semi-static test, 96 h: > 1,000 mg/l

Aquatic Plant Toxicity ErC50, *Pseudokirchneriella subcapitata* (green algae), static test, biomass growth inhibition, 96 h: > 969 mg/l

Aquatic Invertebrates Chronic Toxicity Value *Daphnia magna* (Water flea), flow-through test, 22 d, NOEC: > 0.5 mg/l, LOEC: > 0.5 mg/l

Persistence and Degradability

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% biodegradation in OECD test(s) for inherent biodegradability).

OECD Biodegradation Tests: Biodegradation Exposure Time Method 10 Day Window 75 % 28 d OECD 301F Test pass

Indirect Photodegradation with OH Radicals Rate Constant Atmospheric Half-life Method
5.00E-05 cm³/s 3.4 - 10.4 h Estimated.

Biological oxygen demand (BOD): BOD 5 BOD 10 BOD 20 BOD 28 0 % 0 % 31.6 %

Chemical Oxygen Demand: 2.02 mg/mg

Theoretical Oxygen Demand: 2.06 mg/mg Bioaccumulative potential Bioaccumulation:

Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient, n-octanol/water (log Pow): 1.01 Measured

Mobility in soil

Mobility in soil: Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient, soil organic carbon/water (Koc): 0.28 Estimated.

Henry's Law Constant (H): 1.6E-07 atm*m³/mole; 25 °C Estimated.

Olefinic Hydrocarbon/Paraffin Mixture

CAS# 64742-48-9

Toxicity: Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Behavior in environmental systems: Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Additional ecological information:

General notes: Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects: No further relevant information available

Terpene Hydrocarbon

CAS# 68956-56-9

Ecotoxicity: No data available. No information available.

Environmental: No information available.

Physical: No information available.

Other: Do not empty into drains.

Section 13: Disposal Considerations

Sewage Disposal Recommendations: Do not empty into drains; dispose of this material and its container in a safe way.

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations. **Waste characterizations and compliance with applicable laws are solely the responsibility of the waste generator**

Additional Information: Container remains hazardous when empty. Continue to observe all precautions. This product, if discarded, would not be a hazardous waste by listing and is not expected to be a characteristic hazardous waste. Processing, use, or contamination by the user may change the waste code(s) applicable to the disposal of this product.

Section 14: Transport Information

Proper Shipping Name:	NZD ISO FLUSH™ ISOCYANATE CLEANERR
DOT Identification Number:	Class 55
NMFC Number:	4858003
Land DOT Hazard Class:	Combustible Liquid (NO ODCs, NON-FLAMMABLE, NON-CORROSIVE, WATER-MISCIBLE)
Hazardous Ingredients:	See Section I, VI and Section IX
In Accordance with IMDG	Not regulated for transport
In Accordance with IATA	Not regulated for transport
In Accordance with TDG	Not regulated for transport

Section 15: Regulatory Information

OSHA Hazard Communication Standard (Components)

Dipropylene Glycol Monomethylether

CAS # 34590-94-8

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312 Immediate (Acute) Health Hazard; Yes

Delayed (Chronic) Health Hazard; No

Fire Hazard; Yes

Reactive Hazard; No

Sudden Release of Pressure Hazard; No

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986)

Section 313: To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Section 15: Regulatory Information (cont'd)

OSHA Hazard Communication Standard (Components)

Dipropylene Glycol Monomethylether

CAS# 34590-94-8

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

US. Toxic Substances Control Act

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

CEPA - Domestic Substances List (DSL)

This product contains one or more substances which are not listed on the Canadian Domestic Substances List (DSL).

Olefinic Hydrocarbon/Paraffin Mixture

CAS# 64742-48-9

Safety, health and environmental regulations/legislation specific for the substance or mixture SARA

Section 355 (extremely hazardous substances): Substance is not listed.

Section 313 (Specific toxic chemical listings): Substance is not listed.

TSCA (Toxic Substances Control Act): Substance is listed.

Proposition 65 Chemicals known to cause cancer: Substance is not listed.

Chemicals known to cause reproductive toxicity for females: Substance is not listed.

Chemicals known to cause reproductive toxicity for males: Substance is not listed.

Chemicals known to cause developmental toxicity: Substance is not listed.

Carcinogenic categories EPA (Environmental Protection Agency) Substance is not listed.

TLV (Threshold Limit Value established by ACGIH) Substance is not listed.

NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.

OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed

GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms GHS08 Signal word Danger



Hazard-determining components of labelling: Naphtha (petroleum), hydro treated heavy

Hazard statements Combustible liquid. May be fatal if swallowed and enters airways.

Precautionary statements

If medical advice is needed, have product container or label at hand. Keep out of reach of children. Read label before use. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Store locked up. Store in a well-ventilated place. Keep cool

Dispose of contents/container in accordance with local/regional/national/international regulations.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

Terpene Hydrocarbon

CAS# 68956-56-9

US FEDERAL

TSCA CAS# 68956-56-9 is listed on the TSCA inventory.

Health & Safety Reporting List None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules None of the chemicals in this product are under a Chemical Test Rule.

Section 12b None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances None of the chemicals in this product have a TPQ.

Section 313 No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Section 15: Regulatory Information (cont'd)

OSHA Hazard Communication Standard (Components)

Terpene Hydrocarbon (Cont'd)

CAS# 68956-56-9

US FEDERAL

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA: None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 68956-56-9 can be found on the following state right to know lists: New Jersey.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Xi N

Risk Phrases:

R 10 Flammable.

R 38 Irritating to skin.

