

BOELUBE®



A BOEING DEVELOPED LUBRICANT



BOELUBE PASTE

Produced under license from Boeing Intellectual Property Licensing Company. **BOELUBE®** is among the trademarks owned by Boeing. These products represent a family of proprietary lubricants developed through Boeing manufacturing operations and lubricant experience.

在波音管理公司的授权许可下生产，BOELUBE®是波音公司所拥有的商标之一。凭借波音飞机的制造工艺要求和润滑经验发展而来的系列润滑剂

The Orelube Corporation holds an exclusive worldwide license from Boeing Intellectual Property Licensing Company to manufacture and market the **BOELUBE®** series of lubricants.

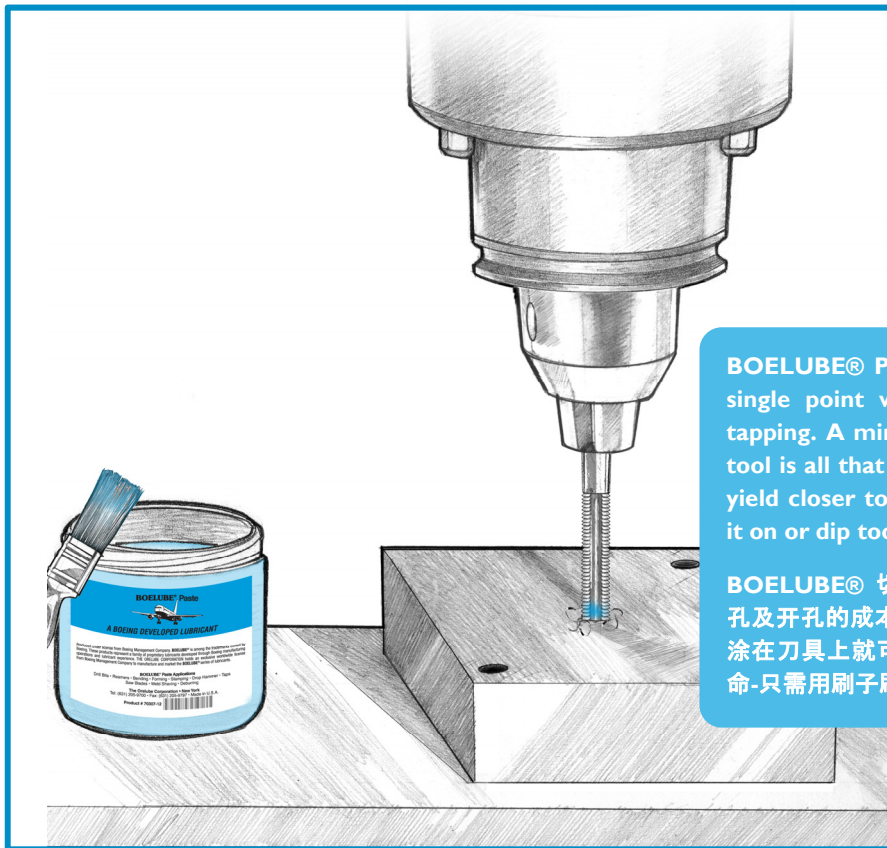
Orelube公司从波音管理公司获得全球独家许可，生产和销售BOELUBE®系列润滑剂。

Historically, the metalworking industry has used metalworking fluids by flood application in machining operations. But because the costs associated with use, management, and disposal of flood coolants has risen over the years, in part due to increasing federal, state, and local regulations aimed at worker safety and fluid disposal, there has been a growing trend to utilize methods requiring less metalworking fluid to reduce cost, protect the environment, and improve and protect worker health, without sacrificing productivity and quality.

从历史上看，金属加工业一直使用金属加工液应用于加工。但由于金属加工液的使用，管理和处理多年来成本不断上升。出于保障工人的人身安全以及以安全废弃处理的目的，根据部分增加的联邦、州和地方法规，在保证生产效率和质量的前提下，使用尽可能少的金属加工液以降低成本，保护和改善工人健康的方法已成为趋势。

A metalworking lubricant should impart sufficient lubricity between the tool and the workpiece to cause a significant reduction in friction to occur. **BOELUBE®** is a technologically advanced lubricant that significantly reduces friction (one of the major elements in generating heat during the material removal process).

