Dag® 2404
Extreme temperature graphite in solvent additive

Technical Process Bulletin

Description

Dag® 2404 is a high quality lubricant additive consisting of superfine graphite particles in mineral spirits. Lubricants diluted with **Dag® 2404** are able to form a highly effective graphite film on metal surfaces at temperatures up to 482°C (900°F). It is particularly successful in conveyor chain operation because it penetrates and forms a solid lubricating film over the entire bearing surface as the carrier vaporizes.

Specific advantages offered by lubricants diluted with **Dag® 2404** include:

- Reduced metal-to metal contact
- Nonfreezable
- Effectiveness at extreme temperatures
- Minimum pre-treatment
- High Lubricity
- Easy application
- Extremely low residue

Dag® 2404 is noted for extremely low residue formation when mixed with a quality diluent.

FEATURES	BENEFITS
Stable colloidal suspension of graphite	Minimal mixing costs for blending into your finished lubricant
Fine particle size distribution	Provides cost-effective usage in finished lubricant to provide superior lubrication performance, consumer confidence and repeat sales
Lubricating, low friction graphite particles	Superior lubrication extends equipment life, reduces maintenance costs and lubricant intervals
Robust chemical and base oil compatibility	Minimizes formulation costs for achieving stable and effective product

TYPICAL APPLICATONS

Conveyer chains
Hot zone bearing lubrication
Kiln car wheel bearings
Penetrating oils
Automotive upper valv assembly additive

The thin graphitic film produced by **Dag® 2404** provides near-perfect lubrication for line-belt conveyors used in glass production operations to carry hot bottles to Lehr ovens. The graphite film allows relative motion between the bottle and the conveyor without the formation of "crizzles" or other markings.

Note: When diluted 1:4 (product:diluent) by weight with a mineral seal oil and continually applied by drop apparatus, **Dag® 2404** eliminated frequent chain breakage in an enclosed heat-treat oven by providing the necessary lubrication for the linkage.

Physical Properties: (as supplied)

Lubricating solid	: processed micrographite
Carrier	: mineral spirits
Viscosit	: 11-14 seconds, #4 Ford cup at 25°C (77°F)
Diluent	: mineral spirits, Stoddard solvents or similar hydrocarbons
Solid content	: 10%
	: 10 minimum
Particle size	: median 2-4 microns by volume
Density	: 0.852 kg/l (7.1 lb/gal) @ 25°C (77°F)
Flash point	: 43°C (110°F)
Color	: Black

Method of Use:

Surface Preparation

When evaluating **Dag® 2404** on a bearing application, the bearing surface should be thoroughly cleaned by chemical rinse or any practical method available. The graphite particles must come in contact with the metal for good adhesion and effective lubrication. If cleaning is not feasible, several liberal applications are recommended during the initial break-in period.

Dilution

Dag® 2404 can be diluted with any compatible petroleum product, such as: conventional oils, kerosene, mineral seal oil, mineral spirits, petroleum oil, and Stoddard solvent.

The diluent and dilution ratios are usually finalized on the job. However, typical recommendations for initial evaluations are:

Application	Diluent	Weight Ratio (product:diluent)
Conveyor Chain (continuous application)	Kerosene or Mineral Seal Oil	1:50
Conveyor Chain (intermittent application)	Kerosene or Mineral Seal Oil	1:20
Kiln Car Wheel Bearings	Kerosene	1:20

Application

Agitate or stir **Dag® 2404** to a uniform consistency before diluting and again just prior to application. **Dag® 2404** can then be applied by spray, brush, or drip, whichever method is suitable for the job. Overspray and spills are easily cleaned up with detergent solution.

Storage/Handling: Keep container closed when not in use to avoid contamination. See Henkel Material Safety Data Sheet for proper first aid instructions. Shelf life is 12 months from date of qualification under original seal.

Application/Assistance: Henkel's Application Specialists are available to assist you in production start-up with **Dag® 2404**. Visit our website www.heneklna.com/metals for more information and for the Henkel global location nearest you.

Health and Safety: Please consult Material Safety Data Sheet

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