R 43 May cause sensitization by skin contact.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 65 Harmful: may cause lung damage if swallowed.

Safety Phrases:

S 2 Keep out of reach of children.

S 24 Avoid contact with skin.

S 37 Wear suitable gloves.

S 60 This material and its container must be disposed of as hazardous waste.

S 61 Avoid release to the environment.

Refer to special instructions /safety data sheets.

WGK (Water Danger/Protection)

CAS# 68956-56-9: No information available.

Canada - DSL/NDL

CAS# 68956-56-9 is listed on Canada's DSL List.

Canada - WHMIS This product has a WHMIS classification of B3, D2B, D2A.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

Section 16: Other Information

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Rating

0	Non Regulated
1	Low
2	Moderate
3	High
4	Extreme

HMIS RATING	
HEALTH	2
FLAMMABILITY	2
PHYSICAL HAZARD	0
PROTECTION	0



HMIS (Hazardous Material Information Association)

NFPA (National Fire Protection System)

Recommended monitoring method
Exposure controls

None

Appropriate engineering controls

Not normally required.

Personal protection equipment
Eye/face protection

Wear protective eye glasses for protection against liquid splashes.



Skin protection
(Hand protection/ Other)

The following to be used as necessary:
Gloves (Neoprene or Natural rubber).

Respiratory protection



Insufficient ventilation: Wear respiratory protection.

Respirators - A NIOSH/MSHA approved air purifying respirator with a organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Thermal hazards

None

Environmental Exposure Controls

Do not allow to enter drains, sewers or watercourses.

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstance of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with Federal, State or Provincial, and local laws. The following specific information is made for the purpose of complying with numerous Federal, State or Provincial, and local laws and regulations. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

Section 1: Product and Company Identification

Product Identifier

Product Form: Proprietary Product

Product Name: SURF A LUBE™ - Storage Fluid (Environmentally Sensible) VOC-Exempt, non-HAPs, non-Combustible, non-Corrosive

Product #: 02-W400590

Intended Use of the Product: Commercial, Industrial and Professional use only. Use as directed

Details of the supplier of the safety data sheet

Manufacturer

Global Specialty Products - USA, Inc.

10 Eagle Avenue - Suite 500

Mount Holly, New Jersey 08060

www.gsp-usa-inc.com

Telephone: 609-518-7577 Fax: 609-518-5277 Mon - Fri, 8am - 5 pm PST

Email: support@gsp-usa-inc.com

Chemical Emergency Number


ChemTel: 1-800-255-3924

Section 2: Hazards Identification

Classification of the substance or mixture

According to Regulation 2012 OSHA Hazard Communication Standards (29 CFR 1910.1200).

Label Elements

Signal Word	Classification of the substance or Mixture	Category	Hazard Statements (GHS-US)	Hazard Pictograms/ Labeling (GHS-US)
Warning	Eye Irritation	2A	H319 - Causes Serious eye irritation	

Precautionary Statements

PREVENTION	P264 - Wash skin thoroughly after handling. P280 - Wear eye protection/face protection
RESPONSE	P305 , P351, P338 - IF IN EYES - Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice/ attention
Other Hazards which do not result in classification:	N/A

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1 % is identified as a carcinogen or potential carcinogen by ACGIH.
OSHA: No component of this product present at levels greater than or equal to 0.1 % is identified as a carcinogen or potential carcinogen by OSHA.
NTP: No component of this product present at levels greater than or equal to 0.1 % is identified as a known or anticipated carcinogen by NTP.

Section 3: Composition/Information on Ingredients

Mixture

The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret (29 CFR 1910.1200) Contains no hazardous components at 1% or more as listed or defined in 29 CFR 1910, Subpart Z. Contains no components that are reported to be carcinogenic by any reference source including IARC, OSHA, NTP and EPA. This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

California Prop 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm. **DOES NOT contain raw materials listed on SECTION 112(b) OF HAZARDOUS AIR POLLUTANTS.**

Section 4: First Aid Measures

Description of First Aid Measures

GENERAL: Never give anything to an unconscious person. If Exposed or Concerned; Get medical advice/attention immediately.

INHALATION: When symptoms occur remove to fresh air immediately. Keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a POISON CENTER, doctor or physician immediately. Ventilate suspected area.

SKIN CONTACT: Wash with plenty of soap and water. If skin irritation or rash occurs, get medical advice and attention immediately. Wash contaminated clothing before reuse.

EYE CONTACT: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Duration of rinsing should be at least 15 minutes. Get medical attention if irritation persists after washing.

INGESTION: Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. **NOTE TO PHYSICIANS:** Treat symptomatically.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If medical advice is needed, have product container, SDS or label at hand.

Section 5: Fire Fighting Measures

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire. Water Spray, CO₂, Dry Chemical, Foam

Unsuitable Extinguishing Media: High volume water jet.

Special Hazards Arising From the Substance or Mixture

Specific Hazards during firefighting: Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products: toxic fumes Carbon oxides.

Specific extinguishing methods: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further Information: Standard procedure for chemical fires.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for fire-fighting if necessary.

Use personal protective equipment.

Reference to Other Sections - Refer to section 9 for flammability properties. Refer to section 16 for NFPA information

NFPA Flammable and Combustible Liquids Classification: Combustible Liquid Class IIIB

Section 6: Accidental Release Measures

Steps To Take If Material Is Released/Spilled/Leaks

NOTE: Review Fire And Explosion Hazards and Safety Precautions before proceeding with clean up.

Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean up. Remove source of heat, sparks, flame, impact, friction or electricity.

