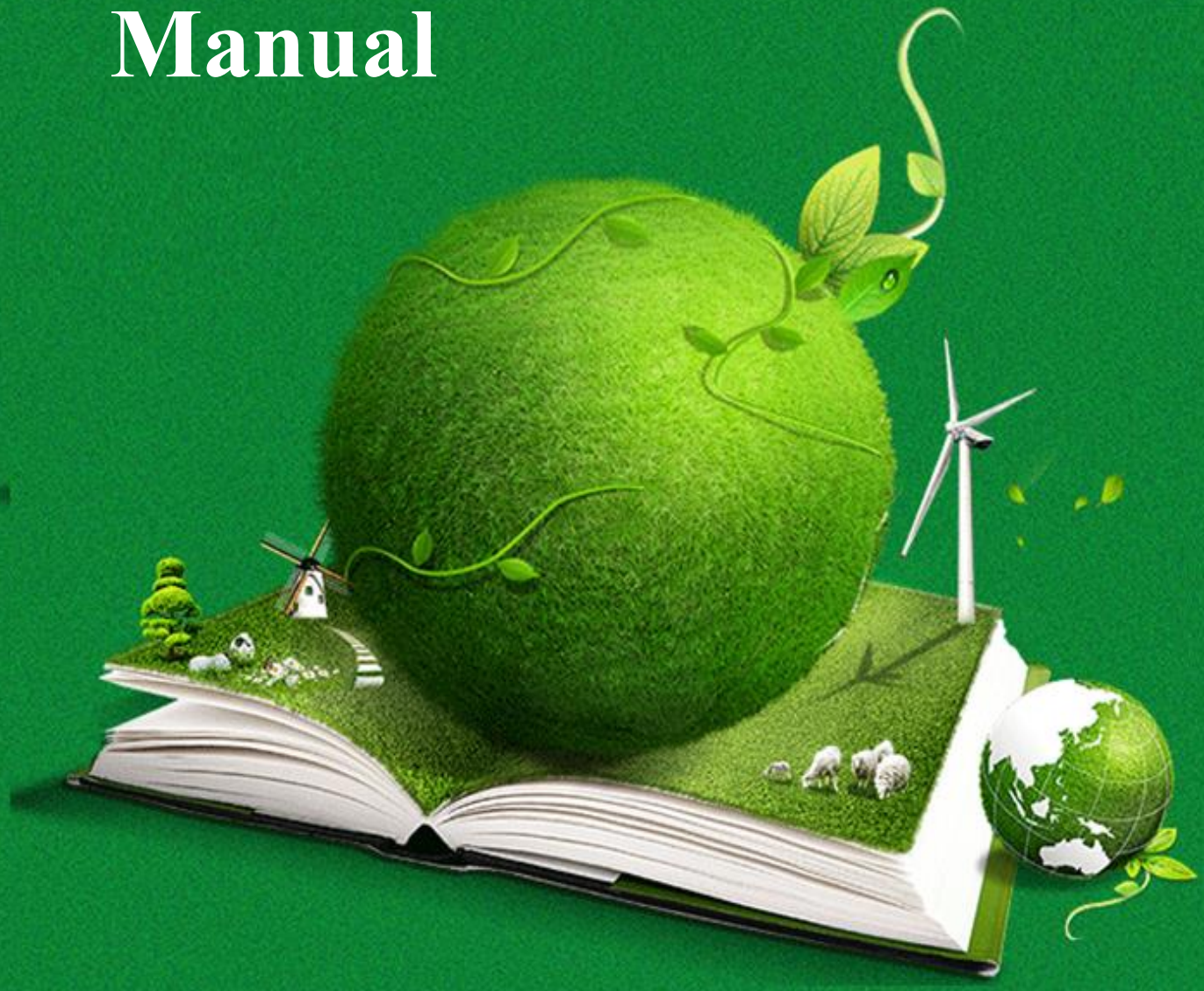
ANTA Sports Chemicals Management Manual



ANTA Sports Chemicals Statement

Chemicals used in production play an important role in the business of ANTA Sports. At the same time, we acknowledge that chemicals must be managed properly to maximise their value and minimise risks to the environment and human health and safety.

From raw materials to finished products, the sporting goods industry, such as footwear and apparel, uses a wide range of chemicals. We hope to reduce the overall impact of our chemical footprint on people and the environment by promoting safe and environmentally friendly chemicals in the supply chain, reducing or eliminating the use of undesirable chemicals and choosing chemicals that comply with laws, regulations and industry standards to ultimately achieve zero use and zero emission of hazardous chemicals in the supply chain.

By ensuring compliance management throughout the supply chain, as well as including and evaluating suppliers and subcontractors, we will strengthen the traceability of chemicals in the production process, share the best practices of chemical management with external and internal stakeholders in a transparent way, replace harmful chemicals with safer and more environmentally friendly substitutes as much as possible, and regularly share training with supply chain partners on the safe use, storage and handling of chemicals, so as to continuously improve the knowledge and skills of chemicals management in the supply chain.

To achieve this goal, we have developed ANTA Sports Chemicals Management Manual to communicate our chemicals management strategy.

ANTA Sports
30 June 2023

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I. Chemicals Management

1. Overview

ANTA Sports established the ANTA Sports Restricted Substances List (RSL) - J01 Technical Specification for Chemical Safety of Apparel, Shoes and Accessories, which provides clear definitions and regulations on chemical substances and limit values in products and materials. ANTA Sports's RSL list complies with the latest versions of standards such as GB 31701, REACH SVHC, Oeko-Tex100 and AFIRM. ANTA Sports requires all suppliers: ANTA Sports's products and the materials used in manufacturing such products must comply with the requirements of ANTA Sports Restricted Substances List (RSL).

We understand that using chemicals that comply with ZDHC MRSL and Anta RSL standards is the beginning of the journey to produce RSL-compliant materials and finished products. From initial procurement to the delivery of finished products, chemicals must be properly managed at every step, and chemicals conforming to regulations and industry standards must be selected to reduce the overall impact of chemical footprint on human beings and the environment, reduce or eliminate the use of unpopular chemicals, and finally realize zero use and zero emission of hazardous chemicals in the supply chain.

The establishment of strong policies and procedures for chemical inventory management, storage, handling and use is critical to achieving a more sustainable and efficient manufacturing industry. Good chemicals management helps us achieve zero use and zero emission of hazardous chemicals in our supply chain - from product concepts to positive human health protection to ethical environmental management.

2. Methods

Effective chemicals management is very important for both finished products factories and material suppliers. All suppliers should have the ability to effectively incorporate chemical management guidelines into their operations.

ANTA Sports conducts annual chemical assessments of its supply chain and applies the results to evaluate supplier performance. ANTA Sports encourages suppliers to adopt HIGG FEM and ZDHC tools to measure and improve their environmental performance. In the future, we will adopt more tools shared by the industry to reduce the management burden of the supply chain.

ANTA Sports strictly controls the impact of chemicals through various measures and incorporates the environmental and health performance of products into the whole process of product design from input to output. We strictly implement product technical standards such as ANTA Sports RSL-J01 Technical Specification for Chemical Safety of Apparel, Shoes and Accessories and ANTA Sports Supplier Sustainability Management Manual to reduce adverse impact on the environment and health.

3. Our Goals and Expectations

Establishing a foundation of proven chemicals management capabilities throughout the supply chain is a key step to be achieved as a matter of priority. ANTA Sports Supplier Sustainability Management Manual sets out our expectations for suppliers, with key elements consistent with the best practices inside and outside the industry.

As a member of the Sustainable Apparel Coalition (SAC), ANTA Sports actively promotes the use of Higg FEM in its supply chain. Similar to the other components of the HIGG Index, FEM is a self-assessment tool that measures and guides the sustainable performance of factories in a structured way, with focus on chemicals management and its related management of energy, water and waste.

ANTA Sports expects all suppliers, including finished products factories and material suppliers, to develop chemicals management programmes and use industry applicable assessment tools (e.g. Higg FEM, ZDHC Incheck reports, etc.) to demonstrate their chemicals management capabilities and improve their chemicals management performance.

4. Chemicals Procurement Policy

Suppliers must purchase compliant chemicals from legal sources to meet chemicals management requirements, and eliminate or minimize the possibility of harmful chemicals entering the manufacturing plant at the source. A prudent chemicals procurement policy will reduce potential risks and liabilities.

Objects falling inside the scope of our chemicals procurement policy include:

- All dyes, pigments and inks used directly in the process;
- functional surface treatment agents (e.g. anti-microbial, flame retardants, oil and water repellents (OWR));
- printing thickeners and binders;
- basic chemicals;
- chemicals used in wastewater/sewage treatment;
- chemicals for engraving, developing and washing of printing screens;
- sizing chemicals and weaving/knitting oils for in-house warping, weaving and/or knitting operations;
- preparation sections for leather production, water fields and finishing auxiliaries;
- dyes and pigments for leather production water fields and finishing;
- inks and auxiliaries for the production of printed leather;
- adhesives and rubbers for the production of footwear and leather products;
- utility chemicals for machinery maintenance (e.g. lubricants, greases);
- chemicals for quality control laboratory tests;
- pest control chemicals;
- floor cleaning/sanitary cleaners, disinfectants, etc.

Procurement decisions are subject to the following factors:

- local/regional/national and international regulations and restrictions;
- hazards related to the chemicals purchased;
- ZDHC MRSL compliance requirements;
- ANTA Sports Restricted Substances List (RSL) requirements.

