



# TECHNICKÝ DOZORČÍ SPOLEK BRNO

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*TDS Brno – Sekce materiálů a svařování*

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## Technical Appraisal

**Subject matter:** Evaluation of metal spatter sticking with the application of the “SIMPLE GREEN CRYSTAL” preparation.

(Manufacturer: Sunshine Makers, Huntington Harbor, CA/USA)

**Customer:** Liberty – Top – Tech s. r. o. company  
Holešovice, 170 00 Prague 7, Czech Republic

### **Scope of inspection:**

Applying the MAG (135) method according to the ČSN EN ISO 4063 standard, a coating preventing the weld metal spatter sticking was used for the purpose of determining the quantity of metal spatter stuck in the proximity of welded surfaces.

Both butt welds and fillet welds were tested, applying both the short-circuit and shower metal transfer. The tests were carried out using the basic material of W. Nr. 1.0038, thickness: 2 mm.

### **Solution:**

The following testing procedure was applied:

- The Simple Green Crystal preparation was diluted in water in the ratio of 1 : 4 (4 parts of water, 1 part of the preparation) as directed.
- The area adjoining the welded surfaces was coated with the preparation immediately before welding.
- After completing the welding procedure, the degree of splatter sticking around the weld and the possible formation of pores at the edges of the weld were evaluated.
- Surfaces treated with the preparation showed a minimum splatter which was easily removed with a brush. The splatter left no traces.
- Surfaces not treated with the preparation showed an extensive splatter whose removal with a brush and particularly with a chipper was difficult. Once removed, the splatter left traces.



### Inspection result:

- Weldment samples treated with the SIMPLE GREEN CRYSTAL coating showed only a minimum or no splatter on the surfaces surrounding the weld; the splatter was easily removable from the material surface without leaving any marked traces.
- The edges of the weld surface which was in contact with the preparation did not show any porous defects (according to the ČSN EN ISO 5817 standard) due to the anti-splatter preparation sublimation.
- The welded samples treated with the preparation can be further tested for internal integrity (potential occurrence of blisters due to the preparation sublimation), by applying e.g. the penetrating-radiation method according to the ČSN EN 12 062 standard.

### Conclusion:

The results of the above-specified tests indicate positive results of using the preparation concerned.

With best regards,



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Technical inspection

Done in Brno on 1 November 2004

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