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist or spray. Spilled material may present a slipping hazard.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect one-self and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

Environmental Precautions Prevent liquid from entering sewers, waterways or low areas. Recover free liquid for reuse or reclamation.

Recover undamaged and minimally contaminated material for reuse or reclamation. Contact competent authorities after a spill.

Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal and dispose of waste safely.

Reference to Other Sections

See Section 8, Exposure Controls and Personal Protection. See Section 13, Disposal Considerations.

Section 7: Handling and Storage

Precautions for Safe Handling

ADVICE ON SAFE HANDLING: Do not breathe vapors/dust. Avoid contact with skin and eyes. For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards. **Storage Conditions:** Store in a dry, cool and well-ventilated place. Keep container tightly closed. Keep in original container.

Specific End Use(s): Commercial use. For professional use only.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection - No personal respiratory protective equipment normally required.

In the case of vapor formation use a respirator with an approved filter.

Hand Protection: Wear chemically resistant protective gloves.

Eye / Face Protection: Eye wash bottle with pure water. Safety glasses with side shields, or goggles, are recommended. Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection: Impervious clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

Section 9: Physical and Chemical Properties

Appearance	Clear Liquid - Colorless
Odor	Slight Characteristic
Odor Threshold	N/A
pH	5.5 - 7.5 @
Freezing Point (Melting point/freezing point)	-49 °C (-56 °F)
Boiling point (Boiling point/boiling range)	241 - 243 °C (466 - 469 °F)
Flash point	116 - 135 °C (241 - 275 °F)
Evaporation rate	< 0.01 n-Butyl Acetate
Flammability (solid, gas)	N/A
Burning Rate	N/A
Upper explosion limit	21 - 32.5% (V)
Lower explosion limit	1.7 - 4.7 % (V)
Vapor density	1.2 @ 20 °C (68 °F) (Air= 1.0)
Relative density	1.2 @ 20 25 °c (68 77 °F) Reference substance: (water= 1)
Vapor pressure	0.03 mmHg @ 20 °C (68 °F)
is)	Soluble
Auto-ignition temperature	430 - 455 °C
Viscosity @68°F (water=1.0)	Water thin
Weight/Gallon	10.0 (lbs. / gal.)
Normal Working Concentrations/Temperature	Full Strength @ Room Temperature Only
Recycling Parameters (Vacuum Distillation)	195 - 253 °F AND 760 MM HG PRESSURE
REACTIVITY	NO DANGEROUS REACTION KNOWN UNDER CONDITIONS OF
CHEMICAL STABILITY	NORMAL USE.
POSSIBILITY OF HAZARDOUS REACTIONS	STABLE UNDER NORMAL CONDITIONS.
CONDITIONS TO AVOID	NO HAZARDS TO BE SPECIALLY MENTIONED.
	HEAT, FLAMES AND SPARKS.
	EXPOSURE TO MOISTURE.
	ELEVATED TEMPERATURES

Section 10: Stability and Reactivity

Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical Stability: The product is stable at normal handling and storage conditions.

Possibility of Hazardous Reactions: No hazards to be specially mentioned.

Conditions to Avoid: Heat, flames and sparks, Exposure to moisture. Elevated temperatures.

Incompatible Materials: Peroxides, strong acids, strong bases, strong oxidizing agents, water, metal oxides.

Hazardous Decomposition Products: Carbon oxides, nitrogen oxides.

Section 11: Toxicological Information

Information on Toxicological Effects

INHALATION: May cause mild irritation to the nose, throat and upper respiratory tract.

SKIN CONTACT: May cause mild skin irritation.

EYE CONTACT: May cause moderate to severe eye irritation.

INGESTION: May cause irritation of the gastrointestinal tract.

MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED: May cause moderate to severe eye irritation.

Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause mild skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May cause mild irritation to the nose, throat and upper respiratory tract. Symptoms may include upper respiratory irritation, coughing, and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

ACUTE TOXICITY: This product is not classified as an acute toxicity hazard. See data for individual ingredient acute toxicity data.

ACUTE

DERMAL LD50: Rabbit; >5000 mg/kg

INHALATION LC50: Rat; No data in literature

ORAL LD 50: Rat; 29100 mg/kg

Skin corrosion/irritation

Serious eye damage/eye irritation - This product is not classified as a skin corrosive or irritant. Serious eye damage/eye irritation - Category 2A

Respiratory or skin sensitization Respiratory sensitization: This product is not expected to cause respiratory sensitization.

Skin sensitizer: This product is not expected to cause skin sensitization.

Germ cell mutagenicity: No data available to indicate product or any components present at greater than 0.1 % are mutagenic or genotoxic.

Carcinogenicity: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not listed.

Reproductive toxicity: This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity- single exposure: Not classified as a specific target organ toxicity -single exposure.

Specific target organ toxicity- repeated exposure: Not classified as a specific target organ toxicity -repeated exposure.

Aspiration toxicity: Not expected to be an aspiration hazard.

Chronic effects: Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Components of this product are hazardous to aquatic life. No data is available on the product itself. See below for individual ingredient Eco toxicity data.

Section 12: Ecological Information

Information on Ecological Effects

Components of this product are hazardous to aquatic life. No data is available on the product itself. See below for individual ingredient Eco toxicity data.

