

Steam Hose Safety Facts



(Reprinted from RMA IP-11-1 Steam Hose)

Handling steam is a very hazardous situation. Using care and some safety precaution can minimize or eliminate personal or property damage.

SELECTING AND USING STEAM HOSE

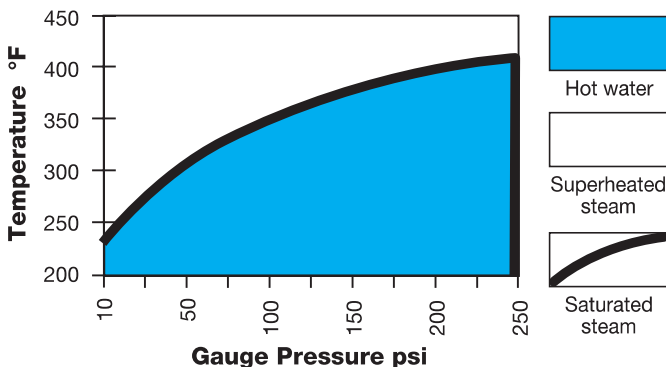
1. Make sure steam hose is identified as a steam hose. It should be branded as such, stating working pressure and temperature rating.
2. Make sure working pressure and temperature is not exceeded.
3. Do not allow hose to remain under pressure when not in use.
4. Avoid excess bending or flexing of hose near the coupling. Straight line operation is preferred. If bends are necessary as part of operation, spring guards may help.
5. Be sure and use recommended steam hose couplings and clamps on hose.

MAINTENANCE OF STEAM HOSE

1. Periodic inspection of hose should include looking for cover blisters and lumps.
2. Check for kinked areas that could damage hose.
3. Drain hose after each use to avoid tube damage before hose is put back in operation, to avoid "popcorning" of the tube.
4. Check tightness of clamps bolts after each use.
5. Check to see if clamps halves are touching. If they are, recouple hose with smaller clamps to insure proper tightness or grip around hose.
6. Do not store hose over hooks.
7. Steam hose lying on metal racks or installed around steel piping will dry out the hose, causing tube and cover cracking.
8. For service in sub-zero application, use only T-341 chlorbutyl hose.

The chart represents the three forms of water when subjected to heat and pressure. Use only hoses specifically designed for the application.

Gauge Pressure (psi)	Temperature of Saturated Steam (°F)
10	239
25	267
50	298
75	320
100	338
125	353
150	366
175	377
200	388
225	397
250	406



SELECTING AND USING STEAM HOSE

Gauge Pressure		Temperature	
psi	bar	°C	°F
25	1.73	130	267
30	2.07	134	274
35	2.42	138	281
40	2.76	141	287
45	3.11	144	292
50	3.45	148	298
60	4.14	153	307
70	4.83	158	316
80	5.52	162	324
90	6.21	166	330
100	6.90	170	338
120	8.28	177	350
140	9.66	182	361
160	11.04	188	371
180	12.42	193	379
200	13.80	198	388
225	15.53	203	397
250	17.25	208	406
275	18.98	212	414
300	20.70	216	422
325	22.43	221	429
350	24.15	225	437

CORROSIVE STEAM

When the water used to generate steam contains dissolved air, oxygen or carbon dioxide, then these gases end up as contaminants in the steam. At high temperatures of steam both oxygen and carbon dioxide are extremely corrosive.

Carbon dioxide is acidic and therefore attacks metals whereas the oxygen corrodes metals and oxidizes rubbers. Corrosion of metals in the presence of both oxygen and acids is forty times faster than with either alone. Boiler water is therefore normally treated not only to remove the "hardness" which would cause "furring" of the boiler but also to remove dissolved oxygen and carbon dioxide and to ensure that the steam is not only not acidic but even slightly alkaline. Boiler water treatment is a specialised subject beyond the scope of this technical sheet but correct steam generation is important.

DETERIORATION OF STEAM HOSE

Like all rubber products steam hoses have a finite life and are subject to gradual deterioration with use. However, it sometimes happens that hoses which have been giving a good life suddenly start failing without apparent reason. In such cases it is often a change in the steam conditions causing a rapid acceleration of a normal failure mode. It is therefore useful to consider how steam hoses normally last and thus how the condition of the steam affects hose life.

BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS OR DISCONTINUE PRODUCTS WITHOUT PRIOR NOTICE.



T340AH / T340AA
270 PSI EPDM
Braided Steam Hose

T340AH
Red Cover

T340AA
Black Cover

Warning
 Handling steam is very hazardous. If it is not properly controlled it can cause property damage, injury or even death. Selection for the proper application, usage, and maintenance will not only increase hose life but will insure safe operation for the user.

Applications:

The transfer of saturated steam up to 270 PSI and 410°F (+210°C).

- ★ **Use with superheated steam will shorten hose life. Proper draining of steam hose after each use will increase service life.**
- ★ **Not recommended for washdown applications where detergent or oils are present.**

Cover:

Red or black EPDM – heat-resistant. Wrapped cover fabric impression. Pin-pricked cover to allow venting.

Reinforcement:

High tensile steel wire braids.

Tube:

Black extruded EPDM – heat-resistant.

Not for steam cleaner use.

Working Pressure:

Constant Pressure – 18 Bar (270 PSI)

Temperature Range:

-40°F (-40°C) to 410°F (+210°C)

Branding:

ALFAGOMMA – ITALY T340 18 BAR (270 PSI) STEAM – DRAIN AFTER USE – QTR/YEAR (embossed)

Standard Length:

50 or 100 feet
 200 feet – 3/4"

Nominal Specifications

Series	ID (in.)	ID (mm)	OD (in.)	OD (mm)	Max Rec. WP (PSI)	Min. Bending Radius (in. @ 68°F)	Weight (lbs./ft.)
T340AH/AA050	1/2	13	0.91	23	270	5	0.28
T340AH/AA075	3/4	19	1.22	31	270	7 1/2	0.52
T340AH/AA100	1	25	1.50	38	270	10	0.60
T340AA200	2	51	2.64	67	270	20	1.38
T340AA250	2 1/2	63	3.19	81	270	25	1.99
T340AA300	3	76	3.70	94	270	30	2.50

REFER TO STEAM HOSE SAFETY FACTS ON PAGE 24.

COUPLING SUGGESTIONS

Steel or malleable iron male insert NPT or female ground joint or washer type with spuds attached with 2 or 4 bolt interlocking clamps.

- ★ Kuriyama offers a full line of ground joint couplings and clamps. Refer to current Kuriyama-Couplings™ and Accessories Catalog for type and pricing.
- ★ Universal quick-acting couplings should not be used with steam hose.

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