



# PANTHER EAST BLACK CAT FASTENERS



July 10, 2018

## Flushing Procedure for Polyurethane Foam (PUF) and Polyurea/Polyurethane Coatings:

This instruction has been written to give the Applicators sufficient knowledge to flush spray equipment for Isocyanate (part A), Polyol (part B), Polyurethane foam (reacted part A & B) and polyurea/polyurethane/hybrid materials prior to changing material systems, placing equipment in storage, or reinstating stored equipment.

**Disclaimer:** Global Specialty Products USA, Inc. "GSP-USA" has made every effort to make the information provided accurate to the best of our knowledge, however, due to the variety of uses and applications of various spray equipment recommended by various equipment manufacturers, and changes that may have been made to the equipment subsequent to the publishing of this procedure, there may well be information that is missing or not applicable to particular circumstances.

The information contained herein for cleaning and removing PUR, PURAEA and other Polymer products is believed to be accurate but is not warranted to be so. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstance of use. GSP-USA 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, GSP-USA 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 Global Specialty Products – USA, Inc.

**General Safety Information:** Extreme care must be taken. Polyurethane and polyurea materials, especially the Isocyanate materials are reactive with water in any form. It is necessary to understand and follow the instructions in this paper to insure proper and safe operation of the equipment.

Sufficient guidelines cannot be developed to eliminate the need for good common sense in the use and flushing of the equipment, and in the use and application of the products, the equipment is designed to process. Users of the equipment must therefore, make their own determination as to the suitability of the information contained herein. There should be no assumption made that the instructions and safety measures herein are all inclusive, and that other measures may not be required for the specific use or application.

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## Cleaning Solvents and Chemicals:

It is the user's responsibility to ensure that adequate personal protection measures are taken so as not to exceed the Threshold Limit Value (TLV) of the products being used, as established by the Occupational Safety and Health Administration (OSHA) or another qualified agency. The user must be aware of the exposure limits specified for the products being used and must use them in accordance with the recommendations specified by their manufacturer.

Personal Protection (please review the SDS for each product before use):

The use of solvents will be required when servicing or cleaning spray foam equipment. To prevent excessive exposure to the solvents, appropriate personal protective gear such as eye and face protection, respiratory protection and protective gloves and clothing are required.

## Required Solvents and supplies

- **NZD ISO FLUSH™ Isocyanates Cleaner**, also known as a “**NEUTRALIZER**” – Primarily for flushing **LIQUID** Isocyanates (part A) or Polyol (part B). The viscosity is thin, therefore, it flushes easily and can be left in proportioner, hoses overnight. **NZD ISO FLUSH™** is a slower acting cleaner than **SURF X FLUSH 2000™**.
- **SURF X FLUSH 2000™** - flushing **HARDENED** Isocyanates (part A) or Polyol (part B). more viscous and aggressive than **NZD ISO FLUSH™**. However, in the presence of moisture, **SURF X FLUSH 2000™** will gel with some Isocyanates (part A). In cases where **SURF X FLUSH 2000™** is used for flushing **HARDENED** part A, a final rinse (flush) of **NZD ISO FLUSH™** is required. Do not leave **SURF X FLUSH 2000™** in equipment or hoses overnight.  
You will need to flush out of the proportioner with **NZD ISO FLUSH™**.
- **SURF X FLUSH 2000™** - flushing & immersion cleaning of **REACTED** part A & B “Polyurethane Foam”, as well as, cleaning over spray foam, resins and other coatings from unpainted surfaces, cement and masonry surface. It is also used for flushing spray guns, chopper guns, etc.
- **SURF A LUBE™ STORAGE FLUID** is a companion product to **NZD ISO FLUSH™** and **SURF X FLUSH 2000™**. It is used to store urethane dispensing equipment for an extended period of time (several years). It is stable under normal storage conditions.
- **GO GREEN™ Saturated WIPES™** are available for surface cleaning.
- **SURF A SEAL™ Coalescent (non-Phthalate)** also known as “**SSC™ Liquid**” (Long-term Storage fluid with full Corrosion Inhibition Package) for protecting Pump Packaging & Bearings from Damage; Protecting Airless Paint & Coating Sprayers.



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**IMPORTANT:** Before doing this procedure or any other chemical change, insure compatibility between the old and new ISO and Polyol and required solvents.

