



SPINOMAR[®] NaSS

(Sodium p-Styrenesulfonate)

1. Cutting edge Properties

SPINOMAR[®] NaSS is sodium styrenesulfonate hemihydrate which is a novel compound having excellent stability with less liability in decomposition, polymerization and lumping.

	Sodium styrenesulfonate (hemihydrate)	Sodium styrenesulfonate (anhydrous)
Storage Period	6 Months	6 Months
Sodium styrenesulfonate content	83.0%→83.2%	83.5%→75.2%
Polymerization	0%	10%
Lumping	No	Solidified rigidly

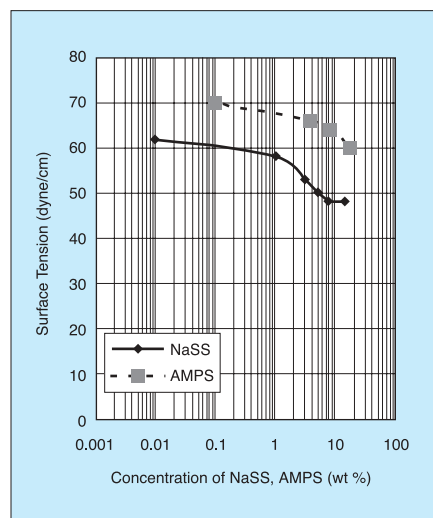
The composition in a powdery state has an improved solubility and handling properties in all procedures.

Patent U.S. 5,898,083
Japan JP 3601222

2. Surface Activity

SPINOMAR[®] NaSS has surface activity. This may be seen in the surface tension measurements shown below.

As a result, *SPINOMAR*[®] NaSS monomer is able to be used as reactive surfactant.



AMPS :
2-acrylamido-2-methylpropane sulfonic acid

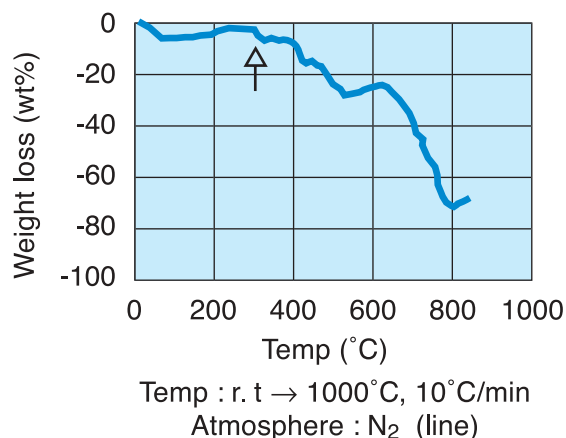
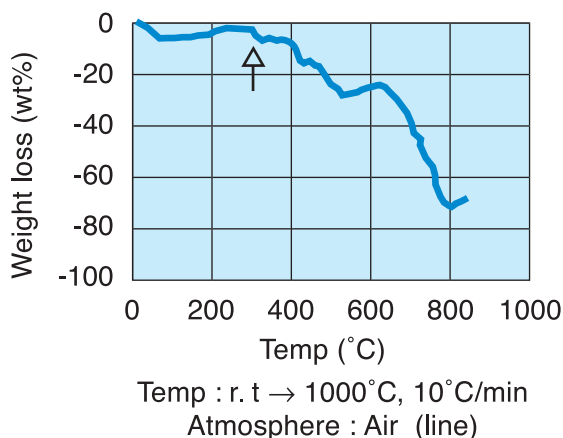


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(Sodium p-Styrenesulfonate)

3. Thermal Stability

SPINOMAR[®] NaSS is particularly well-suited to applications that involve high temperatures reaction, due to its benzene units. The high thermal stability of SPINOMAR[®] NaSS is shown by thermogravimetry analysis (TGA). Decomposition of SPINOMAR[®] NaSS takes place at 315°C.