在刀具和工件间金属加工润滑剂应充分起到润滑作用，以显著降低摩擦发生。**BOELUBE®**拥有先进的技术，可大幅度的减少摩擦(在材料加工中一个主要产生热量的原因)



BOELUBE® Pastes are extremely cost effective in single point work such as drilling, reaming, and tapping. A minimal amount of paste applied to the tool is all that is required to improve surface finish, yield closer tolerances and extend tool life – Brush it on or dip tool in paste.

BOELUBE® 切削油膏对于单一点的工作如钻孔，扩孔及开孔的成本有着有效控制。只需将少量的切削油膏涂在刀具上就可改善表面光滑，减小公差，延长刀具寿命-只需用刷子刷上或将刀具蘸取。

Near dry machining lubricants can also be formulated into paste forms — **BOELUBE®** Pastes.

In near dry machining the goal is high efficiency, which is achieved as a result of using a minimal quantity of lubricant. Because minimal quantities are used and consumed for the most part in the machining process, **BOELUBE®** Pastes produce near dry workpieces and chips with little or no clean-up or related costs and no disposal costs.

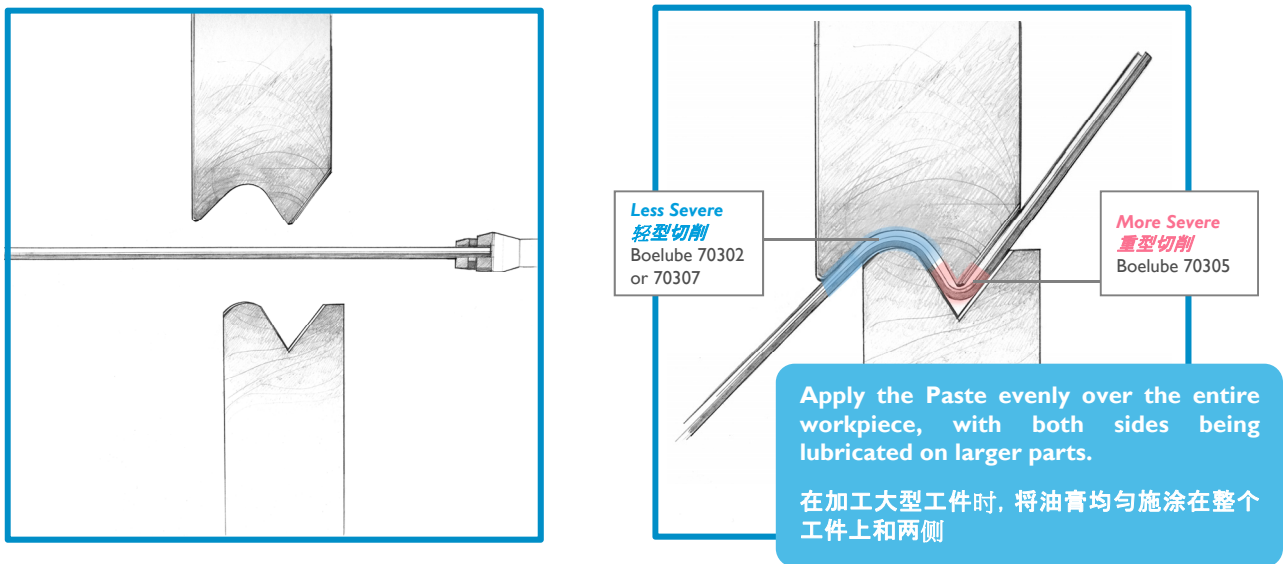
切削液被制成近似干燥的油膏形态——**BOELUBE®**切削油膏。因为在大多数加工过程中，近似干燥的机械加工是为了达到更高的效能，所以要求最小限度使用和消耗润滑剂。**BOELUBE®**切削油膏在加工近似干燥的工件时，很少或根本无需清洗，从而避免因此相关产生的清洗和后期处理费用。

Drilling is one of the most widely used machining processes to produce circular holes in metallic and nonmetallic materials. A drill is a rotary end-cutting tool, with the most common type being the twist drill. The drill, attached to either a stationary machine or hand held, is used to originate or enlarge a hole in a solid material. Drilling can be characterized as in a rough form, whereas reaming is the exact form.