5. Transparency and Traceability

With the industry's focus on transparency and the increasing demand for chemical reporting in multiple regions, suppliers must fully understand the chemical composition of their materials and products in order to move toward a less hazardous future. Transparency means sharing relevant information with specific stakeholder groups, such as brands/retailers, supply chain partners, industry associations, local governments, non-governmental organizations, and internal employees.

Traceability is a key part of a chemicals management strategy, which aims to ensure that suppliers can identify the source of raw materials, such as fibers, chemicals, etc. To do this, organizations should have a clear overview of their supply chain and understand its processes. Traceability enables continuous improvement and incident management of chemical non-conformities in final products and wastewater.

Chemical traceability requires that the correct lot/batch number be recorded for each chemical purchased at the manufacturing plant and correspond to each product type produced to ensure that the source of each chemical can be traced.

6. Hazard and Risk Assessment of Chemicals

The storage and handling of chemicals in manufacturing plants can pose risks to human health and the environment. Manufacturing plants should therefore establish and implement a process for assessing the hazards and risks associated with the chemicals identified in the chemicals inventory and develop a programme of preventive measures to avoid such risks.

A hazard is the inherent characteristic of a chemical substance to cause harm to humans and/or the environment. Risk is the potential for a chemical substance to cause harm or adverse effects. Hazards and risks are linked through exposure, which is defined as the potential for a chemical to come into contact with people or the environment.

Hazard × Exposure = Risk, which means risks can be mitigated by reducing exposure to chemicals. The hazards of a chemical can be identified and its exposure potential determined. Once this has been done, every effort should be made to reduce exposure in order to mitigate the risk.

There are three types of hazards (according to the Globally Harmonised System of Classification and Labelling of Chemicals GHS):
Physical hazards: Chemicals that are explosive, self-reactive, corrosive to metals, oxidizing liquids, etc.

Health hazards: Chemicals that are toxic or cause cancer, germ cell mutagenesis, skin/eye sensitisation, damage to organs, affect fertility and reproduction or may be endocrine disruptors.

Environmental hazards: Chemicals that are toxic, persistent, bioaccumulative to aquatic or terrestrial life or affect the ozone layer.

Chemical risk management includes the following main steps:

A. Pre-assessment of risks

Pre-assessment means identifying potential hazards before they are introduced into a manufacturing process or workplace and assessing the risks associated with employees. In general, this means knowing that hazards may be present in the process and using basic knowledge of chemistry, biology and physics to predict which types of hazards may pose a risk. The anticipated hazards described here are mainly due to materials (e.g. chemicals, raw materials) or machinery, or a combination of both.

B. Identifying risks

Identification involves identifying potential health hazards from chemical, physical or biological agents or unfavourable ergonomic situations. This means assessing industrial hygiene risks and determining whether a hazard may exist.

C. Assessing risks

Assessing hazards essentially means measuring or estimating actual exposure and comparing it to an acceptable exposure limit (e.g. OEL). Exposures that exceed this limit will require the implementation of control measures to prevent such exposures.

D. Controls

Controls are the measures taken to reduce unacceptable exposures. Health hazard controls include hazard abatement, material substitution, engineering controls, work practice controls, administrative controls and personal protective equipment.

7. Industrial Hygiene and Workers Protection

A key to an effective chemicals management programme is the protection of the health and safety of people in the workplace. Certain materials can cause irritation if not properly controlled.

To ensure that workers are protected from chemical hazards, ANTA Sports has developed ANTA Sports Supplier Sustainability Management Manual, which outlines the principles and practices of an effective industrial hygiene programme. Suppliers must follow best practices to address occupational health and hygiene hazards in the workplace.

The standards chosen by suppliers must provide maximum protection for employees in the workplace. Suppliers are responsible for implementing Occupational Exposure Limit (OEL) for their respective plants that meet the requirements of local laws and regulations. In the absence of relevant local requirements, suppliers must comply with the most stringent recognised regulations or accepted standards.

The aim of an industrial hygiene programme is to reduce or eliminate the exposure of workers to chemical hazards by applying appropriate measures to control such risks. Measures such as elimination, substitution, engineering (e.g. ventilation, isolation), management (e.g. work practices) or personal protective equipment (PPE) will help ensure that employees assess exposure to hazards and mitigate exposure.

There are three ways of exposure to chemicals:

A. Inhalation - exposure:

Chemicals can enter the body through nasal passage and damage the respiratory tract or lungs under the following circumstances:

- Forming dust and/or mist
- Releasing steam or gas

Using proper masks to limit such exposure can control the risk.

B. Oral Cavity - exposure:

If swallowed, chemicals will enter the bloodstream. This risk usually occurs when workers handle chemicals without gloves and in the following circumstances:

- eating food with their hands without washing them properly
- inadvertently touching their lips or mouth with a contaminated hand
- using used and contaminated chemical containers to store drinking water or food

Attention to personal hygiene, the use of suitable gloves and the provision of separate and clean eating areas in manufacturing plants are all helpful to control the risk.

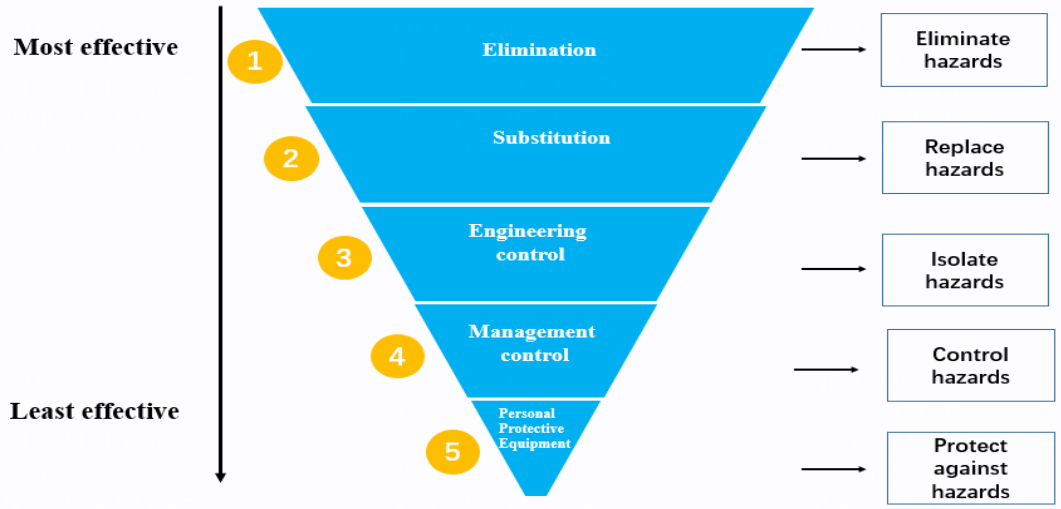
C. Skin – exposure:

Chemicals can damage the skin or eyes, or be absorbed into the body. This can happen when chemicals are weighed, transferred from one container to another, transported from a warehouse to a sub-warehouse or the interior of a machine, splashed or the containers thereof are leaked or damaged.

When handling chemicals harmful to skin, using gloves, protective clothing, face shields, goggles and safety footwear (boots), as well as the installation of emergency response measures such as eyewash and bodywash areas in key areas of the plant can help control these risks.

Once information on hazardous chemicals and their ways of exposure is available, the control measures shown in the diagram should be followed to ensure the health and safety of workers.

Diagram 1: Hierarchy of control measures



8. Personal Protective Equipment (PPE)

PPE should be used to protect against possible accidents and incidents, even if appropriate exposure control systems and handling procedures are in place. The person in charge of chemicals should keep an appropriate inventory of PPE. The PPE required to prevent different exposures includes:

	Type of Protection	Exposure	PPE Items
	Eyes and face protection	Oral cavity, skin	Safety glasses, goggles, face shields, etc.
	Skin protection	Skin	Chemical protective footwear - shoes/boots/water boots, clothing - aprons/suits
	Hand protection	Skin, oral cavity	Disposable or other forms of gloves or long gloves suitable for work
	Respiratory protection	Inhalation	Respirators, masks or hoods that provide adequate protection

As a minimum requirement, the organisation should at least:

- develop standard operating procedures (SOPs) for the identification and use of appropriate PPE;
- ensure that appropriate PPE is provided to employees in areas of potential exposure;
- store chemicals separately, where possible, depending on the type of PPE to be handled;
- review the effectiveness of PPE and replace as necessary.

9. Emergency Response Procedures

Plants should prepare written emergency response procedures. This should include crisis response planning in response to fires, chemical leaks, spills and splashes, and other medical emergencies, following a proper assessment. It can also outline how to deal with the damage to buildings and people caused by major external emergencies such as earthquakes, floods, civil unrest, tsunamis or industrial gas leaks. Appropriate agencies should be consulted for details of contingency planning that may be useful or necessary to incorporate.

9.1 **Fire Management**

Fire prevention is the core principle of fire management. However, if a fire occurs, its spread can be stopped by managing one of three factors - suppressing the oxygen supply, fuel and ignition sources.

Typical fire safety measures include but are not limited to:

- fire alarm systems (audible and visual) as distinct from other alarms and notification systems;
- fire extinguishers suitable for all types of fire (category A, B, C or D) and regularly maintained;
- sand buckets, fire hydrants and fire hoses in chemicals warehouses and other high-risk areas in the plant;
- automatic sprinkler systems for the storage of flammable chemicals;
- emergency lighting for exit routes;
- regular fire drills and training of employees in the use of fire-fighting equipment and evacuation methods
- "No Smoking" signs to prohibit employees from smoking in the plant;
- fireproof wires and cables and a wiring system that does not cause short circuits;
- chemicals warehouses should be equipped with explosion-proof lighting;
- set up a separate storage area for chemicals identified as fire hazards and equip them with all fire safety systems.

