Sono 1100

High-Temperature Ultrasonic Couplant

Sono 1100 provides coupling for high-temperature thickness gauging and will maintain acoustic coupling at high temperatures beyond 15 seconds to give ample time to obtain thickness readings. In most cases, the signal strength increases with time to the point of the couplant's thermal decomposition.

Recommended temperature range is 700 to 775°F / 371 to 413°C.

BENEFITS

- Extended open time window for longer inspections or to optimize thickness readings at high temperatures
- Medium viscosity paste
- Non-toxic, non-irritating formula
- Excellent corrosion inhibition

SPECIFICATION COMPLIANCE

- API
- ASME
- AWS

APPLICATIONS

Defect location: subsurface

Ideal for:

- Thickness gauging
- Corrosion testing
- High temperature ultrasonic testing

PROPERTIES

Appearance	Opaque paste
Color	Beige
Viscosity	Medium paste
Silicone	Yes
Glycerin	No
Propylene Glycol	No
Halogens	N/A
Sulfur	N/A
Water Soluble	No
Flash Point*	455°F / 235°C
Auto-ignition Temperature†	862°F / 461°C

* Flash point temperature determined in accordance with ASTM Method D92 using the Cleveland Open Cup method. In areas where vapors may be confined in an enclosed or semi-enclosed area, the actual flash point of this product may be lower than recorded.

† Auto-ignition temperature determined in accordance with ASTM Method E659.

INSTRUCTIONS FOR USE

In most applications, the transducer is best coupled with the thinnest layer of couplant possible. Apply a small bead of couplant directly to the center of the transducer face and push the transducer down onto the test surface with a uniform force so the couplant spreads out evenly towards the edge of the transducer.

For best results, allow a few seconds of "melt-time" before taking temperature reading. Signal attenuation may occur if this couplant is used at a temperature below the recommended operating range. In high-temperature applications it is recommended that extra care is taken to use just enough couplant to perform the test procedure as excess couplant may increase vapors which can pose a flash hazard.

Extreme-Temperature Guidelines

Before use, make sure the surface temperature of the test piece does not exceed the maximum specified temperature for the application and environmental conditions.

At high temperatures, couplants evaporate relatively quickly; more couplant may be required near the upper end of the operating temperature range to compensate for evaporation. Care should be taken to avoid using excess couplant as this may lead to increased vapors which can pose a flash hazard.

The flash point of a material is the lowest temperature at which it can vaporize to form an ignitable mixture in air. At the flash point temperature, the material vapor will flash only if an ignition source is present and the vapor may cease to burn when the ignition source is removed. In areas where vapors may be confined in an enclosed or semi-enclosed area, the flash point of a material may be lower than the recorded value.

The auto-ignition temperature of a material is the lowest temperature at which it will spontaneously ignite in a normal atmosphere without an external source of ignition, such as a flame or spark. Environmental or atmospheric factors will affect auto-ignition temperature; therefore it is important to observe a suitable safety margin in conjunction with auto-ignition temperature.

Smoke develops as the couplant begins to decompose due to heat exposure. Smoke is not an indication the couplant is not working, but it does indicate the effective coupling time is limited. Smoke produces vapors which may lower the couplant flash point, particularly in enclosed or semi-enclosed areas.

A couplant's upper temperature range for short duration thickness gauging is higher than when used for flaw detection.

USE RECOMMENDATIONS

NDT Method	Ultrasonic Testing
Required Equipment	UT equipment, transducer
Temperature Range‡	700 to 775°F / 371 to 413°C
Compatibility	Most metals

‡ Recommended temperature based on Flash Point and Auto-ignition Temperature. In areas where flame or other ignition source may be present, or in applications where vapors may be confined in an enclosed or semi-enclosed area, these products should not be used above the flash point temperature.

REMOVAL

Remove excess couplant from transducers and other surfaces by wiping with disposable rags or paper towels, being careful to protect skin from hot surfaces. Do not use solvent-based cleaners on hot surfaces!

STORAGE

Store couplant in the original container. Do not freeze. Store out of direct sunlight. Keep container closed when not in use. Never put unused couplant back into the original storage container. Refer to Safety Data Sheet for additional storage instructions.

PACKAGING

4 fl oz / 118 mL tubes (case of 6)	30-6XT04
1 gal / 3.78 L cubitainer	30-901

HEALTH AND SAFETY

Extra care should be taken when operating with couplants in high-temperature applications; refer to Extreme-Temperature Guidelines for pertinent information regarding couplant behavior and properties at high-temperatures.

Review all relevant health and safety information before using this product. For complete health and safety information, refer to the product Safety Data Sheet, which is available at **www.magnaflux.com**.