

NUMBER 4857

V-Pyrol™ reactive diluents (N-Vinyl-2-Pyrrolidone)

Reactive Monomer

Description

V-Pyrol reactive diluent is a clear liquid stabilized with insoluble sodium hydroxide or soluble N,N'-di-sec-butyl-p-phenylenediamine (tenamine). V-Pyrol RC reactive diluent with a concentration of 25 ppm tenamine is primarily for radiation curing, while V-Pyrol/Amine reactive diluent with a concentration of 100 ppm tenamine, is used for non-radiation curing applications. V-Pyrol/Caustic is supplied for conventional solution polymerization applications.

Key Attributes

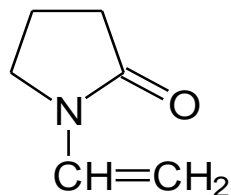
- V-Pyrol reactive diluent accelerates UV curing rates as the reactive diluent.
- Typically formulated with an acrylate oligomer, it imparts its unique solution viscosity reduction and enhanced adhesion to non-polar substrates.
- The activated double bond of V-Pyrol reactive diluent facilitates its use in free radical homo- and copolymerizations and grafting reactions.
- The products of these reactions are either linear or cross-linked homopolymers and nonionic, anionic and cationic copolymers.
- Polymers from V-Pyrol reactive diluent are amorphous, and the pyrrolidone ring imparts hydrophilicity, adhesiveness, strength and complexing capability.

Applications and Usage Notes

- Reactive diluent for radical initiated UV radiation curing used in vinyl flooring, wood coatings, release coatings, inks, (please consult your Ashland representative for more).
- Numerous conventional polymerizations to generate an array of materials with a variety of properties

Typical Product Properties

Structure:



Tradename	V-Pyrol™ reactive diluents
Empirical Formula	C ₆ H ₉ NO
Physical Form	Clear liquid
Molecular Weight	111.16
Purity, Area%, GC	99.0 min.
Moisture, %	0.1 max.
Color (APHA)	60 max.
Boiling Point	193°C @ 400 mm Hg
Freezing Point	13.5°C
Viscosity, cps	2.07 @ 25°C (1.56 @ 40°C)
Refractive Index @ 20°C	1.511
Vapor Pressure (mm Hg)	< 0.1 @ 20°C 3.4 @ 70°C
Density (g/ml)	1.045
Solubility in water	Complete
Surface tension @ 25°C (mN/m)	39.1
Solubility Parameter (J ^{1/2} cm ^{-3/2})	23.17
Flashpoint	205°F (96°C)
Autoignition Temperature	364°C
CAS Registry No.	88-12-0

Available Grades

V-Pyrol/ RC reactive diluent inhibited with 25 ppm N,N'-di-sec-butyl-p-phenylenediamine

V-Pyrol/Amine reactive diluent inhibited with 100 ppm N,N'-di-sec-butyl-p-phenylenediamine

V-Pyrol/Caustic reactive diluent inhibited with 0.01% NaOH

Packaging Information

Product	Physical Form	Pkg Type	Net Wgt (lbs)	Net Wgt (kgs)
V-Pyrol/Amine	Liquid	Steel Drum	460 lbs	208.6 kgs
V-Pyrol/Amine	Liquid	Bulk TW	44,000 lbs	19,960 kgs
V-Pyrol/Caustic	Liquid	Steel Drum	460 lbs	208.6 kgs
V-Pyrol/RC	Liquid	Steel Drum	100 lbs	45.3 kgs
V-Pyrol/RC	Liquid	Steel Drum	460 lbs	208.6 kgs

Product Safety Information

For health and safety data and handling, storage and disposal procedures, please refer to the Safety Data Sheet (SDS) and product label.

To learn more, visit ashland.com

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