9.2 Chemicals Spill Management

Even in the best-managed chemicals warehouses and areas, spills may occur occasionally, which can be prevented by the following methods:

- checking containers for any cracks or damage upon delivery before storing them;
- ensuring safe handling practices for the internal transfer of chemical containers (e.g. mechanised or manually driven trolleys);
- in chemicals warehouses, containers should be properly stacked on slotted corner shelves to prevent them from falling.

To control any spill, the following measures should be taken:

- secondary protection of chemical containers to prevent spills and diffusion;
- spill control kits, including: sawdust, sand or any other absorbent container to absorb leaked liquids, brooms, shovels and gloves;
- empty containers marked "hazardous waste";
- trolleys for storing these items (for rapid transport to the spilled area);
- refer to the Safety Data Sheet (SDS) and the manufacturer's instructions for information on corrective measures and whether PPE is required.

9.3 First-aid Management

First-aid kits need to be installed in appropriate locations in the plant for immediate response to accidents. The first-aid kit should contain at least the following items:

- bandages and/or dressing change supplies;
- antiseptic creams or sprays and disinfectant solutions;
- sterile gauze pads and cotton swabs or cotton wool;
- burn dressings and gels;

- tapes and scissors;
- disposable gloves;
- painkillers (e.g., aspirin tablets).

9.4 Management of Eyewash and Bodywash Stations

If chemical substances are splashed into eyes or on the skin, the affected area should be washed with water as soon as possible to minimise the extent of the injury. To this end, eyewash and bodywash stations should be installed in key locations in chemicals warehouses and manufacturing areas, with appropriate signs for easy identification.

These washing stations should:

- be quickly accessible (high hazard = closer proximity);
- be placed in a well-lit area and identifiable with signs;
- be located on the same floor as the hazardous area;
- provide sufficient water at appropriate temperature and pressure.

10. Storage and Handling

Chemical SDS (Safety Data Sheet) contains important guidelines for the storage and handling of chemicals. The physicochemical and toxicological hazards outlined in SDS are essential for making the right decisions to protect people and the planet.

Suppliers should correctly identify the hazards of chemicals in order to develop a programme of precautions for storage and handling. These hazards should be communicated to employees and they should be trained in safe handling procedures.

Storage requirements

- Hazardous chemicals warehouses should store hazardous chemicals in the way of isolation, partition and separation;
- Storage facilities that meet the characteristics of hazardous chemicals, fire protection requirements and the storage requirements in the technical safety instructions for chemicals should be selected for storage;
- The storage of hazardous chemicals should be strictly controlled in terms of variety and quantity in accordance with the design and operating permit requirements of hazardous chemicals warehouses;
- Storage of hazardous chemicals should meet the requirements for classification, packaging, storage methods and fire protection of hazardous chemicals, and comply with local regulations and chemical safety technical instructions;
- Warehouses storing explosives/toxic gases or flammable gases which constitute a significant source of danger to hazardous chemicals should meet the requirements of local government regulations in terms of external safety distances and storage of items;
- Highly toxic chemicals, flammable gases, oxidizing gases, acutely toxic gases, substances and mixtures that emit flammable gases in contact with water, chlorates, permanganates, nitrites, sodium peroxide, hydrogen peroxide, bromine should be stored separately;
- Highly toxic chemicals, monitored chemicals, precursor chemicals and explosive hazardous chemicals should be reported to relevant departments for record in accordance with the provisions of the storage location, storage quantity, flow and management personnel. Highly toxic chemicals and hazardous chemicals that constitute a

major source of danger should be stored separately in designated warehouses, the acceptance, distribution and safekeeping of which should be under the charge of two persons.

Loading and unloading/stacking

- should be operated in accordance with chemical safety technical instructions and loading and unloading requirements;
- should be handled gently and should not be dragged, rolled, bumped, rubbed, thrown, crushed, etc.;
- explosion-proof forklifts should be used for handling explosives and other hazardous chemicals that are prone to combustion and explosion;
- the stacking of hazardous chemicals should be neat, firm and free from inversion; fire-fighting equipment, safety facilities, safety signs and passages should not be blocked;
- stacking should meet the requirements of packaging marks; the stacking height of hazardous chemicals without stacking marks should not exceed 3m (excluding the height of pallets).
- when shelves are used for storage, they should be placed on pallets and fixed.

Diagram 2: The dos and don'ts of chemical use

11. Chemical List

The chemical list is one of the components for implementing our chemicals management system. It assists plants in making purchasing decisions, promoting responsible chemical use, preventing pollution, improving traceability, simplifying chemical handling decisions, and controlling disposal costs. Suppliers should have a robust process for creating and updating the chemical list and assign a person responsible for maintaining it.

The managed list of chemicals must be maintained and updated by the person responsible for the chemicals or the core team with competent knowledge or training in the chemical safety data sheet (SDS).

The chemical list shall include all chemicals used and stored in the plants, which may include but not limited to cleaning agents, adhesives, paints, inks, detergents, dyes, colorants, auxiliaries, coatings and finishing agents, basic chemicals and other chemicals for environmental protection, sanitation, laboratory and utility uses.

The chemical list for chemical management purposes should contain comprehensive information, including:

• the name of the chemicals;
• the name of the chemical manufacturers;
• the volume/mass of the chemicals;
• the location of chemical use within the facility;
• chemical ingredient name, CAS number and content;
• chemical hazard information;
• control measures for chemicals;
• Chemical Safety Data Sheet (SDS) that meets the requirements;
• Chemical ZDHC MRSL compliance.

12. Hazard Communication Training

Knowledge of chemical safety is the foundation of a sound chemicals management program. Supplier leadership is required to continue to train employees to understand the principles of chemical management and put them into practice.

Early communication about chemistry helps build employee confidence, minimizes the risk of improper use or exposure, and encourages a culture of safety in the workplace. Effective communication across the plant, from chemical procurement to chemical disposal, also facilitates compliance and improves the efficiency of chemical decision-making.

Chemical information must be clearly conveyed to employees:

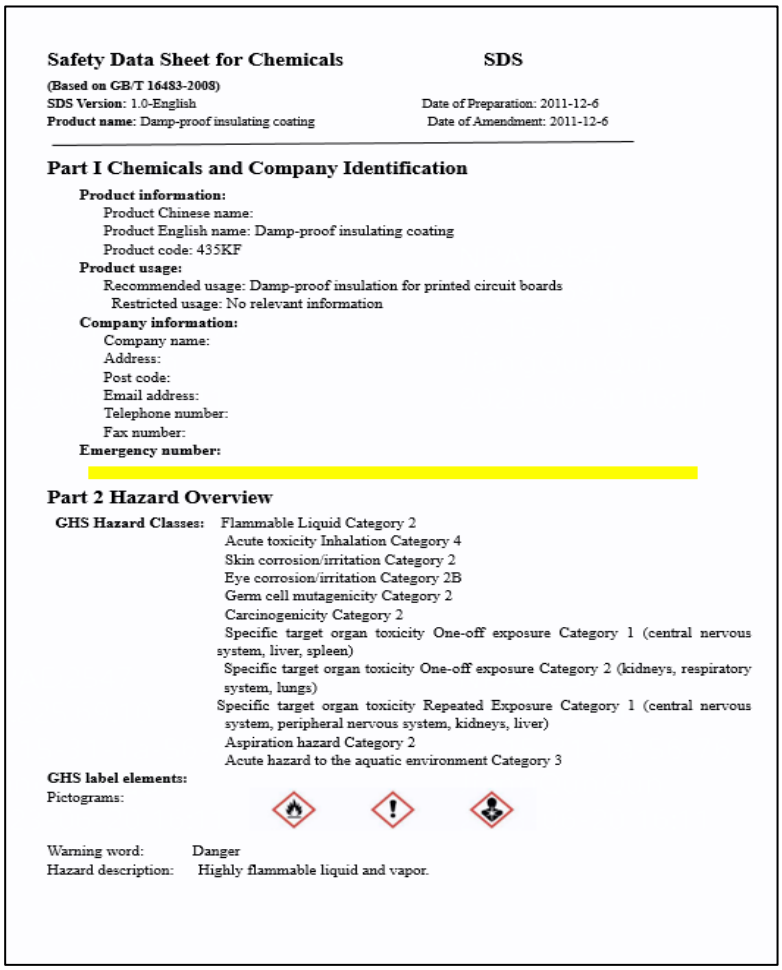
• All chemical containers must be labeled with the relevant formula, manufacturer and date;
• Hazardous chemicals must be marked with signaling words, hazard and precautionary statements and appropriate pictograms;
• All employees shall have access to the current compliant SDSs for all chemicals;
• All employees are trained on chemicals and their associated risks.

SDS (Safety Data Sheet, also known as Material Safety Data Sheet, MSDS) is very important in the process of chemical control. It provides guidance for specific chemical substances that may require dedicated engineering controls, PPE (personal protective equipment), storage or environmental handling systems. All relevant employees should read the SDS of chemicals in detail in order to understand how to manage and use chemicals correctly and safely in the plant.