在金属和非金属材料上钻孔是最广泛的应用加工过程，钻孔使用一种旋转式的刀具。最常见的类型是麻花钻。通常用来在固体表面转孔，扩孔或更精确的绞孔，钻机可以是手持的也可以连接到一个固定的机器上。

A tap is a cylindrical tool that cuts internal threads and has flutes to remove chips and carry lubricant to the point of cut. Tapping is a machining operation in which a tap, with teeth on its periphery, cuts internal threads in a predrilled hole having a smaller diameter than the tap diameter.

螺纹钻是用来形成内螺纹的圆柱形的工具，在攻丝时刀刃可以带出金属屑，并将润滑剂带到需要润滑的点。攻内螺纹是螺纹加工的一种，利用螺纹钻边缘的牙齿在直径较小的预制孔上制成内螺纹。



For Forming and Bending — **BOELUBE®** Pastes provide an excellent means of obtaining maximum stretch area and close tolerance bends by providing superior lubrication that allows the workpiece to attain the desired shape without creating areas that are stressed.

成型和折弯加工——**BOELUBE®** 切削油膏提供了极佳润滑以获得最大限度的拉伸和精密公差的折弯。卓越的润滑允许工件被制成所需形状且无型差。

MAJOR BENEFITS 第四页

- **BOELUBE®** is non-corrosive, non-flammable, chemically stable and free of halogens, heavy metals, sulfur, phosphorus, silicone, petroleum or paraffin wax.
- 主要优点: BOELUBE®无腐蚀性、不易燃、具有化学稳定性以及不含卤素、重金属、硫、磷、硅、石油或石蜡。
- **BOELUBE®** does not contain any ingredients considered a hazardous substance by OSHA, WHMIS, IARC, NTP and State Regulatory Lists. Refer to Material Safety Data Sheets for additional information.
- BOELUBE®OES不含有任何有害物质, 和OSHA,WHMIS,IARC,NTP和国家的管理列表里规定的有害物质。更多的信息, 请参阅材料安全数据表。
- **BOELUBE®** will not promote dermatitis, provides a high degree of worker safety, and presents a safe effective method to machine various types of materials without special handling, fluid recycling or typical disposal issues.
- BOELUBE®不会引发皮炎,对使用者无危害, 并且可以安全有效的加工各种类型的材料, 不需要特别处理, 回收或特别的清理。
- **BOELUBE®** can be removed from surfaces using isopropyl alcohol, denatured alcohol, MEK, or aqueous cleaner.
- BOELUBE®可使用异丙醇, 工业酒精, MEK或者清洁剂从工件表面洗去。
- **BOELUBE®** has indefinite shelf life.
- BOELUBE®无限期的保质期
- **BOELUBE®** does not need to be removed prior to heat treat.
- BOELUBE®热处理时不需要去除
- **BOELUBE®** is in most cases compatible with paints and sealants (though it is highly recommended that compatibility be determined before use).
- BOELUBE®在大多数情况下, 兼容涂料和密封剂(尽管如此, 但强烈建议在确认兼容性后再使用)
- **BOELUBE®** provides superior lubrication when machining or forming the increasingly complex range of materials now being used in Aerospace, and a wide range of other manufacturing industries.
- 在航空航天和其他制造领域中日益复杂材料加工和成型中, BOELUBE®提供杰出的润滑。

COST SAVINGS

成本的降低

- Are derived through longer tool life, better surface finish, increased productivity, reduction in lubricant usage and subsequent cleaning and disposal costs, reduced environmental impact, improved housekeeping, and easier chip handling and recycling
- 延长刀具寿命,更好的表面光洁度,提高生产力,降低润滑油的使用和随后产生的清洁和处理成本,减少对环境的影响, 提高工作场所的整洁, 更容易金属屑处理和回收利用