## Procedure:

1. Remove Spray Gun and Coupling Block from hose ends and secure hose ends into waste containers.
2. Lower material dispensing pressure by decreasing air pressure to the transfer pumps 30 psi.
3. Fill one clean 5-gallon pail with 2 gallons of **NZD ISO FLUSH™** for flushing "A" ISO side.
4. Fill one clean 5-gallon pail with 2 gallons of **SURF X FLUSH 2000™** for flushing "B" RES side.
5. Using the Transfer Pumps and Supply Hoses, remove them from the material drums; lift the inlet balls to drain material from inside the Transfer Pump into drum before you move to pail. Wipe the exterior of the pump with **SURF X FLUSH 2000™**. **GO GREEN™ SATURATED WIPES**. Insert each Pump into the separate pails and secure to insure tipping over is not possible.
6. Activate the transfer pumps to move slowly and purge both chemicals into waste containers / pails.  
**CAUTION: Do not activate the Primary Heaters or Heated Hoses.**
7. Stop the transfer pumps as soon as the ISO and RES are purged from the hoses.  
The **NZD ISO FLUSH™** and **SURF X FLUSH 2000™** solution is flowing.
8. Collect the first gallon or so from the material hose ends and safely dispose of the solutions in accordance with applicable federal, state, and local regulations.
9. Securely fasten the ISO material hose end into the respective pail of **NZD ISO FLUSH™** on the ISO side and begin to recycle the **NZD ISO FLUSH™**. Recycle at the fastest transfer pump cycle rate possible without creating a safety hazard. Effective flushing is a function of velocity (rate at which the **NZD ISO FLUSH™** travels) not gallon age (amount of **NZD ISO FLUSH™**).
10. Securely fasten the RES material hose end into the respective pail **SURF X FLUSH 2000™** on the RES side and begin to recycle the **SURF X FLUSH 2000™**. Recycle at the fastest transfer pump cycle rate possible without creating a safety hazard. Effective flushing is a function of velocity (rate at which the **SURF X FLUSH 2000™** travels) not gallon age (amount of **SURF X FLUSH 2000™**).



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11. Allow **NZD ISO FLUSH™** and **SURF X FLUSH 2000™** to re-circulate for at least one (1) hour.
12. Turn off air and remove the Transfer Pumps from the **NZD ISO FLUSH™** and **SURF X FLUSH 2000™**, lift the inlet balls to drain material from inside the Transfer Pump into pail. Wipe the exterior of the pump with **SURF X FLUSH 2000™ GO GREEN™ SATURATED WIPES** with. Insert each pump into a clean pail filled with two (2) gallons of fresh clean **NZD ISO FLUSH™** and **SURF X FLUSH 2000™** secure to insure tipping over is not possible.
13. Activate the transfer pumps to move slowly and purge all remaining dirty NZD ISO FLUSH™ and **SURF X FLUSH 2000™** out into the two waste containers, filling the proportioner with only clean **NZD ISO FLUSH™** and **SURF X FLUSH 2000™**. Safely dispose of the **NZD ISO FLUSH™** and **SURF X FLUSH 2000™** in both waste containers in accordance with applicable federal, state, and local regulations. Stop the transfer pumps and insure all pressure is removed from the proportioning unit and material hoses.
14. Choose one of the following steps based on what you are doing with the machine:
  - A) New Material: Reinstall the Coupling Block. Activate the transfer pumps to move slowly and purge all remaining **NZD ISO FLUSH™** and **SURF X FLUSH 2000™** out into a pail, filling the proportioner with the new material. Safely dispose of the **NZD ISO FLUSH™** and **SURF X FLUSH 2000™** in accordance with any applicable federal, state, and local regulations.
  - B) Storage: Fill two clean 5-gallon pails with 2 gallons of **SURF A LUBE™ STORAGE FLUID** for storage. Reinstall the Coupling Block or Spray Gun. Activate the transfer pumps to move slowly and purge both cleaning chemicals into waste containers / pails. Make sure to Park the Proportioning pump secure machine with all valves closed and power off. Remove Spray Gun and ensure Coupling Block is clean. **SURF A LUBE™** is a companion product to **NZD ISO FLUSH™** and **SURF X FLUSH 2000™**. It is used to store urethane dispensing equipment for extended periods of time. **SURF A LUBE™** is stable under normal storage conditions.

Note: For extended storage times let the proportioner set for one week and then flush the “A” side again with **SURF A LUBE™** one more time. Be sure that all ISO is out of the system and do this a third time one week later. Don't want to take any chances of problems when you want to spray again.



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## We Create “Safer Products for a Cleaner Environment”

At GSP USA, Inc. we strive to bring the Polyurethane/Spray Foam & Coating Industries the best Flushing and Immersion cleaning products for the value. We combine Unmatched Technology “Protected Intellectual Property” with proven performance to help you get the most out of your equipment and successfully complete your projects. All while maintaining your workers safety and the environment.

