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ashland technical data sheet

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Introduction

When engineers and procurement specialists search for reliable, detailed product information, they often turn to a **technical data sheet**. This document serves as a bridge between raw product data and the practical needs of designers, manufacturers, and end users. In the world of industrial chemicals and advanced materials, one name that frequently appears in technical literature is *Ashland*. Ashland, a global leader in specialty chemicals, offers a wide range of products—from adhesives and coatings to performance polymers and chemical intermediates. This article dives deep into the concept of the **ashland technical data sheet**, exploring what it contains, why it matters, how to interpret it, and how it can streamline your engineering and purchasing processes. Whether you're a seasoned engineer or a procurement officer new to the field, understanding these documents is essential for making informed decisions and ensuring product compatibility, safety, and compliance.

What Is an Ashland Technical Data Sheet?

At its core, a technical data sheet (TDS) is a concise, fact-based document that outlines the physical, chemical, and performance characteristics of a product. For Ashland, the TDS is tailored to each specific product line, offering details such as:

- Product identification and classification
- Key physical properties (density, viscosity, melting point)
- Chemical composition and purity levels
- Performance metrics (strength, durability, resistance)
- Safety and handling information (hazard statements, first aid measures)
- Regulatory compliance (REACH, RoHS, OSHA)
- Recommended applications and usage guidelines

While the structure of a TDS remains consistent across manufacturers, Ashland's approach emphasizes clarity, accessibility, and actionable data. The goal is to equip engineers, chemists, and safety professionals with the information they need to evaluate and implement the product effectively.

Why the Ashland Technical Data Sheet Is Critical for Engineers

Engineers rely on precise data to design systems that meet performance, safety, and regulatory standards. The Ashland TDS provides:

- Design Parameters: Viscosity and rheological data help in selecting the right equipment for mixing, pumping, and processing.
- Compatibility Checks: Chemical compatibility tables identify which polymers, metals, and other chemicals can coexist without degradation.
- Performance Benchmarks: Tensile strength, impact resistance, and temperature tolerance data inform material selection for specific applications.
- Environmental Impact: Information on biodegradability, VOC content, and environmental hazard classifications aids in meeting sustainability goals.

- Safety Protocols: Hazard statements and recommended PPE ensure safe handling and compliance with OSHA and other safety regulations.

By consulting the Ashland TDS early in the design process, engineers can avoid costly redesigns, reduce time to market, and ensure that the final product meets all functional and regulatory requirements.

Decoding the Sections of an Ashland Technical Data Sheet

1. Product Identification

This section lists the product name, model number, and any relevant batch or lot information. It also includes the product's classification (e.g., polymer additive, surfactant, or flame retardant). Knowing the exact product variant is essential for cross referencing with other data sheets and for accurate procurement.

2. Physical Properties

Key parameters such as density, boiling point, flash point, and viscosity at various temperatures are presented. For example, a polymer additive might have a viscosity of 350 cP at 25°C, which informs pump sizing and mixing strategies.

3. Chemical Composition

Detailed breakdowns of the active ingredients and any additives are provided. This section often includes purity percentages, which are crucial for applications where contaminants could compromise performance.

4. Performance Data

Performance metrics are tailored to the product's intended use. For a flame retardant, you might find data on limiting oxygen index (LOI) and UL 94 ratings. For a lubricant, you'll see wear resistance curves and temperature ranges.

5. Safety and Handling

Hazard statements (e.g., H302 – "Toxic if swallowed"), precautionary measures, and first aid instructions are listed. This information is vital for compliance with OSHA's Hazard Communication Standard (HCS) and for ensuring safe workplace practices.

6. Environmental and Regulatory Information

Details on REACH registration status, RoHS compliance, and any other relevant regulatory frameworks are provided. This section helps companies navigate international trade and meet environmental standards.

7. Application Guidelines

Practical usage instructions, such as recommended mixing ratios, curing times, and storage conditions, are included. These guidelines help ensure that the product performs as expected in real world scenarios.

How to Use an Ashland Technical Data Sheet Effectively

1. Match the TDS to Your Design Requirements

Start by identifying the key performance criteria for your project. Then, cross reference those criteria with the data in the TDS. For example, if your application requires a material that can withstand 200°C, look for the maximum operating temperature in the performance section.

2. Verify Compatibility

Use the chemical compatibility tables to confirm that the product will not react adversely with other materials in your

system. This step is crucial for preventing corrosion, degradation, or safety hazards.

