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Standard Operating Procedure (SOP) for P-80[®] Temporary Rubber Assembly Lubricants

P-80[®] Emulsion	P-80[®] Grip-it	P-80[®] Emulsion IFC
P-80[®] THIX	P-80[®] RediLube	P-80[®] THIX IFC

A. STORAGE & HANDLING

1. P-80 lubricants should be stored at temperatures between 2°- 30°C (36°- 86°F) in the original sealed container. Do not store outdoors, or in direct sunlight.
2. Each container has a lot number that gives the date (yyymmdd) that the material was produced. For instance, lot number 190106 was produced in 2019 (19), during January (01), on the sixth day (06). Expiration dates are also stamped on the product for convenient inventory control. As always, use the oldest product first.
3. P-80 Emulsion and P-80 Emulsion IFC should be mixed or shaken before use. For drums, stir with a mixing recirculation pump or folding propeller mixer for up to 10 minutes to ensure a homogenous mixture. If a hold tank is used, agitate the lubricant before it is fed to assembly equipment. Smaller containers should be shaken or stirred prior to use. **Never use air agitation on any P-80 product.** Bubbling compressed air through P-80 lubricants may introduce bacteria that can overpower the preservatives, causing separation or spoilage.
4. Never pour dispensed or used product back into the original container.
5. P-80 Emulsion IFC and P-80 THIX IFC meet the requirements of 21 CFR 178.3570, which controls lubricants for incidental food contact. Use the minimum amount of lubricant needed and apply it in a way that minimizes food contact.
6. All equipment and storage tanks, including transfer lines, containers, reservoirs, mixers, nozzles and pumps in contact with P-80 lubricants should be cleaned at least once a month to ensure a problem-free lubrication process. Rinse with potable water. Follow cleaning with a sanitizer rinse. This procedure is particularly important in hot or dirty work areas. **Refer to the Preventive Maintenance section below for detailed cleaning instructions.**
7. Do not mix P-80 with other chemicals.
8. Do not dilute P-80 with water.
9. Excess P-80 can be wiped or washed away with soap and water.
10. Always use rubber gloves when handling P-80.
11. For safety details, please refer to the appropriate safety sheet, available at www.ipcol.com.

B. PREVENTIVE MAINTENANCE

The cleaning process outlined below is recommended monthly, especially for new P-80 customers.

1. All materials coming into contact with P-80 must be cleaned and sanitized to prevent bacterial growth. The cleaning frequency may need to be adjusted based on the overall cleanliness of the plant, the temperature of the environment, and the frequency and length of downtime. Developing a regular preventive maintenance program is particularly important in hot or dirty work areas.
2. A cleaning step should be done first, using a mild detergent such as International Products' Micro[®] Green Clean Biodegradable Cleaner, Micro-90[®] Concentrated Cleaning Solution, or LF2100[®] Liquid Low-Foam Cleaner.
3. After cleaning with a detergent, all materials should be rinsed with potable water.
4. Next, the materials should be sanitized using a mixture of 8 ounces of household bleach to one-gallon of water.
5. Lastly, all materials should be given a thorough rinse with potable water.
6. With drum or tote use, a dedicated pump should be cleaned, sanitized, and rinsed before it is transferred to a fresh drum of P-80.
7. At the end of each shift, any P-80 remaining in open containers should be covered. It should not be added into a fresh container.
8. Once a preventive maintenance program is established, the P-80 system will remain effective and problem-free.

C. DRUM/TOTE HANDLING

1. Each drum is equipped with a spigot that can be screwed into the center of the 2-inch bung opening after the center is punched out. A drum truck may be used to turn a drum on its side to facilitate dispensing P-80.
2. An appropriate dedicated pump should be used by inserting it into the 2-inch bung opening. A collar may be needed to secure the pump to the drum. The other smaller bung opening should be opened sufficiently to allow P-80 to be dispensed.
3. Use a pump tube type mixer that will allow you to both mix in the drum and dispense P-80. The pump tube mixer should be made of either stainless steel or polypropylene.
4. Drum/Tote mixing-pump suppliers:
 - A. **Cole Parmer**; www.coleparmer.com; Tel: 1-800-247-2929
 - B. **Grainger**; www.grainger.com; Tel: 1-800-GRAINGER
 - C. **Lutz**; www.lutzpumps.com; Tel:1-800-843-3907
 - D. **McMaster-Carr**; www.mcmaster.com; Tel: 609-259-8900

D. APPLICATION METHODS

Be sure to apply P-80 to the rubber part of the assembly.

1. **Dip/Dunk Tank Application Procedure:** This technique is the most common for P-80 applications where the amount of lubricant transferred to the rubber part is not critical. Pour P-80 into a clean container. While wearing rubber gloves, dip the rubber part into P-80. Remove the part and shake-off excess P-80 before assembly. Wearing cotton gloves over rubber gloves may help grip the parts more effectively.
2. **Controlled Volume Techniques:** This technique allows for a more controlled volume of P-80 to be applied. Different application methods are listed below:
 - A. Pour P-80 into a clean container and apply to the rubber part with a paint brush, foam brush or sponge.
 - B. Drag the rubber part across a sponge that is sitting in the P-80 container.
 - C. Use a hollow-handle dishwashing wand to deliver a small volume to the rubber part.
 - D. Plunger cans allow a small transfer of P-80 without exposing excess lubricant to contamination.
 - E. IPC sells 28mm disposable spray nozzles that work with 1L, 475 mL, and 225 mL bottles of P-80 Emulsion, P-80 RediLube, P-80 Grip-It, and P-80 Emulsion IFC. The nozzle should be soaked in hot water at the end of each shift. Nozzles should be replaced every month.
 - F. If you are interested in a custom dispensing solution, Designetics Inc. may be able to assist with a variety of bottles and dispensing caps (www.designetics.com).
3. **Automated System Application Procedure:** This technique creates a closed system, which minimizes the potential for any contamination and ensures application consistency. An automated lubrication system may be used to apply the P-80 products. In general, there are no wrong spray configurations to use with P-80, and a number of spray and nozzle manufacturers will provide assistance with setting up the appropriate system. However, **compressed air should never be used to agitate P-80 and there should be no overspray product return lines to the drum. Both of these could cause bacterial contamination.**

The following dispensing companies have designed automated dispensing equipment for P-80 products:

- A. **APTL**; www.aptl.co.uk; Tel: +44(0) 1268 691301
- B. **DOPAG US**; www.dopag.com; Tel: 1-859-918-5688
- C. **DOPAG UK**; www.dopag.uk; Tel: +44 1299 250740
- D. **Jet Set Hydraulic Spray Systems**; www.Jetsetspray.com; Tel: 1-248-545-4441
- E. **PVA**; www.pva.net; Tel: 1-518-371-2684
- F. **ViscoTec**; www.viscotec.de; Tel: +49(0) 8 6 31 / 9274 – 0