

Weatherproof Leather

# KOMA TOUGH™

Four types of toughness!!

1. TOUGH against outdoor use!
2. TOUGH against friction and abrasion!
3. TOUGH against hydrolysis!
4. TOUGH against extremely low temperatures!

KOMA TOUGH™ is a strong weatherproof polyurethane leather.

It is the highest grade material developed using Komatsu Matere technology.



## Outdoor use

No change in appearance and no deterioration in abrasion strength (compared to our regular leather)



## Abrasion resistance

No apparent abnormalities (compared to our regular leather) after testing using a Gakushin-type rubbing tester with steel plate (applied 1 kg-load). \*Testing performed within our company.



## Durability

No change in appearance and abrasion strength (compared to our regular leather) after the "jungle test" (leaving the material at a temperature of 70°C and 90% humidity for 10 weeks).



## Cold resistance

No apparent abnormalities (compared to our regular leather) after flex testing in cold weather (JIS K 6772, -30°C test).

KOMATSU MATERE Co., Ltd.

Head Office - Nu 167, Hama-machi, Nomi-city, Ishikawa, Japan TEL:+81-761-55-1111

Tokyo Sales Branch - 3-10-6 Maruito Ginza No.3 Building 4th floor, Ginza, Chuo-ward, Tokyo, Japan TEL:+81-3-3549-3880

Osaka Sales Branch - 2-2-22 HERBIS ENT Office Tower 8th floor, Umeda, Kita-ward Osaka-city, Osaka, Japan TEL:+81-6-6344-4161



适用于所有环境的皮革

# KOMA TOUGH™

## 四个“耐用”！！

1. 经得住室外使用
2. 耐摩擦、磨损
3. 耐水解作用
4. 极低温环境下耐用

KOMA TOUGH™ 是一种能适应所有环境的耐用PU皮革，其技术水平即使在小松美特料所拥有的技术范围内也是属于最高等级的。



**室外使用** (与我公司普通皮革对比)  
无外观变化、磨损强度无降低



**耐磨损性** 学振型钢板试验  
(载荷1kg) ※单独试验  
无异常 (与我公司普通皮革对比)



**持久性** angle 试验  
(在温度70℃、湿度90%的环境下放置10周后)  
无外观变化、磨损强度无降低  
(与我公司普通皮革对比)



**耐寒性** 耐寒弯曲试验  
(JIS K 6772 -30℃ 试验)  
无异常 (与我公司普通皮革对比)

KOMATSU MATERE Co., Ltd.

总公司 - 石川县能美市浜町NU167番地 TEL: +81-761-55-1111

东京营业所 - 东京都中央区银座3丁目10番6号MARUITO 银座3号大厦 4楼 TEL: +81-3-3549-3880

大阪营业所 - 大阪府大阪市北区梅田2丁目2番22号HERBIS ENT 办公楼8楼 TEL: +81-6-6344-4161

上海代表处 - 中华人民共和国上海市延安西路2201号 上海国际贸易中心 1913室 TEL: +86-21-6275-4558

