

## Introduction

The temptation to save money and translate Safety Data Sheet (SDS) documents or phrases using free Machine Translation (MT) tools is strong. Time and cost savings seem to make an overwhelming case in favor of using MT. Also, when combined with the mantra that MT quality is rapidly improving, the risk is perceived to be less of a concern. However, MT is still very risky.

The samples below will provide a current (as of April 17, 2023) look at where MT stands in relation to the correct, regulatory-referenced source text. The decision to use MT for SDS translation, or any text that may have life-or-death consequences if done incorrectly is up to the individual. The phrases chosen for this poster reflect a range from simple terminology to more complex terminology and phrase structure. **NOTE:** Be advised that the the initial/primary result displayed by the MT engine is the translation used for standardization and simplicity.

As depicted by color schemes for comparison, use the following key:  
**Green** text indicates the correct, regulatory compliant translation.  
**Yellow** text indicates a translation that is not regulatory compliant.

## 1. Regulation: (EC) No. 1272/2008 (Spanish)

P280: Wear protective gloves/protective clothing/eye protection/face protection  
P280: **Llevar guantes/prendas/gafas/máscara de protección**

Google: Use guantes protectores/ropa protectora/protección para los ojos/protección para la cara	15%
Bing: Use guantes protectores / ropa protectora / protección para los ojos / protección facial	18%
Yandex: Use guantes protectores / ropa protectora / protección para los ojos / protección facial	18%
DeepL: Llevar guantes/ropa de protección/protección ocular/protección facial	33%

## 2. Regulation: GB 30000.7-2013, Part 7, Flammable Liquids, page 11 (Chinese)

P280: Wear protective gloves/protective clothing/eye protection/face protection  
P280: **戴防护手套/穿防护服/戴防护眼罩/戴防护面具**

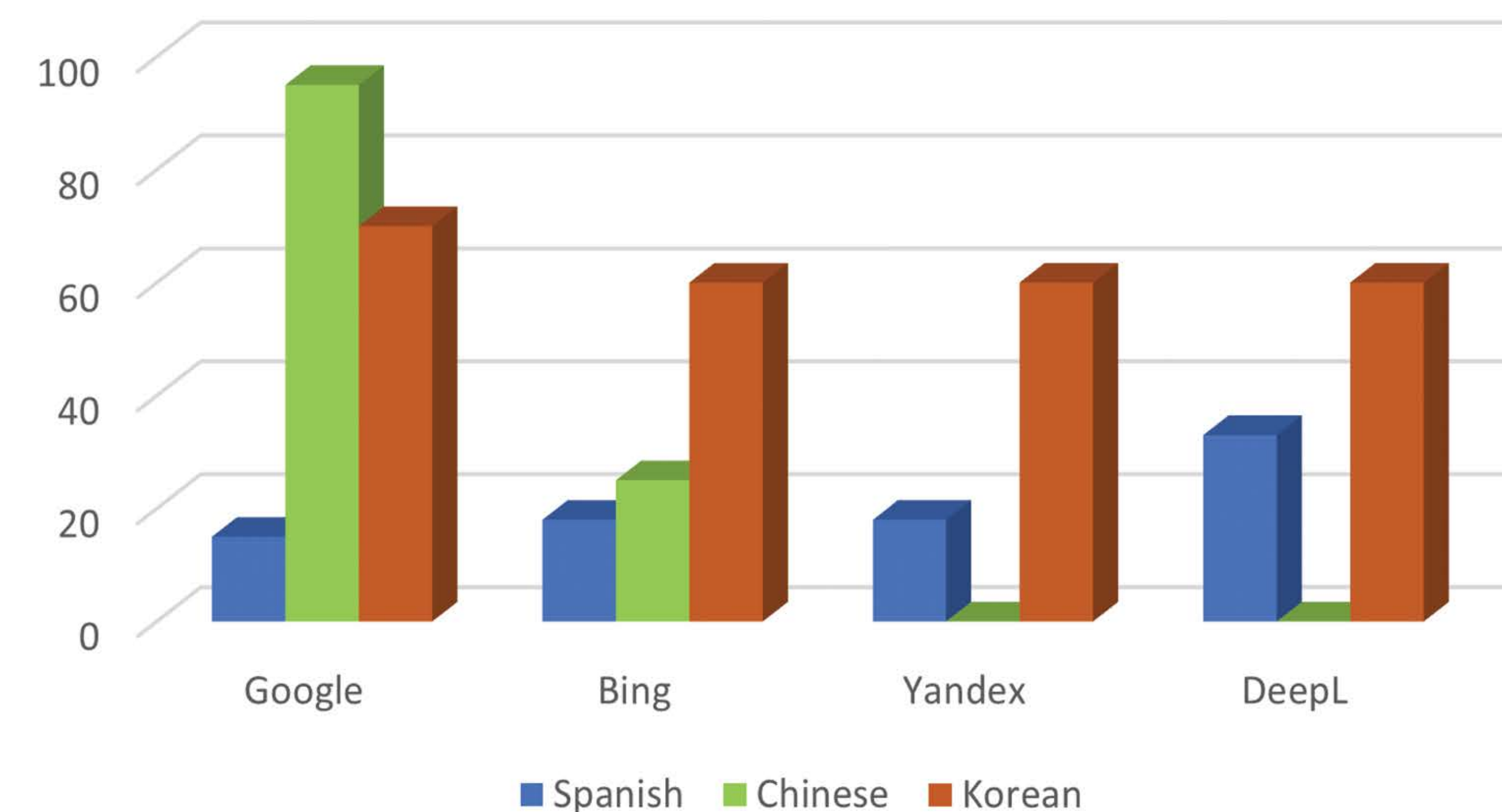
Google: 戴防护手套/穿防护服/戴防护眼罩/戴防护面罩	95%
Bing: 戴防护手套/防护服/护目镜/戴面罩	25%
Yandex: 戴上防护手套/防护服/眼睛保护/面部保护	0%
DeepL: 佩戴防护手套/防护服/防护眼罩/防护面具	0%