Aquatic

Toxicity to fish: LC50 (Cyprinus carpio (Carp)): > 1,000 mg/l Exposure time: 96 h

Test Type: semi-static test

GLP: yes

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): > 1,000 mg/l Exposure time: 48 h Test Type: static test GLP: yes

Toxicity to algae: EC50 (Desmodesmus subspicatus (green algae)): > 900 mg/l End point: Biomass

Exposure time: 72 h

Test Type: static test

GLP: yes

Toxicity to bacteria: LC 50 (Pseudomonas putida): 25,619 mg/l End point: Growth rate

Exposure time: 16 h

Test Type: Static

Method: DIN 38412

GLP: yes

Persistence and degradability Readily biodegradable.

Biodegradability rad a : aerobic

Inoculum: Activated sludge, domestic, adaption not specified

Concentration: 20 mg/l

Biodegradation: 90 %

Testing period: 9 d

Exposure time: 29 d

Remarks: Readily biodegradable

Bio concentration factor (BCF): 3.0

Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water: log Pow: -0.41

Mobility in soil

Stability in soil: Remarks: Not expected to adsorb on soil.

Other adverse effects

No data available

Regulation

40 CFR Protection of Environment; Part 82 Protection

of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information: No data available

Section 13: Disposal Considerations

Disposal Instructions: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Hazardous waste code: Dispose in accordance with all applicable regulations.

The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Section 14: Transport Information

Proper Shipping Name:	SURF A LUBE™ STORAGE FLUID
DOT Identification Number:	Class 55
NMFC Number:	4858003
Land DOT Hazard Class:	Not regulated as dangerous goods
Hazardous Ingredients:	None
NFPA Flammable and Combustible Liquids Classification:	Combustible Liquid Class IIIB
In Accordance with IMDG	Not regulated as dangerous goods
In Accordance with IATA	Not regulated as dangerous goods
In Accordance with TDG	Not regulated for transport

Section 15: Regulatory Information

OSHA Hazard Communication Standard

OSHA HAZARDS MODERATE EYE IRRITANT

WHMIS CLASSIFICATION D2B TOXIC MATERIAL CAUSING OTHER TOXIC EFFECTS

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

TSCA Section 12(b) Export Notification (40 CFR 707, Sub pt. D) Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4) Not listed.

SARA 304 Emergency release notification Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not Listed

Superfund Amendments and Reauthorization Act of 1986 SARA

HAZARD CATEGORIES - Immediate Hazard - Yes

Delayed Hazard - No **Fire Hazard** - No

Pressure Hazard - No **Reactivity Hazard** - No

SARA 302 Extremely hazardous substance

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Hazards - Acute Health Hazard

SARA 313 (TRI reporting) - This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated.

Safe Drinking Water Act (SOWA) Not regulated

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100) Not listed.

US. Massachusetts RTK - Substance List Not regulated.

US. New Jersey Worker and Community Right-to-Know Act Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law Not listed.

US. Rhode Island RTK Not regulated. **US. California Proposition 65** California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

Section 15: Regulatory Information (cont'd)

The components of this product are reported in the following inventories:

United States TSCA Inventory:	y (positive listing) (On TSCA Inventory)
Canadian Domestic Substances List (DSL):	y (positive listing) All components of this product are on the Canadian DSL.)
Australia Inventory of Chemical Substances (AICS):	y (positive listing) On the inventory, or in compliance with the inventory)
New Zealand. Inventory of Chemical Substances:	y (positive listing) (On the inventory, or in compliance with the inventory)
Japan. ENCS - Existing and New Chemical Substances Inventory:	y (positive listing) (On the inventory, or in compliance with the inventory)
Korea. Korean Existing Chemicals Inventory (KECI):	y (positive listing) (On the inventory, or in compliance with the inventory)
Philippines Inventory of Chemicals and Chemical Substances (PICCS):	y (positive listing) (On the inventory, or in compliance with the inventory)
China. Inventory of Existing Chemical Substances in China (IECSC):	y (positive listing) (On the inventory, or in compliance with the inventory)

Section 16: Other Information

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Rating

0 = Non Regulated

1 = Low

2 = Moderate

3 = High

4 = Extreme

HMIS RATING	
HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0
PROTECTION	0



HMIS (Hazardous Material Information Association)

NFPA (National Fire Protection System)

Recommended monitoring method
Exposure controls

None

Appropriate engineering controls

Not normally required.

Personal protection equipment
Eye/face protection

Wear protective eye glasses for protection against liquid splashes.



Skin protection
(Hand protection/ Other)

The following to be used as necessary:
Gloves (Neoprene or Natural rubber).



Respiratory protection

No personal respiratory protective equipment normally required.
In the case of vapor formation use a respirator with an approved filter.



Thermal hazards

None

Environmental Exposure Controls

Do not allow to enter drains, sewers or watercourses.

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstance of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with Federal, State or Provincial, and local laws. The following specific information is made for the purpose of complying with numerous Federal, State or Provincial, and local laws and regulations. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

CIRR D BOND™

CIRR D BOND™

Crystallized Isocyanates Resin Remover is a low emission organic solvent-based “Non-Flammable”, Non-HAPs multipurpose Polyurethane Foam cleaner and Industrial Resin & Coating Remover. This product is free of Ketones, chlorinated solvents, aromatic and aliphatic hydrocarbons.