SDS is a comprehensive document that provides customers with information on chemical composition, physical and chemical parameters, flammability and explosive properties, toxicity, environmental hazards, as well as information on

safe use, storage conditions, emergency response to spills, transportation regulations and other 16 items as required by law. The GHS/CLP-based SDS consists of 16 components, as listed below:

1	Product and producer identification	9	Physical and chemical properties
2	Hazard identification	10	Stability and reactivity
3	Main ingredient information	11	Toxicological information
4	First-aid measures	12	Ecological information
5	Fire-fighting measures	13	Disposal considerations
6	Accidental leakage measures	14	Transportation information
7	Handling and storage	15	Regulatory information
8	Exposure control/Personal Protective Equipment (PPE)	16	Other information



Safety Data Sheet for Chemicals **SDS**

(Based on GB/T 16483-2008)
SDS Version: 1.0-English Date of Preparation: 2011-12-6
Product name: Damp-proof insulating coating Date of Amendment: 2011-12-6

Part I Chemicals and Company Identification

Product information:
Product Chinese name:
Product English name: Damp-proof insulating coating
Product code: 435KF
Product usage:
Recommended usage: Damp-proof insulation for printed circuit boards
Restricted usage: No relevant information
Company information:
Company name:
Address:
Post code:
Email address:
Telephone number:
Fax number:
Emergency number:

Part 2 Hazard Overview

GHS Hazard Classes: Flammable Liquid Category 2
Acute toxicity Inhalation Category 4
Skin corrosion/irritation Category 2
Eye corrosion/irritation Category 2B
Germ cell mutagenicity Category 2
Carcinogenicity Category 2
Specific target organ toxicity One-off exposure Category 1 (central nervous system, liver, spleen)
Specific target organ toxicity One-off exposure Category 2 (kidneys, respiratory system, lungs)
Specific target organ toxicity Repeated Exposure Category 1 (central nervous system, peripheral nervous system, kidneys, liver)
Aspiration hazard Category 2
Acute hazard to the aquatic environment Category 3

GHS label elements:
Pictograms:

Warning word: Danger
Hazard description: Highly flammable liquid and vapor.

13. Practices

Using RSL and ZDHC MRSL compliant formulations in a manufacturing environment is the first step towards achieving environmental protection and RSL compliance goals. Proper and efficient use of all chemicals will maximize value and minimize impact to accelerate reductions in consumption and potential releases of hazardous chemicals.

ANTA Sports expects that suppliers must follow the best practices and comply with local laws and permits in order to successfully reduce the risks associated with the use of chemicals. Supplier management must ensure that all relevant stakeholders understand these fundamental principles and are aware of the risks associated with improper chemicals management.

- Purchasing source chemicals that meet ZDHC MRSL and RSL requirements;
- Informing about chemical hazards by understanding how to use Safety Data Sheets (SDS) and properly label chemicals;
- Effective management of chemical list;
- Understanding how chemicals are used and when personal protective equipment (PPE) may be required;
- Proper storage of chemical locations and containers using industry best practices;
- Disposing of chemicals in a positive, safe and responsible manner;
- Proper handling and transport of chemicals;
- Assessing leakage response and exposure reduction requirements.

II. INPUT END MANAGEMENT

1. Overview

Input end management is the control at the source of the entire chain of production by eliminating the intentional addition or use of certain harmful chemicals and reducing residues in end products and emissions in wastewater, air or other environmental media. By managing chemical inputs, we hope to ensure safer products, cleaner water and cleaner air. This will be a real benefit to people and the planet.

Responsible chemical management involves not only meeting or exceeding test limits for finished goods or products, but also controlling chemicals during the production process.

2. Our Goals

The goal of the ANTA Sports's chemical input management is that all suppliers using process chemicals shall fully comply with the ZDHC MRSL standard.

3. Manufacturing Restricted Substance List (MRSL)

The ANTA Sports requires our suppliers to control the chemicals on the input side by sourcing chemicals that comply with ZDHC MRSL.

To meet MRSL requirements, suppliers must understand the technical requirements of the ZDHC MRSL program, when ZDHC MRSL applies, and how to use the tools that support the procurement of ZDHC MRSL-compliant formulations.

The ZDHC MRSL, as part of the chemical management program, is a list of restricted substances that suppliers must adhere to for production.

a. Substances listed in the MRSL are banned from intentional use in textile material, leather, rubber, foam, adhesive and trim processing facilities for textiles, clothing and footwear.
b. MRSL covers chemical formulations including but not limited to cleaners, adhesives, paints, inks, detergents, dyes, colorants, additives, coatings and finishing agents used in the production of raw materials, wet processing, maintenance of process machinery, wastewater treatment, sanitation and pest control processes.
c. MRSL limits apply to substances in commercial formulations instead of substances in the early stages of chemical synthesis.
d. MRSL applies to chemicals and formulations used in production, and RSL sets limits for chemicals in materials and finished products.

4. Methods

Suppliers are encouraged to utilize ZDHC tools to improve overall chemical management practices, and for most material production suppliers are encouraged to use ZDHC-approved management tools for the list. Suppliers can select a ZDHC-approved solution provider that suits their needs, and suppliers must regularly update their chemical list. Suppliers and Anta can have access to the information related to the list through the ZDHC InCheck report.

InCheck reports provide visibility into MRSL compliance of chemicals in the production process. While this level of information is not a full disclosure, which does not include complete chemical information, it is an important step in promoting the use of cleaner chemicals and ultimately improving traceability and transparency.

ANTA Sports verifies the MRSL performance of its suppliers by:

• collecting ZDHC InCheck reports;
• continuous testing of wastewater (using the limits specified in the ZDHC Wastewater Guidelines).

5. Practices

ANTA Sports encourages suppliers to use ZDHC Gateway and other implementation tools to purchase MRSL-compliant chemicals, recommends them to use InCheck reports to verify the purchase of MRSL-compliant formulations, and helps ensure the availability of chemical list information.

When chemicals are required and there are no MRSL compliant options, you should ask your supplier to upload their information to the ZDHC gateway.

Although the ZDHC Gateway is constantly being expanded to include new chemicals, in some cases fewer chemicals may be available in it. Suppliers must review SDSs against RSL and MRSL limits to ensure that the formulations meet the requirements. We also recommend chemical suppliers to upload their information to the ZDHC Gateway for future access.

When your chemical supplier is registered with ZDHC Gateway and their products are approved, you may submit a ChemCheck report to verify MRSL compliance.

For suppliers not familiar with ZDHC MRSL requirements:

• Please refer Chapter 5 "ZDHC Manufacturing Restricted Substance List" (ZDHC MRSL).
• Please download and review the ZDHC Chemical Management System (CMS) Guide and Technical Information Guide (TIG) at the following link:
https://downloads.roadmaptozero.com/process/ZDHC-CMS-Framework

III. OUTPUT END MANAGEMENT

1. Overview

A plant is not a closed system where all chemical, energy and material inputs are converted into products and emissions to the environment. To avoid contamination of the surrounding environment and the community, plants generating output must have mechanisms, processes and procedures in place to properly manage, treat and discharge output.

The output may take many forms, and the chemicals used and applied in the processes in the production plant eventually leave the plant in five output streams: end product, wastewater, sludge, air emissions, and waste.

All outputs should be considered in the plant's chemical management system, and output management can demonstrate that the plant understands the implementation of the chemical management system. By inspecting and monitoring the output, it is possible to track the progress of the plant's chemical management system goals, and all products or materials leaving the plant have to meet the legal and customer requirements regarding the chemical contents.

2. Our Requirements

ANTA Sports has been committed to comprehensively improving the compliance and sustainable development of the supply chain, and has formulated the ANTA Sports Supplier Sustainability Management Manual, requiring suppliers to abide by relevant laws and regulations and pay attention to environmental protection in the production process. The ANTA Sports Supplier Sustainability Management Manual clearly sets out the requirements in the following criteria:

- Wastewater
- Hazardous waste
- Air emissions
- Chemical management
- Solid waste

3. Wastewater

Wastewater refers to water that is considered no longer usable for a specific purpose. This includes:

- Domestic sewage for showers, toilets, kitchens and dormitories;
- Industrial wastewater discharged during the production process, such as dyeing, finishing, laundry, washing, rinsing, etc.

The chapter of wastewater in the ANTA Sports Supplier Sustainability Management Manual stipulates that all wastewater from suppliers must be properly managed and treated before discharge to ensure compliance. Supplier partners must comply with the wastewater requirements of the local government and Anta, and legally comply with the permits issued by local government institutions. At no time shall untreated wastewater be discharged into the environment. Plants that discharge treated wastewater directly into the environment shall at least demonstrate compliance with local government wastewater discharge requirements.

ANTA Sports encourages suppliers and partners to take the initiative to find opportunities to improve water efficiency. For example, through the recycling of reclaimed water and rainwater recycling, the maximum use of water can be achieved, which reduces not only the cost of water for enterprises, but also the waste of water resources and pollution to the environment.

For material suppliers with wet treatment processes, we require suppliers to meet local wastewater legal compliance requirements and to conduct wastewater testing in accordance with ZDHC wastewater guidelines and share the wastewater testing reports with the ANTA Sports. If chemicals are detected in wastewater that exceed the ZDHC wastewater guideline limits, the plant should determine the root cause of the detection, address the root cause, and sample and test the wastewater to demonstrate that the root cause has been addressed. If the problem is not resolved, the plant should continue to search for the root cause until laboratory test results indicate that the problem has been resolved.

