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**Acheson Colloiden B.V.**  
 Postbox 1  
 9679 ZG Scheemda  
 The Netherlands  
 Tel.: +31 (0)597 591303  
 Fax: +31 (0)597 592552

## Dag® 2404

Extreme temperature dry lubricant

**Description:** Dag 2404 forms a tenacious dry graphite film on all surfaces. This reduces friction, provides parting, and prevents wear. It has remarkable powers of penetration into closely woven fabrics, fine pore cellular material, sintered metal, porous polymers, or composite bearing materials. Dag 2404 has a white spirit carrier which evaporates to leave an adherent film with outstanding lubricating properties to 400°C in air, or above 1200°C in reducing or inert atmospheres. There is no low temperature limit to the capabilities of the dry film, and the dispersion itself can be used as a fluid film lubricant at least down to the pour point of -40°C. Dag 2404 can be diluted with a wide variety of non-polar compounds and is thus ideally suited for blending graphite with penetrating fluids, lubricating formulations, and liquified gases. It will accommodate additions of resins and fluids compatible with white spirit and is ideal as the basis of surface coatings which require dry lubricating properties.

**Typical Applications:**

- \* Gasket anti-stick coating
- \* Treatment of asbestos replacement materials
- \* Mineral or glass textile dressings
- \* Formulation of penetrating fluids
- \* Conveyor chain lubricant for hot and dusty conditions
- \* Kiln car bearing lubrication
- \* Low temperature lubrication
- \* Opaque and black body applications

**Advantages:**

- \* Excellent high and low temperature dry film lubrication and parting
- \* Finely divided graphite particles permit lubrication of fine clearances
- \* Rapid and deep penetration of porous materials
- \* Dry film: no dirt or fluff attraction; no "wicking" by paper, cotton flour or other absorbent materials
- \* Totally opaque coating; can be burnished or calendered to a bright appearance
- \* Residue-free: complete volatilization of graphite and its bonding agent at high temperatures after oxidation
- \* Dispersion can be used for blending graphite into other fluids
- \* Low viscosity; easy blending and mixing; easy to apply

**Typical Properties:**  
 (of wet product)

Pigment	:	graphite
Carrier	:	white spirit
Solids content	:	10 ± 0.1%
Viscosity (Brookfield 25°C, 20 rpm)	:	5 - 50 mPa.s
Flashpoint	:	42°C (Pensky Martin Closed); 45°C (Open)
Density	:	850 kg/m <sup>3</sup>
Theoretical Coverage	:	ca. 23 m <sup>2</sup> /kg at 10 µm
Diluent	:	white spirits; hydrocarbons such as chlorinated and fluorinated solvents; kerosene; mineral oil
Particle size	:	mostly 1 µm or below, but some particles up to 4 µm or occasionally greater
Drying time	:	1 hour approx. at normal ambient temperature
Sensitive substrates	:	compatible with Nitrile and Neoprene; unsuitable for natural, butyl or EP rubber seals
Shelf Life	:	24 months from date of qualification under original seal

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**Method of Use:** After storage Dag 2404 may require homogenising. This can be done by agitation or stirring, or the container can be rolled.  
Dag 2404 can be applied by brush, dip, spray or rollercoat.  
The product is normally diluted before use. Because the applications are so diverse no single dilution rate can be recommended. The following can be used as the starting points for evaluation:

Journal bearings	:	1 part product to 10 parts kerosene
Plain bearing conveyors	:	1 part product to 5 parts kerosene
Penetrating fluids	:	1 part product to 7 parts penetrating carrier
Ceramic textile dressing	:	1 part product to 1 part resin/solvent mix

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**Health & Safety:** See separate Material Safety Data Sheet.

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**Note:** Dag® is a registered trademark of Acheson Industries Inc.  
The data contained on this sheet represents typical properties and is not to be used as a basis for preparation of specifications.  
Before writing specifications on this product, contact our Electronic Materials & Specialty Coatings Business Group's Technical Service Department.  
You can find general information on Acheson at: <http://www.achesonindustries.com>.

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