It is highly effective in Immersion cleaning of spray equipment, mixing and metering equipment and feed lines, as well as loosening, and removing fully cured and old urethane foam deposits and build-up from mixing heads, troughs, conveyor parts, side walls, rollers, foam cutting devices and molds. The product effectively removes fully cured and aged;

- ~ Polyurethane Foam (Reacted Part A & B), Flexible & Rigid Polyurethane Foam, both MDI and TDI esters and ethers, Polyurethane Reactive Hot Melt Urethane Adhesives from roll coating equipment & dispensing equipment, as well as, many other Industrial Adhesives.
- ~ Polyols, crystallized isocyanates, and other urethane intermediates.
- ~ **Industrial Resins** such as: Polyester, Vinylester, Epoxy and Pigmented Gel Coats, as well as, Fiberglass and Resin Mixture.
- ~ **Coatings** such as: High & Low Solid Aliphatic, Water Born Epoxy Primers, Polyurethane, Acrylic, Varnishes and Alkyl Enamel.

However, in cleaning of isocyanate sides of equipment (liquid isocyanates), **NZD ISO FLUSH™ - Isocyanates Cleaner** should be used.

Application

Use Natural Rubber Gloves when handling this product.
Do not Atomize this product.

Use **Full Strength (do not add water)** at **Room Temperature or a Maximum of 150 °F** in an immersion tank with light agitation or spray under immersion. Must have proper ventilation system - mechanical exhaust in place. The use of ultrasonic immersion tank will enhance the loosening performance. **Mechanical filtering** of larger particles **using a cheesecloth or metal mesh filter** will help **extend the life of the product**. Rinse off with warm water and forced air to dry components.

Will cause strong eye irritation; use Eye Protection and appropriate protective clothing.

Typical Properties

Appearance:	Clear Amber Liquid
Flash Point:	>188 °F Seta Flash
Odor:	Mild
pH (50% solution in water @ 68 °F):	8.6 - 9.2
Viscosity (Centipoise @ 68 °F): (Brookfield Spindle #3, 10 RPM)	1000 - 2000
Specific Gravity (68 °F)	0.9960 - 0.9965
Ideal Operating Concentration:	Full Strength
Ideal Operating Temp (°F):	Room Temp. Maximum 150°F
Weight/Gal.	8.299 - 8.300 (lbs. /gal.)
Initial boiling point and boiling range (@ 760 [mm Hg])	385 - 485 °F
VOC Content (ASTM D-2369, Method 24)	6.77 lbs./gal or 811 grams / liter
Product #	02-W409589



RECOMMENDED MATERIALS TO USE FOR; O-Rings, Gaskets, Hoses And Pump Packaging

- | | | |
|----------------|--------------------------------|---------|
| * FEP-Teflon | * Ethylene-Propylene Copolymer | * Ryton |
| * Butyl Rubber | * Kalrez | |
| * Buna-S | * Fluorosilicone Rubber | |
| * Melamine | * Mild Steel | |
| * Nylon 101 | * Halar | |

MATERIAL TO AVOID

- | | | |
|----------------------|----------------|---------|
| * Viton | * PVC | * Valox |
| * ABS | * Buna-N | |
| * Durel | * Hypalon | |
| * Kynar | * Lexan | |
| * Lucite | * Noryl EN-265 | |
| * PET | * Noryl -731 | |
| * Phenolic Polyester | * Polysulfone | |
| * Polyurethane | * Ultem | |

Safety & Handling Precautions

Refer to SDS for use, disposal and additional safe handling

Direct contact of **CIRR D BOND™**

Crystallized Isocyanates Resin Remover will cause eye irritation or skin irritation. It is important to utilize recommended gloves (natural rubber), safety goggles and other suitable protective clothing your company recommends. Aspiration hazard if swallowed. Keep liquid and vapor away from heat, sparks and flames. Keep container closed. Use with adequate ventilation. DO NOT take internally. Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mist. Wash thoroughly after handling.

Disposal

Refer to SDS for use, disposal and additional safe handling

Even though **CIRR D BOND™**

Crystallized Isocyanates Resin Remover has a low order of toxicity, * with a low risk of environmental harm. Effluent analysis is required for proper waste disposal. **Discharge your distill bottom and screened out solids according to Federal, State and Local Regulations.**

*Per OSHA & EPA regulations.

Packaging & Storage

HDPE 1 & 5 gallon pails

55 gallon steel drums (closed cap)

This product should be kept in its original container above freezing and less than 100 °F.

Store drums in a dry area.

HMIS Rating

Health	2
Fire	2
Reactivity	0

Global Specialty Products - USA, Inc.

10 Eagle Avenue, Suite 500 - Mount Holly, New Jersey 08060-1649
Phone: 609-518-7577 Fax: 609-518-5277 www.gsp-usa-inc.com

FEB 2017

Section 1: Product and Company Identification

Product Identifier

Product Form: Mixture

Product Name: CIRR D BOND™ Crystalized Isocyanates Resin Remover

Product #: 02-W409589-SB

Intended Use of the Product: Commercial, Industrial and Professional use only. Use as directed

[Details of the supplier of the safety data sheet](#)

Manufacturer

Global Specialty Products - USA, Inc.

10 Eagle Avenue - Suite 500

Mount Holly, New Jersey 08060

www.gsp-usa-inc.com

Telephone: 609-518-7577 Fax: 609-518-5277 Mon - Fri, 8am - 5 pm PST

Email: support@gsp-usa-inc.com

Chemical Emergency Number: ChemTel: 1-800-255-3924

Section 2: Hazards Identification

Classification (GHS-US) Classification of the mixture

HAZCOM Standard Status: This material is considered hazardous by the OSHA Hazard Communication Standard (29CFR 1910.1200)

GHS Classification

Flammable Liquids

:Category 4 (Combustible) Warning

Acute Toxicity (Oral)

:Category 4

Acute Toxicity (Inhalation)

:Category 4

Skin Irritation

:Category 2

Serious eye damage/eye irritation

:Category 2B

GHS Label Element

Hazard pictograms



Signal word

: Warning

Hazard statements

: H227 Combustible liquid
 : H302 Harmful if swallowed
 : H315 Causes skin irritation
 : H320 Causes eye irritation
 : H332 Harmful if inhaled.