4. Hazardous Waste Management

Suppliers generate waste during the production process, which is classified as hazardous waste or non-hazardous waste. Hazardous waste must be collected and disposed of in accordance with local regulations. If hazardous waste is generated on site, suppliers must manage it safely within the hazardous waste collection area and take the necessary precautions such as ventilation, secondary containment, fire protection and leakage response.

The hazardous waste management staff of suppliers should be trained on how to identify and safely handle hazardous waste, and suppliers should comply with the requirements of the local government and Anta brand on hazardous waste and hire qualified hazardous waste disposal providers to dispose of hazardous waste.

For the management rules of hazardous waste, please refer to the ANTA Sports Supplier Sustainability Management Manual.

5. Air Emissions

ANTA Sports adheres to the sustainable development principle that protects the natural environment. Under the global climate crisis and the vision of "double carbon" target, ANTA Sports actively promotes the green transformation of supply chain to solve the problem of high energy consumption and high emission in the production process. This is reason that the ANTA Sports Supplier Sustainability Management Manual clearly states that air emissions and climate impacts should be minimized. Active monitoring and control of pollutants including greenhouse gases, volatile organic compounds, hazardous air pollutants, particulate matter, ammonia, ozone-depleting chemicals and combustion by-products is required.

All plants must comply with the regulatory requirements of the local government, including discharge permits, operating requirements and regular monitoring requirements to ensure legal and compliant discharges.

5.1 Greenhouse Gas Emissions

The use of energy in the production process affects the air emissions of plants, especially the emission of combustion by-products such as NOx, SOx and COx, etc., which can negatively affect the environment and human health. ANTA Sports has formulated Science-Based Targets (SBT), which aims to reduce greenhouse gas emissions and reduce its impact on the climate.

To achieve this goal, ANTA Sports requires its suppliers to closely track and monitor equipment and fuel sources, while promoting a series of measures for the supply chain to reduce combustion by-product emissions. For example, combustion by-product emissions can be reduced by using cleaner and more efficient energy sources such as natural gas, solar power and wind power. In addition, advanced emission control technologies such as denitrification, desulfurization, and dust removal can be used to reduce emissions of combustion by-products.

In the chapter of air emissions in the ANTA Sports Supplier Sustainability Management Manual, it is clearly stipulated that suppliers should adopt a unified and effective method to manage greenhouse gas (GHG) emissions in the site. In the quantification, tracking and reporting of GHG emissions, the GHG list for Scope 1 and Scope 2 GHG emissions should be compiled in accordance with national or international standards, with reference to the GHG Protocol or the ISO 14064 GHG Certification. Through these measures, ANTA Sports strives to reduce its impact on the environment, protect human health and achieve the goal of sustainable development.

5.2 Exhaust Gas Emissions

Changes in chemicals in the manufacturing processes of production plants may affect air emissions. Therefore, when a chemical is characterized as an air pollutant, it is important to calculate the potential to emit (PTE) and/or to calculate expected emissions. The location and type of the relevant chemical can help a company assess whether air pollution control equipment is needed.

Suppliers shall reduce and control air emissions from manufacturing processes and operations through every available emission control device. As a minimum, suppliers shall:

- Identify the emission sources and related emission points of the production plant, and establish an air emission list;
- Check all required permits, authorizations, laws, regulations and standards regarding air emissions;
- Track air emissions and use of volatile chemicals in the process;
- Regularly monitor emissions through available on-line monitoring systems or through third-party approved laboratories;
- Track the quantity of pollutants discharged in the production process and the compliance of emission standards to ensure that the compliance requirements of local regulations are met or exceeded;
- Continuously reduce air emissions that are above the required limit through process transformation, new equipment, and chemical substitution.

6. End Product and Material Testing

Plants responsible for producing end products and materials respectively are designed to efficiently produce products, including textiles, leather or finished shoes. The output of these plants is based on the production and utilization of materials. The products of ANTA Sports and the materials used to manufacture them must comply with relevant domestic and international laws and regulations to protect the health and safety of consumers.

Therefore, ANTA Sports has established an internal RSL control system - J01
"Chemical Safety Guidelines on Apparel, Footwear and Accessories", which defines and specifies the chemical substances and their restricted amount in products and materials. The relevant test methods, sampling and determination rules are explained in detail in Chapter 4 of J01 ANTA Sports Restricted Substances List (RSL).

ANTA Sports has notified all suppliers that the products of ANTA Sports and the materials used to manufacture them must meet the requirements of ANTA Sports's RSL.

IV. The Chemical Phase-out Plan of ANTA Sports

With the growing concern of environmental protection and public health, the safety and environmental friendliness of chemicals has become an increasingly important issue. ANTA has established a chemical policy to gradually reduce the chemicals in the supply chain that may cause potential harm to the environment and human health. The chemical policy is an important part of ANTA's sustainable development strategy. ANTA will work with its suppliers to find alternative substances that are more environmentally friendly and healthier, and strengthen its management of the supply chain to ensure that all raw materials meet the environmental protection and health standards.

We realize that protecting our environment is an ongoing process. We strive to comply with local and international chemical-related laws, to be transparent about the chemical-related impacts of our stakeholders' work, and to continuously improve our performance. As we continue to evaluate the chemicals in the supply chain, we will look for more opportunities and choose to use cleaner chemicals, and we will gradually reduce the use of chemical substances in the following seven areas:

4.1. Gradually reduce the use of alkylphenol ethoxylates (APEOs) and alkylphenols (APs)

Alkylphenol ethoxylates (APEOs) and alkylphenols (APs) are considered to have potential environmental and health risks. These chemical substances are surfactants that produce toxic metabolites during biodegradation, which may have negative effects on aquatic organisms and the environment. In addition, APEOs and APs have also been identified as possible endocrine disruptors that may pose a potential hazard to human health. ANTA will work with its suppliers to reduce the use of alkylphenol ethoxylates (APEOs) and alkylphenols (APs) through technical innovation, research and development to look for more environmentally friendly and healthier alternative substances.

4.2 Gradually ban the use of polyvinyl chloride (PVC):

PVC is a chlorinated plastic that produces hazardous substances such as dioxins, chlorides and benzene during its production and use. These hazardous substances may have a negative impact on human health and the environment. ANTA is committed to promoting sustainable development by banning the use of polyvinyl chloride (PVC) materials in the manufacturing process of our products and looking for more environmentally friendly and healthier alternatives to ensure that our products are manufactured and used in a way that minimizes the impact on the environment and human health.

4.3 Gradually reduce the use of per- and polyfluorinated compound (PFC):

PFC is typically used to provide water repellency ("WR"), making surfaces water repellent, oil-proof, and antifouling. PFCs are also used in the production of polytetrafluoroethene (PTFE).

Per- and polyfluorinated compounds (PFCs) will accumulate in the environment and cause harm to aquatic organisms and terrestrial ecosystems, and per- and polyfluorinated products (PFCs) may have negative effects on human health, such as causing liver damage, reproductive problems and immune system problems. ANTA will work with its suppliers to actively look for more environmentally friendly and healthier alternatives, gradually reduce the use of per- and polyfluorinated compounds (PFCs), and regularly evaluate and update our products and production processes to ensure that our products have the least possible impact on the environment and human health in the future.

4.4 Gradually reduce the use of volatile organic compounds (VOC),

ANTA has been prioritizing the gradual reduction of the use of organic solvents and is committed to promoting the use of water-based adhesives and cleaners instead of solvent based adhesives. To achieve this goal, ANTA will work with its suppliers and manufacturers to develop and promote the use of water-based adhesives and cleaners, and will encourage them to adopt a more environmentally friendly approach in their production. Secondly, ANTA has optimized and improved the production process, enhanced the training and education of employees in order for employees to understand the advantages and use of water-based adhesives and cleaners, and actively promoted the use of these environmentally friendly products.

4.5 Gradually ban the use of DCP (dicumyl peroxide).

Dicumyl peroxide, also known as DCP, is a strong oxidant that can be used as the initiator of monomer polymerization, the vulcanizing agent, cross-linking agent, curing agent and flame-retardant additive, etc., of polymer materials, and is commonly used in the manufacture of products such as plastics, rubber and coatings. DCP is a flammable and explosive chemical, and there are certain safety risks in the process of using and storing it. In addition, the production and use of

DCP will generate hazardous substances that have a negative impact on the environment and human health.

4.6 Gradually ban the use of chloroprene rubber.

The production and use of chloroprene rubber will generate hazardous substances that have a negative impact on the environment and human health. In addition, the production of chloroprene rubber requires a large amount of energy and water resources, which is a burden to the environment. ANTA is committed to promoting sustainable development and has decided to ban the use of chloroprene rubber. ANTA will work with its suppliers to look for more environmentally friendly and healthier alternatives to ensure that products are manufactured and used in a way that minimizes the impact on the environment and human health.

4.7 Innovation:

ANTA has always placed a premium on encouraging innovation and is committed to achieving a more environmentally friendly and efficient production method through innovation. Hence, we have taken a variety of measures, including improving the efficiency of material use and changing the material technology. We have developed new materials, such as the one-piece mesh, and have improved material efficiency and reduced waste and pollution through new designs and technology. At the same time, we have also made efforts to change the material technology, such as adopting the water-saving dyeing technology to reduce chemicals and waste water emissions, which have a positive impact on waste streams.