ENVIRONMENTALLY NON-HAZARDOUS / WORKER FRIENDLY

环保, 无害/有利于工人健康

- Manufactured from personal care ingredients, **BOELUBE®** is non-irritating and biodegradable
- Minimal lubricant usage reduces worker exposure
- 使用个人护理材料制造, BOELUBE®无刺激性, 并可通过生物降解。

BOELUBE® PRODUCT LIST

Order items by Product Code numbers

BOELUBE Solids 70200 White		Quantity
70200-00	14.5 oz. Cartridge (14.5盎司/盒)	12 per Box / 24 per Case (12/盒, 24盒/箱)
70200-13	1.6 oz. Push Tube (1.6盎司/管)	50 per Box / 300 per Case (50管/盒, 300盒/箱)
70200-14	4 oz. Block (4盎司/块)	30 per Box / 180 per Case (30块/盒, 180盒/箱)
70200-18	2 oz. Stick (2盎司/支)	64 per Box / 192 or 384 per Case (64支/盒, 192或384盒/箱)
70200-40	3.5 oz. Push Tube (3.5盎司/管)	32 per Box / 192 or 384 per Case (32管/盒, 192或384盒/箱)
BOELUBE Pastes 70302 Blue (Soft) / 70305 Pink (Hard) / 70307 Blue (Medium)		Quantity
70307-02	2 oz. Jar (2盎司/瓶)	150 per Box (150瓶/箱)
70307-L	4 oz. Jar (4盎司/瓶)	30 per Box / 150 per Case (30瓶/盒, 150/箱)
70307-05	35 lb. Pail (35英镑/桶)	1 each (独立包装)
70307-11	5 lb. Tub (5英镑/桶)	1 each / 8 per Case (8桶/箱)
70307-12	12 oz. Jar (12盎司/瓶)	12 per Box / 36 per Case (12瓶/盒, 36盒/箱)
70307-07	120 lb. Drum (120英镑/桶)	1 each (独立包装)
70307-09	400 lb. Drum (400英镑/桶)	1 each (独立包装)
BOELUBE Liquids 70104 Red (100A) / 70106 Clear (100F) / 70090 Clear		Quantity
70104-04	1 gal. Container (1加仑/桶)	1 each / 6 per Case (6桶/箱)
70104-05	5 gal. Pail (5加仑/桶)	1 each (独立包装)
70104-07	15 gal. Drum (15加仑/桶)	1 each (独立包装)
70104-09	55 gal. Drum (55加仑/桶)	1 each (独立包装)
70104-HHL	Hand Held(手持式)	70 per Box / 140 per Case
70104-L	4 oz. Bottle (4盎司/瓶)	36 or 72 per Box / 150 per Case (36或72瓶/盒, 150盒/箱)
70106-L	4 oz. Bottle (4盎司/瓶)	36 or 72 per Box / 150 per Case (36或72瓶/盒, 150盒/箱)
70090-L	4 oz. Bottle (4盎司/瓶)	36 or 72 per Box / 150 per Case (36或72瓶/盒, 150盒/箱)
BOELUBE Water-Soluble Fluid 70105		Quantity
70105-04	1 gal. Container (1加仑/桶)	6 per Case (6桶/箱)
70105-05	5 gal. Pail (5加仑/桶)	1 each (独立包装)
70105-07	15 gal. Drum (15加仑/桶)	1 each (独立包装)
70105-09	55 gal. Drum (55加仑/桶)	1 each (独立包装)



5 Gallon Pail
(18.9 liter)

12 oz. Jar
(340 grams)

1.6 oz.
Push Tube
(45 grams)

14.5 oz.
Push Tube
(411 grams)

4 oz. Bottle
(113 ml)

1 Gallon
(3.8 liter)

4 oz. Block
(113 grams)

2 oz. Stick
(57 grams)