Precautionary Statements (GHS-US)

General precautionary statements

P101: If medical advice is needed, have product container or label at hand.

P102: Keep out of reach of children.

P103: Read label before use.

Prevention:

P210: Combustible Liquid - Keep away from heat/sparks/open flames/hot surfaces. No smoking

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

P262: Do not get in eyes, on skin, or on clothing.

P264: Wash hands thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P271: Use only outdoors or in a well ventilated area

P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.

Section 2: Hazards Identification (cont'd)

RESPONSE:

P301 + P312 + P330: IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

Rinse mouth.

P302 + P352: IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P308 + P311: IF exposed or concerned: Call a POISON CENTER or doctor/ physician.

P308 + P313: IF exposed or concerned: Get medical advice/ attention.

P332 + P313: If skin irritation occurs: Get medical advice/ attention.

P362: Take off contaminated clothing and wash before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alco-hol-resistant foam to extinguish.

STORAGE:

P402: Store in a dry place.

P403 + P235 Store in a well-ventilated place. Keep cool.

DISPOSAL:

P501: Dispose of contents/ container to an approved waste disposal plant.

Section 3: Composition/Information on Ingredients

<u>Mixture</u>	Name	Product Identifier CAS #	(Weight) %
	2-Butoxyethoxy	111-76-2	15 - 30
	Benzyl Alcohol	100-51-6	60 - 90

Contains no other hazardous components at 1% or more as listed or defined in 29 CFR 1910, Subpart Z. This product contains other important & proprietary ingredients (co-solvents, wetting agents, etc.). **California Prop 65 Components:** This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm. **DOES NOT contain raw materials listed on SECTION 112(b) OF HAZARDOUS AIR POLLUTANTS.**
The exact composition in this product is under patent review

Section 4: First Aid Measures

Description of first aid measures

General Advice:

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment. Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

Do not leave the victim unattended.

Eye Contact:

In case of contact, wash immediately and continuously with flowing water for at least 30 minutes.

Remove contact lenses after the first 5 minutes and continue washing.

Obtain prompt medical consultation, preferably from an ophthalmologist.

Suitable emergency eye wash facility should be immediately available.

Inhalation:

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If not breathing, if breathing is irregular or respiratory arrest occurs, provide artificial respiration, or oxygen by a trained professional, using a pocket type respirator.

Section 4: First Aid Measures (cont'd)

Description of first aid measures:

Skin Contact:

Immediate continued and thorough washing of contaminated skin in flowing water for at least 30 minutes is imperative while removing contaminated clothing.

Prompt medical consultation is essential.

Remove contaminated clothing and shoes.

Properly dispose of leather items such as shoes, belts, and watchbands.

Suitable emergency safety shower facility should be immediately available.

Ingestion:

Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband

Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Potential acute health effects:

Eye contact: Causes eye irritation.

Inhalation: Harmful if inhaled.

Skin contact: No known significant effects or critical hazards.

Ingestion: Harmful if swallowed. May be irritating to mouth, throat and stomach

Over-exposure signs/symptoms

Eye contact: May cause irritation with symptoms of reddening, tearing and stinging.

Inhalation: May cause adverse respiratory effects including cough, tightness of chest and shortness of breath.

Skin contact: No specific data.

Ingestion: Symptoms of ingestion may include abdominal pain, nausea, vomiting and diarrhea.

Potential chronic health effects

No known significant effects or critical hazards. Notes to physician Protection of first-aiders

Treat symptomatically. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

See toxicological information (Section 11)

Section 5: Fire Fighting Measures

Extinguishing media:

Suitable extinguishing media:

Use an extinguishing agent suitable for the surrounding fire. In case of fire, use water spray (fog), Alcohol-resistant foam

Carbon dioxide (CO₂)

Dry chemical

Unsuitable extinguishing media:

High volume water jet

Hazardous Combustion Products:

No hazardous combustion products are known

Specific extinguishing methods:

Use a water spray to cool fully closed containers.

Specific hazards arising from the chemical

In a fire or if heated, a pressure increase will occur and the container may burst.

Section 5: Fire Fighting Measures (cont'd)

Extinguishing media

Hazardous thermal decomposition:

Decomposition products may include the following materials:

carbon dioxide

carbon monoxide

Carbon oxides (CO, CO₂). Irritating or toxic vapors

Special protective actions for fire-fighters:

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Further information

For safety reasons in case of fire, cans should be stored separately in closed containers.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency Procedures:

No action shall be taken involving any personal risk or without suitable training.

Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material.

Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Environmental precautions:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains

and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Approach release from upwind.

Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. Prevent entry into sewers, water courses, basements or confined areas.

Section 7: Handling and Storage

Precautions for Safe Handling

Protective measures:

Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container in an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Remove contaminated clothing and protective equipment before entering eating areas. Workers should wash hands and face before eating, drinking and smoking. Put on appropriate personal protection equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Conditions for safe storage:

No Smoking

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Empty containers retain product residue and can be hazardous. Do not reuse container.

Section 7: Handling and Storage (cont'd)

Precautions for Safe Handling

Advice on protection against fire and explosion:

Do not spray on a naked flame or any incandescent material.
 Keep away from open flames, hot surfaces and sources of ignition.

