

# Guide for Compressors in Gas Service

Royal Purple's line of specialty synthetic lubricants offers performance advantages in the lubrication of compressors in gas compression service.

## Royal Purple Product Overview

### General Lubricants

1. Synfilm® NGL with Synerlec® additive technology is formulated to prevent hydrocarbon dilution.
2. Synfilm® GT with Synerlec® additive technology, is a synthetic, high temperature compressor oil.
3. Acivac™ is an excellent lubricant/corrosion preventive in acidic environments.

### NSF Certified Lubricants

1. Crystal-Clear® FDA is NSF Certified for H1 service.

## Product Application Guide

### I. Chemically Reactive — Oxidizing Gases

|                |   |
|----------------|---|
| Oxygen         | These highly reactive gases will react with any carbon based oil;           |
| Chlorine       | therefore, these compressors are either non-lubricated or use special oils. |
| Fluorine       | Royal Purple has no recommendation.   |
| Bromine        |   |
| Nitrogen Oxide |   |

### II. Chemically Reactive — Non-Oxidizing Gases

|                   |            |                                       |
|-------------------|------------|---------------------------------------|
| Hydrogen Chloride | 1st choice | Acilube™ (in vacuum pump, use Acivac) |
| Hydrogen Sulfide  | 2nd        | Crystal-Clear® FDA                    |
| Sulfur Dioxide    |            |                                       |

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### III. Inert Gases or Reducing Gases

|                 |            |                    |
|-----------------|------------|--------------------|
| Nitrogen        | 1st choice | Synfilm® NGL       |
| Hydrogen        | 2nd        | Synfilm® GT        |
| Helium          | 3rd        | Crystal-Clear® FDA |
| Carbon Monoxide |            |                    |
| Carbon Dioxide  |            |                    |
| Natural Gas     |            |                    |

#### Hydrocarbon gases such as:

|         |     |                    |
|---------|-----|--------------------|
| Methane | 1st | Synfilm® NGL       |
| Ethane  | 2nd | Synfilm® GT        |
| Propane | 3rd | Crystal-Clear® FDA |
| Butane  |     |                    |
| Pentane |     |                    |

|           |     |                    |
|-----------|-----|--------------------|
| Methylene | 1st | Crystal-Clear® FDA |
| Ethylene  |     |                    |
| Propylene |     |                    |
| Butylene  |     |                    |
| Acetylene |     |                    |

### IV. Other Gases

|  |     |              |
|--|-----|--------------|
|  | 1st | Synfilm® NGL |
|  | 2nd | Synfilm® GT  |

Note: Check lubrication recommendations in equipment manual for correct ISO viscosity grade. If any catalyst is used downstream of the compressor, check with Royal Purple's Industrial Tech. Department prior to product selection.



**Royal Purple's lubricants are saving individual companies millions of dollars a year in gas compressor service!**