V. J01 ANTA Sports Restricted Substances List (RSL)

Finished Product and Material Testing

Finished products factories and material production factories aim to produce products efficiently, whether they are textiles, leather or finished shoes. The output of these factories is based on the production and utilization of materials. The products of ANTA Sports and the materials used for production are required to comply with the requirements of relevant domestic and international laws and regulations, as well as to protect the health and safety of consumers.
Therefore, ANTA Sports has established an internal RSL control system - "Technical Standards on the Safety of Chemicals in Apparel, Footwear and Accessories", which clearly defines and specifies the chemical substances and their limit values in products and materials, and details the relevant test methods, sampling and determination rules. See J01 ANTA Sports Restricted Substances List (RSL) for details.

ANTA Sports requires all suppliers that: the products of ANTA Sports and the materials used for production must comply with the requirements of the ANTA Sports Restricted Substances List (RSL). ANTA Sports regularly updates the product testing value requirements in accordance with national laws, regulations and industry standards and phases out restricted substances, and continuously updates the restricted substances based on the candidate list.

ANTA Sports Restricted Substances List (RSL) complies with/conforms to: "Technical Specification for the Safety of [Control and Prevent] Products for Infants and Children", the SVHC list of EU's REACH regulation (updated to 2023.1.17), Oeko-TexStandard100 certification, AFIRM RSL 2023 and other standards. ANTA Sports will conduct revision and update simultaneously with the update of the standards involved (if any).

Limit requirements and test methods (Table 1):

Table 1 Limit requirements and test methods

Test items	requirement		test method	Request source
	baby	Non-infant		
PH value [1]	Textiles, synthetic leather, artificial leather, down: 4.0-7.5 Leather: 3.5-6.0 PH dilution difference ≤ 0.7 (inspection when leather pH value is less than 4.0)	Textiles, synthetic leather, artificial leather, down: Class B: 4.0-8.5 Class C: 4.0-9.0 PH dilution difference ≤ 0.7 (inspection when leather pH value is less than 4.0)	Textiles, synthetic leather, artificial leather, down: GB/T7573-2009 ISO 3071:2020 Leather: QB/T2724-2018 EN ISO 4045:2018	GB25038-2010 GB18401-2010 QB/T1873-2010 GB/T18885-2020
Formaldehyde [1] [mg/kg] <	Textiles, leather, down Class A: 20 Textile materials, artificial leather and synthetic leather for shoes: 16 Adhesive: 20	Textiles, leather, down B: 75 Class C: 75 Textile materials, artificial leather and synthetic leather for shoes: 75 Adhesive: 75	Textile materials, artificial leather, synthetic leather, down: GB/T29121-2009 EN ISO 14184-1:2011 Leather: GB/T19941 (all parts) ISO 17226-1：2021、ISO 17226-2:2018 (The arbitration method is ISO 17226-1) Adhesive: GB 18583-2008	GB30585-2014 GB20400-2006 GB18401-2010 GB25038-2010 GB/T18885-2020 REACH

Hexavalent chromium [mg/kg] <		Leather and fur 3.0		GB/T 22807-2019 GB/T 38402-2019 (Arbitration Law) ISO 17075-1:2017 ISO 17075-2:2017 (Arbitration Law) Aging test: ISO 10195:2018 Method A2 [4]	GB 30585-2014 REACH
Extractable heavy metal [mg/kg] <	Antimony Sb	30	30	Textiles, synthetic leather, artificial leather: GB/T 17593 (all parts) Leather: ISO 17075-2:2017 (Arbitration Law) GB/T 38402-2019 (Arbitration Law) GB/T22930-2008 ISO17072-1:2019 Aging test: ISO 10195:2018 Method A2[4]	GB25038-2010 FZ/T73025-2019 GB/T18885-2020 Oeko-Tex 100-2022 Section 18 of the German Commodity Regulations (hexavalent chromium) REACH
	Arsenic As	0.2	0.2		
	Lead Pb	0.2 Glass 1000	1.0 Glass 1000		
	Cadmium Cd	0.1 Glass 1000	0.1 Glass 1000		
	Chromium Cr (leather is not examined)	1.0	2.0		
	Chromium Cr (hexavalent)	Other materials except leather < 0.5	Other materials except leather < 0.5		
	Cobalt Co	1.0	4.0		
	Copper Cu	25.0	50.0		
	Nickel Ni	1.0	1.0		
	Mercury Hg	0.02	0.02		

Total heavy metals [mg/kg] <	Total cadmium (Cd)	40 Glass 1000	40 Glass 1000	Textiles: GB/T30157-2013 EN 16711-1:2015 Leather ISO17072-2:2019 other: QB/T4340-2012 BS EN 1122-2001 EPA 3052 EPA 3050B/3051	REACH Oeko-Tex 100-2022 2009/563/EC (EU Footwear Ecological Label) GB30585-2014 GB31701-2015
	Total lead (Pb) [6]	40 Glass 1000	90 Glass 1000	Textiles: GB/T30157-2013 CPSC-CH-E1002-08.3 other: QB/T4340-2012 16 CFR 1303 EPA 3052 EPA 3050B/3051 CPSC-CH-E1001-08.3 CPSC-CH-E1003-09.1	GB31701-2015 Oeko-Tex 100-2022 2009/563/EC (EU Footwear Ecological Label) GB30585-2014 16CFR 1303 CPSIA California 65 Act
		30 (Vinyl materials in clothing products exported to California, USA, such as PVC, neoprene, vinyl printing and vinyl decoration)			
	Total arsenic (As)	10	100	QB/T 4340-2012 EN 16711-1:2015	GB30585-2014
Nickel release [µg/cm2 •week] <		0.5	0.5	EN 1811:2011+A1:2015 EN 12472:2020 GB/T28485-2012 GB/T19719-2005 GB/T30158-2013	GB/T 18885-2020 REACH GB28480-2012

Total insecticide [mg/kg] <		0.5	0.5	GB/T18412 (all parts)	GB/T18885-2020 Oeko-Tex 100-2022 POPs
chlorinated phenol [mg/kg] <	Pentachlorophenol (PCP)	0.05	0.5	Textiles, synthetic leather, artificial leather: GB/T 18414 (all parts) DIN 50009:2021 Leather: GB/T22808-2021 ISO17070:2015 LFGB§64 BVL B 82.02.08:2001	GB/T18885-2020 GB25038-2010 Oeko-Tex 100-2022 POPs
	Total Tetrachlorophenol (TeCP)	0.05	0.5		
	Total trichlorophenol (TrCP)	0.2	2.0		
	Total dichlorophenol (DCP)	0.5	3.0		
	Total amount of monochlorophenol (MCP)	0.5	3.0		
O-Phenylphenol (OPP) [mg/kg] <		Shoes: 1000 Others: 10	Shoes: 1000 Others: 25	GB/T 20386-2006 DIN EN ISO 17070:2015	GB/T18885-2020 Oeko-Tex 100-2022
Organotin compound [mg/kg] <	Tributyltin (TBT)	0.5	1.0	Textiles, synthetic leather and artificial leather: GB/T 20385.1-2021 ISO 22744-1:2020 Leather: GB/T22932-2008 Other materials: GB/T 32447-2015 ISO/TS 16179:2012	GB/T18885-2020 REACH Oeko-Tex 100-2022
	Dibutyl tin (DBT)	1.0	2.0		
	Triphenyltin (TPhT)	0.5	1.0		
	Dioctyltin (DOT)	1.0	2.0		
	Butyl tin (MBT)	1.0	2.0		
	Monooctyltin (MOT)	1.0	2.0		
	Tricyclohexyltin (TcyHT)	1.0	2.0		
	Trioctyltin (TOT)	1.0	2.0		
	Tripropyltin (TPT)	1.0	2.0		
	Trimethyltin (TMT)	1.0	2.0		

Decomposable carcinogenic (harmful) aromatic amine dyes [mg/kg] <	20	20	Leather, fur: GB/T19942-2019 EN ISO 17234-1:2020 Textiles and others: GB/T17592-2011 EN ISO 14362-1:2017	GB20400-2006 GB18401-2010 GB30585-2014 GB/T18885-2020 REACH
Carcinogenic dyes [mg/kg] <	30	30	Leather and fur: GB/T30399-2013 DIN 54231:2005 Textiles and others: GB/T20382-2006 DIN 54231:2005	GB/T18885-2020 Oeko-Tex 100-2022
Sensitized dye [mg/kg] <	30	30	Leather and fur: GB/T30398-2013 Textiles and others: GB/T20383-2006 DIN 54231:2005	GB/T18885-2020 Oeko-Tex 100-2022 REACH
Other prohibited dyes [mg/kg] <	30	30	GB/T23345-2009 DIN 54231:2005	Oeko-Tex 100-2022

Alkylphenol [AP (NP, OP)] and alkylphenol polyoxyethylene ether [APEO (NPEO, OPEO)] Total [mg/kg] <	AP(NP、OP)10 Total 100	AP(NP、OP)10 Total 100	Textiles: GB/ T2332-2018 Down shall comply with 5.6.2 in GB/T 14272-2021 EN ISO 18254-1:2016 Leather: EN ISO 18218-1:2015、 EN ISO 18218-2:2019 Polymer: 1 g sample/20 mL THF, ultrasonically extracted at 70 ° C for 60 minutes and analyzed by LC/MS or LC/MS/MS Other materials: EN ISO 18254-1:2016, determined by LC/MS or LC/MS/MS; 1 g sample/20 mL THF at 70 ℃ Ultrasonic extraction for 60 minutes at ℃, and then GC/MS analysis	Oeko-Tex 100-2022 REACH
N-nitrosamine [mg/kg]	Shoes: not detectable (detection limit 0.5)	Shoes: not detectable (detection limit 0.5)	GB/T 24153-2009 ISO 19577:2019	GB25038-2010