Advice on safe handling:

Avoid formation of aerosol.
 Do not breathe vapors/dust.
 Avoid contact with skin and eyes.
 For personal protection see section 8.
 Smoking, eating and drinking should be prohibited in the application area.
 Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Occupational exposure limits

No exposure limit value known.

Appropriate engineering controls

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protection

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. When high levels of vapors or aerosols are not controlled by local ventilation, respiratory protection is recommended. Recommended: NIOSH approved air-purifying organic vapor and acid gas respirator. For emergency and other conditions where the exposure limits may be greatly exceeded, use an approved, positive pressure self-contained breathing apparatus or supplied air. Observe OSHA regulations for respirator use (29 CFR 1910.134).

Skin protection

Chemical-resistant gloves. Recommended: Butyl rubber gloves. Fluorinated rubber Gloves Polyvinyl chloride - PVC Gloves After contamination with product change the gloves immediately and dispose of them according to relevant national and local regulations Permeation resistant clothing and foot protection.

Eye/face protection

chemical splash goggles.

Medical Surveillance Not available.

Components with workplace control parameters

CAS#	Components	Percentage	Value type (form of exposure)	Control parameters/Permissible concentration	Basis
111-76-2	2-Butoxy ethanol	15 - 30%	TWA	20 ppm	ACGIH
			TWA	5 ppm / 24 mg/m ³	NIOSH REL
			TWA	50 ppm / 240 mg/m ³	OSHA Z-1
			TWA	25 ppm / 120 mg/m ³	OSHA P0

Section 9: Physical and Chemical Properties

Appearance	Clear Amber Liquid
Odor	Mild
Odor Threshold	N/A
pH (50% solution in water @ 68 °F):	8.6 - 9.2
Specific Gravity (68 °F)	0.9960 - 0.9965
Initial boiling point and boiling range (@ 760 [mm Hg])	385 - 485 °F
Flash point	188 °F Seta Flash
Evaporation rate (nBuAc = 1.00)	N/A
Flammability (solid, gas)	N/A
Upper/lower flammability or explosive limits	N/A
Vapor pressure (@ 25 °C [mm Hg])	N/A
Vapor density	N/A
Relative density	N/A
Solubility(ies) water	Completely Miscible
Partion coefficient: n-octanol/water;	N/A
Auto-ignition temperature	N/A
Decomposition temperature	N/A
Viscosity (Centipoise @ 68 °F): (Brookfield Spindle #3, 10 RPM)	1000 - 2000
Weight/Gallon	8.299 - 8.300 (lbs. / gal.)
Normal Working Concentrations/Temperature	Full Strength - maximum 150 °F
VOC Content (ASTM D-2369, Method 24)	6.77 lbs. / Gal or 811 mg / Lit

Section 10: Stability and Reactivity

Reactivity:

Hazardous reactions will not occur under normal conditions. May react vigorously with strong acids.

Chemical Stability:

The product is stable at normal handling and storage conditions.

Possibility of Hazardous Reactions:

Hazardous polymerization will not occur.

Conditions to Avoid:

Moisture. Exposure to heat, flames, sparks or other ignition. Avoid acidic conditions. Extremely high or low temperatures.

Incompatible Materials:

Strong oxidizing agents, acids. Iron, zinc, aluminum, reducing agents.

Hazardous Decomposition Products:

Thermal decomposition generates: Carbon oxides (CO, CO₂). Irritating or toxic vapors.

Section 11: Toxicological Information

Information on Toxicological Effects - Components

2-Butoxyethoxy

CAS# 111-76-2

Local Effects:

Skin Irritation:

Hazardous in case of skin contact (irritant).

Eye Irritation:

Hazardous in case of eye contact (irritant).

Acute Toxicity(LD50):

745 mg/kg [Rat]. Assessment: The component/mixture is moderately toxic after single ingestion

Acute oral toxicity

2.4 mg/l 4 hours [Rat].

Acute dermal toxicity (LD50):

490 mg/kg [Rabbit].

Acute inhalation toxicity (LC50):

Harmful by inhalation

Serious eye damage/eye irritation

Irritating to eyes.

Species: Rabbit Result:

Carcinogenicity

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH

Confirmed animal carcinogen with unknown relevance to humans

Benzyl Alcohol

CAS# 100-51-6

Information on the likely routes of exposure

Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact

Causes eye irritation.

Inhalation

Harmful if inhaled.

Skin contact

No known significant effects or critical hazards.

Ingestion

Harmful if swallowed. May be irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact

May cause irritation with symptoms of reddening, tearing and stinging.

Inhalation

May cause adverse respiratory effects including cough, tightness of chest and shortness of breath.

Skin contact

No specific data.

Ingestion

Symptoms of ingestion may include abdominal pain, nausea, vomiting, and diarrhea.

Potential chronic health effects

Short term exposure

Potential immediate effects

Not available

Long term exposure

Potential delayed effects

Not available.

General

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Developmental effects

No known significant effects or critical hazards.

Fertility effects

No known significant effects or critical hazards

Section 11: Toxicological Information (cont'd)

Information on Toxicological Effects - Components

Benzyl Alcohol

CAS# 100-51-6

Acute Toxicity: Long Term Effects: No information available for the product.

Toxicological Data:

Oral LD50 (rat): 1230 mg/kg

Oral LD50 (mice): 1360 mg/kg

Dermal LD50 (rabbit): 2000 mg/kg

Inhalation LC50 (rat): >4.178 mg/L/4 hour / LD50

(Oral) Rat 1,230 mg/kg

Irritation: Eyes No data available

Carcinogenicity IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Other Hazards Organ Description Eyes Irritating to the eyes.

