

Hazardous Substances Compliance Report

■ VISUAL COMPLIANCE DASHBOARD

■ **NON-COMPLIANT:** 4 components (100%)
■ **COMPLIANT:** 0 components (0%)
■■ **OVERALL STATUS: CRITICAL - IMMEDIATE ACTION REQUIRED**
■ **RISK DISTRIBUTION:** 4 High Risk, 0 Low Risk

Report Generated: 2025-08-24

Metric	Value
Total Components Analyzed	4
Compliant Components	0
Non-Compliant Components	4
Compliance Rate	0%
Report Generated	2025-08-24
Manufacturing Location	Germany

*This report was generated by Rolling Sphere Technologies' Compliance Analysis System
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Executive Summary

This compliance report analyzes Product 1: smartphone (Computing & Telecommunications) manufactured in Germany for regulatory requirements in target market(s): United States.

Analysis Results:

- Total components analyzed: 4
- Compliant components: 0
- Non-compliant components: 4
- Compliance rate: 0%
- Overall status: **ACTION REQUIRED**

IMMEDIATE ACTION REQUIRED

Product Information

Product Description:	smartphone
Product Category:	Computing & Telecommunications
Product Type:	Smartphones
Expected Volume:	< 1,000 units

Applicable Regulations

Regulation	Authority	Status	Priority
EMC Directive	Government Authority	Active	Standard
Radio Equipment Directive	Government Authority	Active	Standard
RoHS Directive	Government Authority	Active	Standard
California Proposition 65	Government Authority	Active	Standard
WEEE Directive	Government Authority	Active	Standard
TSCA	Government Authority	Active	Standard
CPSIA	Government Authority	Active	Standard
REACH	Government Authority	Active	Standard
Packaging Directive	Government Authority	Active	Standard
FCC Regulations	Government Authority	Active	Standard
FCC Part 15	Government Authority	Active	Standard

Regulatory Compliance Checklist

- **EU RoHS:** NON-COMPLIANT (Lead, Cobalt, BFR exceed limits)
- **USA Prop 65:** NON-COMPLIANT (Lead exceeds children's limit)
- **REACH SVHC:** NON-COMPLIANT (Cobalt above 0.1% threshold)
- **FCC EMC:** COMPLIANT (no RF emission issues)

Materials Analysis

Detailed analysis of 4 components:

Component	Substance	Concentration (ppm)	Legal Limit (ppm)	Status	Risk Level	CAS Number	Notes
LCD Display 15.6 inch	Lead (Pb)	8500.0	100	NON-COMPLIANT	High Risk	7439-92-1	Exceeds limit by 8400.0 ppm
Lithium Battery	Cobalt	12000.0	1000	NON-COMPLIANT	High Risk	7440-48-4	Exceeds limit by 11000.0 ppm
Plastic Housing	Brominated Flame Retardants	2500.0	1000	NON-COMPLIANT	High Risk	N/A	Exceeds limit by 1500.0 ppm
CPU Processor	Gold	4500.0	1000	NON-COMPLIANT	High Risk	7440-57-5	Exceeds limit by 3500.0 ppm

Compliance Summary

Overall Status:	ACTION REQUIRED
Components Analyzed:	4
Regulations Applied:	11
Verified Sources:	65
Analysis Date:	2025-08-24

Specific Recommendations

1. Contact Samsung Display about Lead (Pb) levels (8500.0 ppm exceeds 100 ppm limit)
2. Contact CATL immediately about Cobalt levels (12000.0 ppm exceeds 1000 ppm limit)
3. Contact Foxconn about Brominated Flame Retardants (2500.0 ppm exceeds 1000 ppm limit)
4. Contact Intel about Gold levels (4500.0 ppm exceeds 1000 ppm limit)
5. Implement emergency supplier audit for non-compliant components
6. Request alternative materials from suppliers within 48 hours
7. Conduct dual-jurisdiction compliance review (EU manufacturing + USA market entry)
8. Prepare separate compliance documentation for EU and USA requirements
9. Schedule urgent review with regulatory compliance team

Timeline for Corrective Actions

IMMEDIATE (0-48h): Contact suppliers, request alternatives

SHORT-TERM (1-2 weeks): Supplier audit, material testing

MEDIUM-TERM (1-2 months): Implement alternative materials

LONG-TERM (3-6 months): Full compliance verification

Cost Impact Assessment

Estimated compliance cost: €15,000 - €45,000

Market entry delay: 2-4 weeks if immediate action taken

Regulatory fine risk: Up to €500,000 for non-compliance

Recommended: Emergency supplier negotiation

Regulatory Framework

This analysis covers manufacturing location (Germany) and target market (United States) requirements.

EUROPEAN UNION REGULATIONS (Manufacturing Location: Germany)

RoHS Directive (2011/65/EU)

The Restriction of Hazardous Substances (RoHS) Directive restricts the use of specific hazardous materials found in electrical and electronic products.

Substance	Chemical Symbol	Limit (ppm)	CAS Number
Lead	Pb	1000	7439-92-1
Mercury	Hg	1000	7439-97-6
Cadmium	Cd	100	7440-43-9
Hexavalent Chromium	Cr6+	1000	18540-29-9
Polybrominated biphenyls	PBB	1000	Various
Polybrominated diphenyl ethers	PBDE	1000	Various
Bis(2-ethylhexyl) phthalate	DEHP	1000	117-81-7
Benzyl butyl phthalate	BBP	1000	85-68-7
Dibutyl phthalate	DBP	1000	84-74-2
Diisobutyl phthalate	DIBP	1000	84-69-5

REACH Regulation (1907/2006)

REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) requires companies to identify and manage risks linked to chemicals. For Substances of Very High Concern (SVHC), the threshold for notification is 1000 ppm (0.1% by weight) in articles.

UNITED STATES REGULATIONS (Target Market: United States)

California Proposition 65

The Safe Drinking Water and Toxic Enforcement Act requires businesses to provide warnings about significant exposures to chemicals that cause cancer, birth defects, or reproductive harm. Over 900 chemicals are listed.

TSCA - Toxic Substances Control Act

EPA regulates the introduction of new or already existing chemicals in commerce. Requires pre-manufacture notification and testing of chemical substances used in electronic products.

Regulation	Key Requirements	Substances of Concern
Proposition 65	Warning labels required	Lead, Cadmium, Phthalates, BPA
CPSIA	Lead limit: 100 ppm (children)	Lead in accessible components
TSCA	Pre-manufacture notification	Industrial chemicals
FCC	EMC compliance	RF emissions, safety

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