Dimethyl fumarate (DMFu) [mg/kg] <		0.1	0.1	Leather: GB/T26702-2011 Textiles: GB/T28190-2011 GB/T26713-2011 Other materials: ISO 16186:2021	Oeko-Tex 100-2022 REACH GB30585-2014 GB/T18885-2020
Polycyclic aromatic hydrocarbons (PAH) [mg/kg] <	Benzo [a] pyrene (BaP)	0.5	1.0	textile GB/T28189-2011 other GB/T33391-2016 ISO 16190:2021 All materials AfPS GS 2019:01 PAK	Oeko-Tex 100-2022 GB/T18885-2020 REACH
	Benzo [e] pyrene	0.5	1.0		
	Benzo [a] anthracene	0.5	1.0		
	Chrysene	0.5	1.0		
	Benzo [b] fluoranthene	0.5	1.0		
	Benzo [j] fluoranthene	0.5	1.0		
	Benzo [k] fluoranthene	0.5	1.0		
	Dibenzo [a, h] anthracene	0.5	1.0		
	Total (24 kinds)	5.0	10.0		
Phthalate [7] Total [%] <		0.1	0.1	Textiles: GB/T20388-2016 EN ISO 14389:2014 EPA 3550C EPA 8270E Shoes: ISO 16181-1:2011 other: GB/T22048-2015 CPSC-CH-E1007-09.4	Oeko-Tex 100-2022 REACH GB/T 18885-2020 GB30585-2014 GB31701-2015 CPSIA California 65 Act

Prohibited flame retardant (Appendix C.8)		Disable	Disable	GB/T24279. 1-2018 GB/T 24279.2-2021 EN ISO 17881-1:2016 (bromine series) EN ISO 17881-2:2016 (phosphorus series) SCCPs: ISO 18219-1:2021	GB/T 18885-2020 REACH Oeko-Tex 100-2022 POPs
Total organochlorine carriers (chlorobenzene, chlorotoluene) [mg/kg] <		1.0	1.0	GB/T20384-2006 DIN EN 17137:2019	GB/T18885-2020 Oeko-Tex 100-2022
Perfluorinated and polyfluorinated compounds <	Perfluorooctane sulfonic acid and its salts, perfluorooctane sulfonamide, perfluorooctane sulfonyl fluoride, N-methyl perfluorooctane sulfonamide, N-ethyl perfluorooctane sulfonamide, N-methyl perfluorooctane sulfonamide ethanol, N-ethyl perfluorooctane sulfonamide ethanol total [μg/m2]	1.0	1.0	Textiles: GB/T31126-2014 Leather: SN/T2449-2010 ISO 23702-1:2018	Oeko-Tex 100-2022 REACH GB/T18885-2020 POPs
	Perfluorooctanoic acid and its salts [mg/kg]	0.025	0.025	GB/T31126-2014 ISO 23702-1:2018	
	Perfluoroheptoic acid and its salts [mg/kg]	0.05	0.1	GB/T31126-2014 ISO 23702-1:2018	
	Perfluorononic acid and its salts [mg/kg]	0.05	0.1		
	Perfluordecanoic acid and its salts [mg/kg]	0.05	0.1		
	Perfluorodecanonic acid and its salts [mg/kg]	0.05	0.1		
	Perfluordodecanoic acid and its salts [mg/kg]	0.05	0.1		
	Perfluorotrecanoic acid and its salt [mg/kg]	0.05	0.1		
	Perfluoro-tetradecanoic acid and its salt [mg/kg]	0.05	0.1		
	Perfluorocarbonic acid and its salts / Perfluorobutyric acid and its salts	0.05	/		

	[mg/kg]	Perfluoroacetic acid and its salts	0.05	/		
		Perfluorohexanoic acid and its salts	0.05	/		
		Perfluoro-3,7-dimethyloctanoic acid and its salts	0.05	/		
	Perfluorosulfonic acid and its salts [mg/kg]	Perfluorobutane sulfonic acid and its salts	0.05	/	GB/T31126-2014 ISO 23702-1:2018	
		Perfluorohexane sulfonic acid and its salts	0.05	/		
		Perfluoroheptane sulfonic acid and its salts	0.05	/		
		21 fluorodecane sulfonic acid and its salts	0.05	/		
	Fluorinated carboxylic acid/fluorinated sulfonic acid [mg/kg]	7H-dodecafluoroheptanoic acid and its salts	0.05	/	GB/T31126-2014 ISO 23702-1:2018	
		2H, 2H, 3H, 3H-heptafluoroundecanoic acid and its salts	0.05	/		
		1H, 1H, 2H, 2H PFOS	0.05	/		
	Fluorinated alcohol [mg/kg]	1H, 1H, 2H, 2H-Perfluoro-1-hexanol	0.5	/	GB/T31126-2014 ISO 23702-1:2018	
		1H, 1H, 2H, 2H-perfluoro-1-octanol	0.5	/		
		1H, 1H, 2H, 2H-perfluoro-1-decanol	0.5	/		
		1H, 1H, 2H, 2H-perfluoro-1-dodecanol	0.5	/		

	Fluoroacrylate [mg/kg]	1H, 1H, 2H, 2H perfluorooctanoic acrylate	0.5	/	GB/T31126-2014 ISO 23702-1:2018	
		1H, 1H, 2H, 2H perfluorodecylacrylate	0.5	/		
		1H, 1H, 2H, 2H perfluoro dodecyl acrylate	0.5	/		
	Total PFOA related substances [mg/kg]		1.0	1.0	GB/T31126-2014 ISO 23702-1:2018	
Short-chain chlorinated paraffin [mg/kg] <			1000	1000	Textiles: ISO 22818:2021 EPA 3550C EPA 8270E Leather, artificial leather, synthetic leather: GB/T 38405-2019、ISO 18219-1:2021、ISO 18219-2:2021 Rubber and plastic: SN/T 3814-2014	Oeko-Tex 100-2022 REACH POPs
Medium chain chlorinated paraffin [mg/kg] <			1000	1000		Oeko-Tex 100-2022
Phenol [3] [mg/kg] <			20	50	GB/T 39113-2020 EN 71-11	Oeko-Tex 100-2022
Acetophenone [mg/kg] <			50	50	QB/T4555-2013	AFIRM Oeko-Tex 100-2022
Phenyl-2-propanol [mg/kg] <			50	50	Ultrasonic extraction with methanol solvent at 60 ℃ for 60 minutes and analysis with GC-MS	

Total content of lead+cadmium+hexavalent chromium+mercury [mg/kg] <		Shoes packaging materials: 100 in total	Shoes packaging materials: 100 in total	EPA 3052 EPA 3060A	2004/12/EC (Packaging Directive)
Bisphenol A (BPA) [mg/kg] <		1	1	SN/T 4424-2016 1g sample is extracted at 60 ℃ for 60 minutes with 20mL THF and analyzed by LC/MS	REACH Oeko-Tex 100-2022 GB/T18885-2020
asbestos		Disable	Disable	Micro observation; Polarized light filter shall be at least 1-250 times larger, and the fiber specific length diameter shall be at least 3:1	REACH GB/T18885-2020
Residual solvent [mg/kg] <	N. N-dimethylformamide (DMF) [2]	500	500	GB/T 35446-2017 QB/T 5158-2017 ISO 16189:2021	REACH GB/T18885-2020 Oeko-Tex 100-2022
	N. N-dimethylacetamide (DMAc)	500	500	GB/T 35446-2017 ISO 16189:2021	
	N-methylpyrrolidone (NMP)	500	500	GB/T 35446-2017 ISO 16189:2021	
	Formamide	200	200	SN/T 3587-2016 ISO 16189:2021	
Quinoline [5] [mg/kg] <		50	50	Analysis by HPLC-MS/MS or HPLC-DAD after extraction with methanol or tetrahydrofuran	Oeko-Tex 100-2022 REACH

Chloro-o-toluidine hydrochloride [5] [mg/kg] <		30	30	GB/T17592-2011 EN ISO 14362:2017 EN ISO 17234-1:2020	OEKO-TEX 100-2022 REACH
2-naphthylammonium acetate [5] [mg/kg] <		30	30		REACH
Diaminoanisole sulfate [5] [mg/kg] <		30	30		
2,4,5-trimethylaniline hydrochloride [5] [mg/kg] <		30	30		
UV light stabilizer [mg/kg] <	UV 320	1000	1000	GB/T 36940-2018	GB/T18885-2020 Oeko-Tex 100-2022
	UV 327	1000	1000		
	UV 328	1000	1000		
	UV 350	1000	1000		
benzene [g/kg] <		5.0	5.0	GB18583-2008	GB 19340-2014
Toluene+xylene [g/kg] <		200	200	GB18583-2008	
Free toluene diisocyanate [g/kg] <		10.0	10.0	GB18583-2008	
N-hexane [g/kg] <		150	150	GB19340-2014	
1, 2 dichloroethane [g/kg] <		5.0	5.0	GB19340-2014	
Halogenated hydrocarbon [g/kg] <	dichloromethane	50.0	50.0	GB19340-2014	
	Dichloroethane				
	Trichloroethane				
	Trichloroethane				
Total volatile organic compounds [g/L] <		Solvent type: 750 Water-based type: 100	Solvent type: 750 Water-based type: 100	GB18583-2008 GB19340-2014	
Tetraethylene glycol dimethyl ether [mg/kg] <		1000	1000	Solvent extraction, GC/MS analysis	REACH

Limit of volatile organic compounds in adhesive [g/L]	Test and judgment according to the requirements of GB 33372-2020	GB 33372-2020
Volatile organic compound content in ink [%]	Test and judgment according to the requirements of GB 38507-2020	GB 38507-2020
Content limit of volatile organic compounds in cleaning agent	Test and judgment according to the requirements of GB 38508-2020	GB 38508-2020

Note 1: PVC material is prohibited.