Ingestion Harmful if ingested

Inhalation May be harmful if inhaled. Irritating to the respiratory tract.

Skin Harmful if absorbed through skin. Irritating to skin.

Section 12: Ecological Information

Information on Ecological Effects - Components

2-Butoxyethoxy

CAS# 111-76-2

Eco toxicity: No data available

Persistence and degradability: No data available

Bio accumulative potential: No data available

Mobility in soil: No data available

Other adverse effects

Product:

Ozone-Depletion Potential: Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Pzone - CAA Section 602 Class I Substances
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information: No data available

Benzyl Alcohol

CAS# 100-51-6

Eco toxicity (aquatic and terrestrial, where available):

Acute Fish Toxicity (BENZYL ALCOHOL) LC50 / 96 hours Bluegill - 10 mg/L

Persistence and degradability: 92 - 96 % - Readily biodegradable.

Bio accumulative potential: No data available

Other adverse effects: Potential to become an environmental hazard if mishandled or through improper disposal.

Avoid contaminating waterways. 230 mg/L

Section 13: Disposal Considerations

Waste Disposal Recommendations: The generation of waste should be avoided or minimized wherever possible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Waste disposal should be in accordance with existing federal state, provincial and or local environmental controls laws. **Waste characterizations and compliance with applicable laws are solely the responsibility of the waste generator**

Additional Information: Container remains hazardous when empty. Continue to observe all precautions. If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24).

Section 14: Transport Information

Proper Shipping Name:	CIRR D BOND™ Crystalized Isocyanates Remover
DOT Identification Number:	Class 55
NMFC Number:	4858003
Land DOT Hazard Class:	Combustible Liquid (No ODCs, NON-FLAMMABLE, NON-CORROSIVE, WATER-MISCIBLE)
Hazardous Ingredients:	See Section I, VI and Section IX
In Accordance with IMDG	Not regulated for transport
In Accordance with IATA	Not regulated for transport
In Accordance with TDG	Not regulated for transport

Section 15: Regulatory Information

2-Butoxyethoxy

CAS# 111-76-2

WHMIS Classification: B3: Combustible Liquid

1A: Very Toxic Material Causing Immediate and Serious Toxic Effects
 D2B: Toxic Material Causing Other Toxic Effects

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards: Fire Hazard

Immediate (Acute) Health Hazard

SARA 302:

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313:

The following components are subject to reporting levels established by SARA Title III, Section 313:

111-76-2 2-Butoxy ethanol

Section 15: Regulatory Information (cont'd)

2-Butoxyethoxy (cont'd)

CAS# 111-76-2

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489):

111-76-2 2-Butoxy ethanol

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307 US State Regulations

Massachusetts Right To Know	111-76-2	2-Butoxy ethanol	15 - 25 %
Pennsylvania Right To Know	111-76-2	2-Butoxy ethanol	15 - 25 %
New Jersey Right To Know	111-76-2	2-Butoxy ethanol	15 - 25 %

California Prop 65: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other re-productive harm.

The components of this product are reported in the following inventories:

TSCA : On TSCA Inventory

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

NZIoC : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

KECL : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

Section 15: Regulatory Information (cont'd)

Benzyl Alcohol

CAS# 100-51-6

SARA311/312: : Immediate (acute) health hazard
SARA Title III Section 302 Extremely Hazardous Substances: : None

SARA Title III Section 313 Toxic Chemicals : None
US EPA CERCLA Hazardous Substances (40 CFR 302) : None

State regulations

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections on the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Ingredient name	CAS #	State Code	Concentration
Benzyl alcohol	100-51-6	MA- S, PA- RTK HS	35 - 50%

Massachusetts Substances: MA - S

Massachusetts Extraordinary Hazardous Substances: MA - Extra HS

New Jersey Hazardous Substances: NJ - HS

Pennsylvania RTK Hazardous Substances: PA - RTK HS

Pennsylvania Special Hazardous Substances: PA - Special HS

California Prop. 65

To the best of our knowledge, **this product does not contain** any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

U.S. Toxic Substances Control Act: : Listed on the TSCA Inventory.

Section 16: Other Information

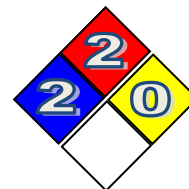
This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Rating

0	Non Regulated
1	Low
2	Moderate
3	High
4	Extreme




HMIS RATING	
HEALTH	2
FLAMMABILITY	2
PHYSICAL HAZARD	0
PROTECTION	0

HMIS (Hazardous Material Information Association)



NFPA (National Fire Protection System)

Section 16: Other Information (cont'd)

Recommended monitoring method	None
Exposure controls	
Appropriate engineering controls	Provide general ventilation. Where adequate ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls. If this material is handled under mist forming conditions, approved respiratory protection equipment should be used.
Personal protection equipment	
Eye/face protection	 Wear protective eye glasses for protection against liquid splashes.
Skin protection	
(Hand protection/ Other)	 The following to be used as necessary: Gloves (Neoprene or Natural rubber).
Respiratory protection	 Insufficient ventilation: Wear respiratory protection. Respirators - A NIOSH/MSHA approved air purifying respirator with a organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Thermal hazards	None
Environmental Exposure Controls	Do not allow to enter drains, sewers or watercourses.

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstance of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with Federal, State or Provincial, and local laws. The following specific information is made for the purpose of complying with numerous Federal, State or Provincial, and local laws and regulations. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.