Effective flushing the spray foam equipment and spray guns using Proven Technology, ECO Friendly Cleaning Products will enable end-users “Contractors”, as well as, “Manufactures” of Diisocyanates, Polyol, Polyurea and other Resin & Coatings to see and react in real time-with analytics-to the performance of their equipment. Our product line ensures that your operation continues to run smoothly whether you need to clean a chopper gun or eliminating cured resin on a substrate.

### Attributes (Environmental, Regulatory & Workers Safety) Compliances:

- Safer Alternative to NMP, BLO, Acetone, MEK, Methylene Chloride and other hazardous ingredients containing Phenols, Aliphatic & Aromatic Hydrocarbons
- Low VOC, non-Hazardous, non-HAPs, non-Flammable, non-Corrosive
- DOES NOT contain raw materials known to the State of California (Proposition 65) to cause cancer, birth defects or other reproductive harm
- DOES NOT contain raw materials listed on SECTION 112(b) OF HAZARDOUS AIR POLLUTANTS
- REACH Compliance - DOES NOT contain raw materials listed on REACH Annex
- Protected Intellectual Property (IP) – Made in USA

### Effective in cleaning uncured or semi-cured and Cured:

- Isocyanates (Part A)
- POLYOLS” (Part B)
- TDI and MDI Esters & Ethers
- Urethane Intermediates (Polyether Polyols, and polyester polyols)
- Flexible and Rigid Polyurethane Foam
- Cured Reactive Hot Melt Polyurethane Adhesives
- Resins (Polyester, Vinylester, Epoxy, Polyamide, Orthophthalic, Isophthalic and Dicyclopentadiene)

### Packaging:

- 1 Gal. Jugs / 5 Gal. Pails. & 55 Gal. Drums
- **GO GREEN™ Saturated Wipes** (90) 12 x 12 center pull wipes/bucket



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## KEY PRODUCTS:

**NZD ISO FLUSH™** ISOCYANATE CLEANER “Iso-Neutralizer & Cleaner”, Non-gelling Flushing or immersion cleaning of Diisocyanatos (Part A) or Polyols (part B). Is used to remove any excess liquid of isocyanates from processing equipment. It is designed for use in isocyanate feed tanks and equipment that contain crystallized isocyanate residue. This pre-flushing step is necessary when it is not possible to drain out all remaining liquid isocyanates from the equipment.

**SURF X FLUSH 2000™** Polyurethane Foam (Reacted Part A & B) & Polyurea Coating, Epoxy, Polyester and other industrial resins. It offers extended bath life (tolerate high resin loadings), It will reduce disposal costs (recyclable via vacuum distillation). It is effective for flushing, mixing and metering equipment and feed lines, as it quickly and completely cleans polyols, crystallized isocyanates and other urethane intermediates. However, in cleaning of isocyanate (part A) of equipment, NZD ISO FLUSH™ ISOCYANATE CLEANER should be used first where excessive amounts of liquid Diisocyanatos are present.

**CIRR D-BOND™** (Crystallized Isocyanates Resin Remover) - An immersion Cleaner “ONLY” for penetrating, loosening, and removing cured urethane foam deposits and build-up from mixing heads, troughs, conveyor parts, side walls, rollers, foam cutting devices and molds. Effectively removes both MDI and TDI esters and ethers, as well as, residual of cured polyurethane reactive hot melt urethane adhesives from roll coating equipment and other industrial adhesives. Effective in cleaning Polyurethane Foam Polyurea Coating, Epoxy, Polyester and other industrial resins.

**SURF A LUBE™** Storage Fluid for Spray Foam Equipment and Spray Guns for Several Years. Besides being a storage fluid, it keeps the system very clean and when you are ready to drain the system, the product drains much easier without leaving residues of Isocyanates, Polyols, Polyurethane Foam, or any other coatings and resins.

- Non-hydroscopic
- VOC-Exempt
- Does NOT crystallize in cold climate
- Free of Phenol and Sulfur
- An ideal replacement for Mesamoll

**SURF A SEAL™** Coalescent (non-Phthalate), also known as “SSC™ Liquid”. Protecting Pump Packaging & Bearings from Damage. Protecting Airless Paint & Coating Sprayers.

**FOAM OFF | MP™** Flexible & Rigid Polyurethane Foam Cleaner, Injection Mold Cleaner. Also removing Urethane Adhesives from roll coating equipment, dispensing equipment, as well as many other Industrial adhesives. Highly effective in flushing and immersion cleaning of spray equipment, mixing and metering equipment and feed lines, as well as, loosening, and removing cured urethane foam deposits and build-up from mixing heads, troughs, conveyor parts, side walls, rollers, foam cutting devices and molds.

**GLOBE KLEEN - 2002™** - Viscous version of SURF X FLUSH 2000™, as a Polyurea Coating Remover; also removing Epoxy, Polyurethane, Polyester and Vinyl ester Coatings



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