THINNER/REDUCER
K0166 Series

Product Data Sheet

KRYLON INDUSTRIAL COATINGS™

OVERVIEW

- Film integrity, appearance, and application are significantly affected by the nature of the solvent. A solvent plays a very important role in film formation and durability even though it is not a permanent component.
- There are only two basic performance properties that must be considered in selecting the proper solvent for any end use: solvency and evaporation rate. Solvency is important because, by definition, a solvent must dissolve something.
- The solvent dissolves the resin and reduces the viscosity. Evaporation is subsequently necessary, not only as a part of the drying process, but to control the coating viscosity at various stages of drying. As the solvent evaporates, film viscosity increases.
- A solvent must evaporate relatively quickly during initial drying to prevent sagging, but it must evaporate slowly enough to give sufficient leveling and adhesion.

ALIPHATIC/AROMATIC

Aliphatic Solvents: These solvents are used to reduce medium and long oil alkyd enamels such as High Gloss Alkyd Enamel (K0083 series) and Rust Tough Alkyd Enamel. They are not strong enough to be true solvents in any resin quality other than alkyds. Aliphatic solvents are non-photochemically reactive, HAPS complying, and non-polar.

- Mineral Spirits, (K01661600) - Weak, slow evaporating. Used predominately in alkyds.
- VM&P Naphtha, (K01661714) - Weak, fast drying solvent, very good for solvent cleaning galvanized metal.

Aromatic Solvents:

- Aromatic solvents are economical solvents that are widely used in fast drying alkyds, polyesters, and epoxies; either alone or in combination with other solvent types. All aromatics are photochemically reactive.
- Toluene, (K01661524) - fast evaporating, strongest aromatic, not HAPS complying.
- Xylene, (K01661530) - medium evaporating, most common aromatic, not HAPS complying. Used to adjust viscosity when electrostatic spraying.
- Aromatic Naphtha (Hi-Flash), (K01664659) - Slow evaporating aromatic. Used as retarder to improve flow or as part of a solvent blend. Not HAPS complying.

BLENDED SOLVENTS

- Epoxy Reducer (K01661000) - designed for use with epoxies where a photochemically reactive solvent blend is permitted. It has excellent solvent power and permits application at higher solids and less reduction than when using other blended reducers. It is relatively fast evaporating and used primarily with spray applications.
- Urethane/Epoxy Reducer for Brush and Roller, (K01661100). It has excellent solvent power. It is slower evaporating than Epoxy Reducer (K01661000). Used for brush, roll, and squeegee applications.
- Fast Urethane Reducer, (K01661150) - a general purpose, photochemically reactive reducer for use High Gloss Polyurethane (408 Series).
- SC15 Thinner Blend, (K01667397) - a photochemically reactive blend of solvents designed for use in 686 Series, Surface Tolerant Epoxy. It has excellent solvent power permitting less reduction for higher solids epoxies being applied by spray.
- Multi-Purpose Epoxy Reducer, (K01662000) - a special blend to help allow good film formation and evaporation at temperatures below 50°F on specific epoxy coatings.

KETONES (GENERIC)

Ketone solvents offer very strong solvency to reduce viscosity rapidly and to increase conductivity. Ketones are widely used in polyurethanes, and epoxies and also as part of a solvent blend in many other coating qualities.

- Methyl Ethyl Ketone (MEK), (K01661300) - a very fast evaporating polar solvent widely used in zinc rich coatings, and as part of reducer blends. It is also used to increase conductivity of coatings for electrostatic applications. It is not HAPS complying.

Krylon Industrial offers thinners and reducers which will assure the correct tailor-made properties are obtained for each coating or application requirement. The following chart provides a list of solvents and blended solvents and some specific properties. For the proper selection of a thinner or reducer, see the respective Product Data Page which then can be tied in with the chart below.

Solvent	Evaporation Rate-Minutes 1*	Solvent Strength 2*	Flash Point 3*	Flow 4*	Set Up Time 5*	HAPS 6*	Non-Photochemically Reactive	Characteristic Summary
ALIPHATIC/AROMATIC								
K01661600 Mineral Spirits	50	1	105	6	6	OK	YES	Weak, slow evaporating, used predominately in alkyds.
K01661530 Xylene	11	6	80	4	3	NO	NO	Medium fast evaporating for use in epoxies and alkyds.
K01661524 Toluene	4	6	40	2	1	NO	NO	Fast evaporating.
K01661714 VM&P Naphtha	4	2	50	2	2	OK	YES	Weak, fast evaporating, very good for solvent cleaning when using alkyd topcoats.
K01664659 Aromatic Naphtha (Hi-Flash)	40	5	105	6	6	NO	NO	Slow evaporating, overuse may cause sagging.
BLENDED SOLVENTS								
K01661000 Epoxy Reducer	15	6	55	5	5	NO	NO	Medium-fast evaporating for epoxy spray application.
K01661100 Urethane/Epoxy Reducer - for Brush and Roller	20	6	80	8	7	NO	NO	Slow evaporating for epoxies and urethanes, use with brush and roll application.
K01661150 Fast Urethane Reducer	8	6	35	4	4	NO	NO	Medium-fast evaporating for use with polyurethanes.
K01667397 SC15 Thinner Blend	12	8	<100	5	7	NO	NO	Medium-fast evaporating for use with moisture cure urethanes.
K01662000 Multi-Purpose Epoxy Reducer	30	6	105	8	7	NO	NO	Special blend to allow good film formation and evaporation at temperatures below 50°F.
KETONES								
K01661300 MEK	2	10	18	2	2	NO	YES	Very fast evaporating for spray application with zinc rich coatings. Used in small amounts.
K01663000 Acetone	1	10	1	1	1	OK	YES	Very fast evaporating.

1* Measure of time in minutes required for 90% to evaporate. ASTM-D3539.

2* Ratings express the approximate ability to dissolve resin and reduce viscosity. Rated 1 to 10 (10 best).

3* Temperature (°F) at which sufficient vapors are given off to ignite by open flame (Closed Cup Method).

4* Rated from 1 to 10 (10 best). Good flow permits paint film to level out into a smooth film of uniform thickness without orange peel, brush marks, etc.

5* Rates from 1 to 10 (10 slow) relative rating of time necessary to obtain surface or dry-free drying of film.

6* Status relative to proposed Federal EPA HAPS Rule. "No" means listed and regulated as hazardous air pollutant.