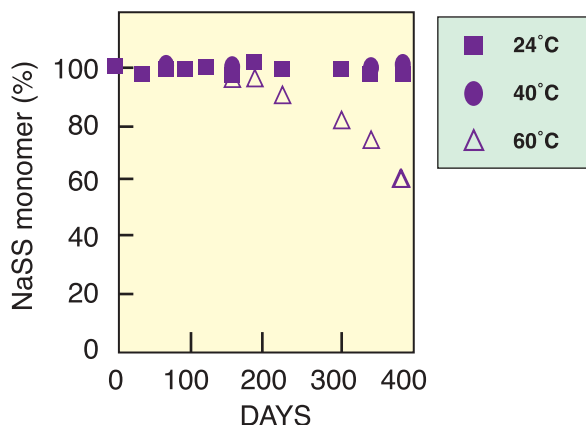


4. Storage Stability

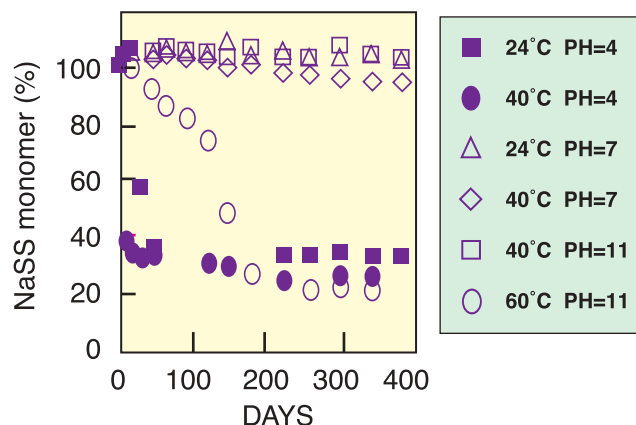
SPINOMAR[®] NaSS powder is stable below 40°C.

Aqueous SPINOMAR[®] NaSS solution is also stable below 40°C and in the range of pH 7 to 10. It is especially unstable if pH of solution is lower than 7.

Stability of SPINOMAR NaSS Powder



Stability of SPINOMAR NaSS 15% Aqueous Solution



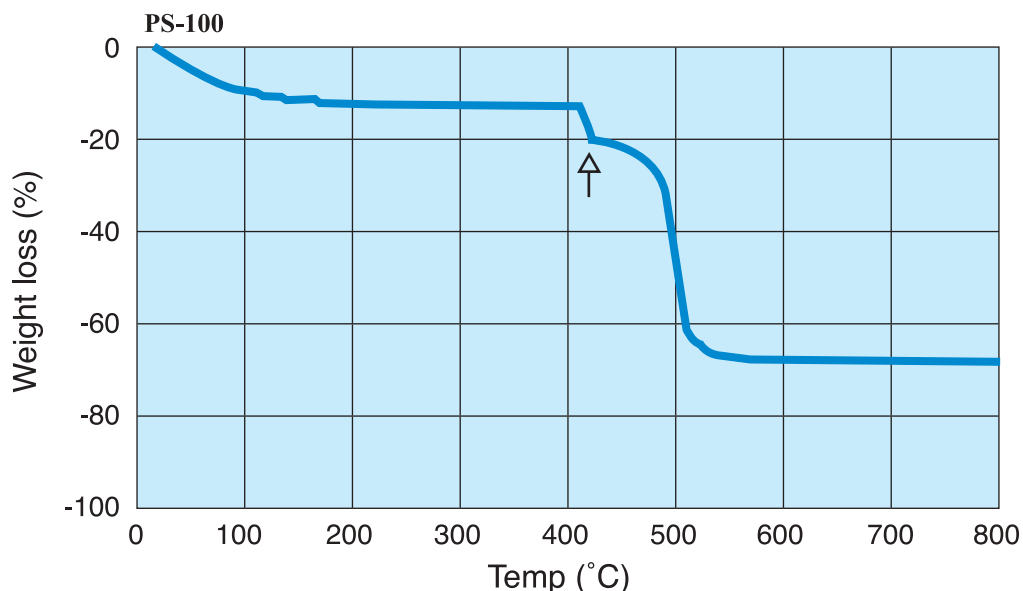


Poly-NaSS

(Sodium Styrenesulfonate Homo-Polymer)

1. Thermal Stability

The high thermal stability of **Poly-NaSS** is shown by thermo gravity analysis (TGA). Decomposition of **Poly-NaSS** takes place at approximately 415°C.



Temp : r. t → 1000°C, 10°C/min
 Atmosphere : N₂ gas (line)

2. Storage Stability

Poly-NaSS solution is stable for about three years at room temperature.

at room temperature and in light-resistant container

period	appearance	solid 20~22(%)	pH 7~9	viscosity 200-500(mPa.s)
0	pale yellow	21.1	8.7	350
6 months	pale yellow	20.9	8.2	340
1 year	pale yellow	20.9	8.3	350
2 years	pale yellow	21.0	8.4	350
3 years	pale yellow	20.8	8.2	340