## 3. Regulation: MOEL 2016-19 (GHS Implementation), page 78 (Korean)

P280: Wear protective gloves/protective clothing/eye protection/face protection  
P280: **(보호장갑·보호의·보안경·안면보호구)를(을) 착용하십시오**

Google: 보호 장갑/보호복/보안경/안면 보호구를 착용하십시오	70%
Bing: 보호 장갑 / 보호 복 / 보안경 / 얼굴 보호구 착용	60%
Yandex: 보호 장갑/보호 복/눈 보호/얼굴 보호를 착용하십시오	60%
DeepL: 보호 장갑/보호 복/눈 보호구/안면 보호구 착용	60%

SDS Machine Translation Accuracy %



## Discussion

When considering the translation of your SDS by one of the free online MT services, this poster shows the risk inherent in that approach. While the phrases may seem to be grammatically and technically correct, they are not compliant with regulations. When regulation mandates a specific H&P phrase related to the properties of your chemical or product, you can be certain the phrase will not match the required regulation from any of the free MT services.

The SDS author is left with the decision to accept the risk in return for the immediate cost and time savings. How much risk there is depends on the likelihood that an issue will arise as a result of the non-compliant translation and the impact of that issue. Since the examples use fairly simple text and the MT engines are unable to match the regulatory requirement, more complicated phrases may result in significantly lower matched percentages. The worst-case scenario would be a complete opposite meaning as a result of a machine translation. Thus making the use of MT translations potentially very costly to use as it becomes a safety and regulatory risk, as well as risking the reputation of the company.

## References

(EC) No 1272/2008  
GB 30000.7-2013 (Chinese)  
MOEL 2016-19 (GHS Implementation)  
<https://translate.google.com/>  
<https://www.bing.com/>  
<https://yandex.com/?>  
<https://www.deepl.com/en/translator>

www.GLTaC.com

