



SGS U.S. Testing Company Inc.

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Report Number: 409277
Date: 11/19/96
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C/R Number: 203026

CLIENT: Firefreeze World Wide, Inc.
Attn: Stephanie Giessler
270 Route 46
Rockaway, NJ 07866

SUBJECT: One (1) sample received on 10/29/96 and identified by the client as:
Cold Fire

AUTHORIZATION: Requisition #104532.

PURPOSE: To perform DOT corrosion testing (metal) employing the submitted sample.

TEST DATES: 11/05/96 - 11/12/96.

SIGNED FOR THE COMPANY BY:

B. Santos
Bernardita Santos
Laboratory Supervisor
/mo

Joseph Kwiatkowski
Joseph Kwiatkowski, Director
Specialty & Applied Chemistry

Member of the SGS Group

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OUT THE WRITTEN PERMISSION OF THE SGS U.S. TESTING COMPANY INC. SAMPLES NOT DESTROYED IN TESTING ARE DISPOSED OF AFTER 30 DAYS.

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PROCEDURE: Testing was performed in accordance with method as specified in 49 CFR 173.136 (A) (2) (NACE TM-01-69).

Conditions: Temperature: 55°C
Agitation: none
Volume to Area Ratio: 250 ml/in²
Time: 168 hours
Cleaning: Steel: 20% NaOH; 200 g/L Zn
Aluminum: HNO₃

RESULTS:

	Corrosion Rate	
	mm/yr	in/yr
Aluminum 7075 T-6 Bare	0.07; 0.08	0.003; 0.003
Steel	0.23; 0.27	0.009; 0.011

COMMENTS: Per 49 CFR 173.130 (A) (2) a liquid is considered to have a severe corrosion rate if its corrosion rate exceeds 6.25 mm (0.246 inches) a year on steel (SAE 1020) or aluminum (nonclad 7075 T-6) at a test temperature of 55°C (131°F).

ENCLOSURE: Certificate of compliance for steel and aluminum

End Of Report

REPORT OF TEST

CERTIFICATE OF ANALYSIS

FOR: UNITED STATES TESTING CO.

DATE: 7 AUG 96

SHIP ORDER NUMBER: 1002-1157-19

INSTRUCTIONS: 7168

DESCRIPTION OF MATERIAL

1. (St. No. 686-1020) Steel, SAE-1020 CR, 1 1/2 dia. X 1/8 thick with 1/16 hole (NOMINAL)

AT-10T

CHEMICAL ANALYSIS

HEAT NO.	C	Mn	P	S	Si	Ni	Cr	Mo	Va	Cu	Zn	Cs
1/2235	.20	.60	.02	.033								

MECHANICAL PROPERTIES

TENSILE STRENGTH PSI	YIELD PSI	ELONGATION IN.	REDUCTION OF AREA %	HARDNESS	BEND TEST	GRAIN SIZE

METASPEC

Co

METAL TEST SPECIMEN, COUPONS, PANELS,
RODS, FIXTURES, RACKS AND HOLDERS

210/923-5999

P.O. Box 27707 □ SAN ANTONIO, TEXAS 78227

We certify that this is an exact
duplicate of the records maintained
in our files.

By

Judy Bragg