3. Confirm Safety and Compliance

Review the safety data and regulatory sections to ensure that the product meets all applicable safety and environmental regulations. This includes checking for any restrictions on use, labeling requirements, and necessary personal protective equipment (PPE).

4. Consult with Ashland's Technical Support

If any data points are unclear or if you need additional performance data, contact Ashland's technical support team. They can provide custom data, application notes, or even lab testing results.

5. Document Your Findings

Incorporate the relevant data into your engineering documents, procurement specifications, and safety plans. Proper documentation ensures traceability and facilitates audits or regulatory inspections.

Common Pitfalls When Interpreting Technical Data Sheets

1. Ignoring Units of Measurement

Units can vary between documents (e.g., cP vs. mPa·s for viscosity). Always confirm the units before performing calculations or comparisons.

2. Overlooking Batch Variability

Some properties may vary slightly between batches. Check the lot specific data if available, especially for critical applications.

3. Assuming One Size Fits All

Even within the same product line, different grades or formulations may exist. Verify that the TDS you're using matches the exact product you intend to purchase.

4. Neglecting Safety Data

Safety information is not just regulatory compliance; it protects personnel and the environment. Skipping this section can lead to hazardous exposure or legal penalties.

Case Studies: Real World Applications of Ashland Technical Data Sheets

Case Study 1: Automotive Coating System

An automotive manufacturer needed a high temperature resistant coating for engine components. By reviewing the Ashland TDS for a high performance epoxy resin, the engineering team identified the resin's cure temperature, glass transition temperature (Tg), and impact resistance. They matched these properties to the engine's operating conditions, ensuring the coating would not soften or crack under thermal stress. The safety data in the TDS guided the implementation of proper ventilation and PPE during application.

Case Study 2: Water Based Paint Formulation

A paint manufacturer sought to reduce VOC emissions while maintaining durability. The Ashland TDS for a low VOC binder provided viscosity, film forming properties, and drying time. By integrating this binder into the paint system, the company achieved a 30% reduction in VOC content without compromising gloss or abrasion resistance. The regulatory compliance section confirmed that the binder met REACH and RoHS requirements, simplifying the approval process for global markets.

Case Study 3: Industrial Lubricant for Cryogenic Applications

A cryogenic storage facility required a lubricant that remains stable at temperatures below –150°C. The Ashland TDS for a specialized cryogenic lubricant listed its viscosity at various temperatures, oxidation stability, and compatibility with stainless steel. The facility's maintenance team used this data to select the appropriate lubricant, reducing equipment wear and extending component life.

Integrating Ashland Technical Data Sheets into Your Design Workflow

1. Digital Asset Management

Store all TDS PDFs in a centralized repository with version control. Tag documents with product codes, application categories, and regulatory status to enable quick retrieval.

2. Data Extraction Tools

Use software that can parse PDFs and extract key data points into a database. This allows for automated comparison, trend analysis, and integration with design software.

3. Collaboration Platforms

Leverage collaborative platforms (e.g., SharePoint, Confluence) to share TDS insights across engineering, procurement, and safety teams. This ensures that everyone works from the same data set.

4. Continuous Updates

Product formulations can change. Set up alerts from Ashland's product portal to receive notifications of updates or revisions to the TDS. This practice keeps your data current and reduces the risk of using obsolete information.

Future Trends in Technical Data Sheets

1. Interactive Digital TDS

More manufacturers are moving away from static PDFs toward interactive web pages or apps. These platforms allow users to input design parameters and receive real time recommendations.

2. Integration with AI and Machine Learning

AI algorithms can analyze large volumes of TDS data to predict performance outcomes, suggest optimal formulations, or flag potential compatibility issues before they arise.

3. Enhanced Sustainability Metrics

With growing emphasis on green chemistry, future TDS documents will include life cycle assessments, carbon footprint data, and detailed biodegradability information.

4. Regulatory Transparency

Automated compliance checks will become standard, where the TDS is cross referenced against the latest local and international regulations in real time.

Conclusion

In the complex landscape of industrial chemistry and material science, the **ashland technical data sheet**stands as a vital resource. It translates raw scientific data into actionable information that engineers, designers, and safety professionals can trust. By mastering the art of reading, interpreting, and applying these documents, you can make smarter material selections, ensure regulatory compliance, and drive innovation while safeguarding people and the

planet.

Whether you’re developing a high performance coating, formulating a low VOC paint, or designing a cryogenic lubrication system, the Ashland TDS provides the precision and clarity needed to bring your vision to life. Embrace these documents as your roadmap to success, and watch your projects evolve from concept to reality with confidence and efficiency.

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