Note 2: The national standard test method is preferred for domestic products, and other methods are preferred for export products.

[1] Textile products for infants and young children shall meet the requirements of Class A, products that contact skin directly shall at least meet the requirements of Class B, and products that do not contact skin directly shall at least meet the requirements of Class C.

[2] The test of N, N-dimethylformamide is carried out on relevant materials. Before the test, it is required to undergo "70 ℃, 24h" dry aging treatment to simulate molding processing, storage and transportation.

[3] Phenol content in children's toys is tested using EN71-11, and other materials are tested using GB/T 39113-2020.

[4] The aging test of hexavalent chromium is only used as a risk assessment when leather materials or products need to be transported by sea for a long time, stored or resold.

[5] Testing is only required when the product is exported to Europe.

[6] A. The lead content in paint and paint of products exported to the United States, and the lead content of children's products need to be issued with a certificate of conformity based on the third party inspection.

B. When the total amount of lead in the products exported to California, USA exceeds the following standards, warning labels shall be added to the products:

Clothing (clothing) products: lead content of vinyl materials (such as PVC, neoprene, vinyl printing and vinyl decoration) > 30mg/kg;

Clothing made of leather, vinyl or artificial leather (except raincoat): paint or surface coating > 90mg/kg, vinyl materials (such as PVC, neoprene, vinyl printing and vinyl decoration) > 30ppm or other materials (except zirconia, crystal and glass) > 300mg/kg.

[7] A. Phthalates in children's toys and children's care products exported to the United States (such as bibs and pajamas for children under three years of age) need to be issued with a certificate of conformity based on the third party inspection.

B. If the content of one or more of DEHP, DBP, BBP, DIDP and DINP in the accessible parts of clothing (clothing) products exported to California, the United States is greater than 0.1%, warning labels shall be added to the products.

Requirements for material testing items (Table 2)

Table 2 Requirements for material testing items

Material category	Category I project	Category II project	Category III project
Leather	Formaldehyde, decomposable carcinogenic (harmful) aromatic amine dye [10], dimethyl fumarate [3], phthalate, hexavalent chromium, total cadmium, total lead, total arsenic [1], and phenol chloride [1]	PH value, extractable heavy metals, organotin compounds, carcinogenic dyes, sensitized dyes, alkylphenol and alkylphenol polyoxyethylene ether, flame retardants [2], perfluorinated and polyfluorinated compounds, short-chain chlorinated paraffins, medium-chain chlorinated paraffins	Total amount of o-phenylphenol, other prohibited dyes and pesticides
Synthetic leather/synthetic leather/coating/printing	PH value, formaldehyde, extractable heavy metal [1], total cadmium, total lead, total arsenic [1], phenol chloride [1], decomposable carcinogenic (harmful) aromatic amine dye [10], vinyl chloride monomer, dimethyl fumarate [3], phthalate	Organotin compounds, carcinogenic dyes, sensitized dyes, alkylphenol and alkylphenol polyoxyethylene ether, flame retardants [2], perfluorinated and polyfluorinated compounds, short-chain chlorinated paraffins, medium-chain chlorinated paraffins, N, N-dimethylformamide, formamide [7], bisphenol A	O-phenylphenol, other prohibited dyes, N-methylpyrrolidone, N, N-dimethylacetamide, quinoline, 4-chloro-o-toluidine hydrochloride, 2-naphthylammonium acetate, 2,4-diaminoanisole sulfate, 2,4,5-trimethylaniline hydrochloride, ultraviolet light stabilizer
Plastic/polymer	Total cadmium, total lead, total arsenic [1], N-nitrosamine [1] [4], Phthalate	Organotin compounds, alkylphenol and alkylphenol polyoxyethylene ether, polycyclic aromatic hydrocarbons, flame retardants [2], perfluorinated and polyfluorinated compounds, short-chain chlorinated paraffins, medium-chain chlorinated paraffins, acetophenone [5], 2-phenyl-2-propanol [5], N, N-dimethylformamide, formamide [7], bisphenol A	N-methylpyrrolidone, N, N-dimethylacetamide, quinoline, 4-chloro-o-toluidine hydrochloride, 2-naphthylammonium acetate, 2,4-diaminoanisole sulfate, 2,4,5-trimethylaniline hydrochloride

Synthetic fabric	PH value, formaldehyde, extractable heavy metals [1], total cadmium, total lead, total arsenic [1], phenol chloride [1], decomposable carcinogenic (harmful) aromatic amine dyes, phthalates, dimethyl fumarate [3]	Organotin compounds, carcinogenic dyes, sensitized dyes, alkylphenol and alkylphenol polyoxyethylene ether, flame retardants [2], perfluorinated and polyfluorinated compounds, short-chain chlorinated paraffins, medium-chain chlorinated paraffins, bisphenol A	Other prohibited dyes, organochlorine carriers, phenol, asbestos [8], N-methylpyrrolidone, N, N-dimethylacetamide, quinoline, 4-chloro-o-toluidine hydrochloride, 2-naphthylammonium acetate, 2,4-diaminoanisole sulfate, 2,4,5-trimethylaniline hydrochloride, ultraviolet light stabilizer
Natural fiber fabric	PH value, formaldehyde, extractable heavy metals [1], total cadmium, total lead, total arsenic [1], phenol chloride [1], decomposable carcinogenic (harmful) aromatic amine dyes [10], phthalates, dimethyl fumarate [3]	Organotin compounds, carcinogenic dyes, sensitized dyes, alkylphenol and alkylphenol polyoxyethylene ether, flame retardants [2], perfluorinated and polyfluorinated compounds, short-chain chlorinated paraffins, medium-chain chlorinated paraffins	Total amount of pesticides, o-phenylphenol, other prohibited dyes, phenol, asbestos [8], N-methylpyrrolidone, N, N-dimethylacetamide, quinoline, 4-chloro-o-toluidine hydrochloride, 2-naphthylammonium acetate, 2,4-diaminoanisole sulfate, 2,4,5-trimethylaniline hydrochloride, ultraviolet light stabilizer
Blended fabric (synthetic+natural)	PH value, formaldehyde, extractable heavy metals [1], total cadmium, total lead, total arsenic [1], phenol chloride [1], decomposable carcinogenic (harmful) aromatic amine dyes [10], phthalates, dimethyl fumarate [3]	Organotin compounds, carcinogenic dyes, sensitized dyes, alkylphenol and alkylphenol polyoxyethylene ether Flame retardant [2], perfluorinated and polyfluorinated compounds, short-chain chlorinated paraffins, medium-chain chlorinated paraffins, bisphenol A	Total amount of pesticides, o-phenylphenol, other prohibited dyes, organochlorine carriers, phenol, asbestos, N-methylpyrrolidone, N, N-dimethylacetamide, quinoline, 4-chloro-o-toluidine hydrochloride, 2-naphthylammonium acetate, 2,4-diaminoanisole sulfate, 2,4,5-trimethylphenylamine hydrochloride, ultraviolet light stabilizer
Metal	/	Total cadmium, lead, arsenic and nickel release	/

Ink [9]	Extractable heavy metals [1], total cadmium, total lead, total arsenic [1], phenol chloride, decomposable carcinogenic (harmful) aromatic amine dyes [10], phthalates, dimethyl fumarate [3], volatile organic compounds in ink	Organotin compounds, carcinogenic dyes, sensitized dyes, alkylphenol and alkylphenol polyoxyethylene ether, polycyclic aromatic hydrocarbons, perfluorinated and polyfluoro compounds	O-phenylphenol, other prohibited dyes, short-chain chlorinated paraffins, N, N-dimethylformamide, quinoline, 4-chloro-o-toluidine hydrochloride, 2-naphthylammonium acetate, 2,4-diaminoanisole sulfate, 2,4,5-trimethylaniline hydrochloride, tetraethylene glycol dimethyl ether
an adhesive	Benzene, toluene+xylene, free toluene diisocyanate [6], n-hexane, dichloromethane, 1,2-dichloroethane, 1,1,2-trichloroethane, 1,1,1-trichloroethane, volatile organic compounds limit of adhesive	Total formaldehyde, phthalate, lead and cadmium	Organotin compounds, alkylphenol polyoxyethylene ether, alkylphenol, tetraethylene glycol dimethyl ether
Hardener	Benzene, toluene+xylene, n-hexane, dichloromethane, 1,2-dichloroethane, 1,1,2-trichloroethane, 1,1,1-trichloroethane, total volatile organic compounds	Total formaldehyde, phthalate, lead and cadmium	Organotin compounds, alkylphenol polyoxyethylene ether, alkylphenol
Cleaning agent	Content limit of volatile organic compounds in cleaning agent	/	/
Treatment agent	/	/	Benzene, toluene+xylene, n-hexane, dichloromethane, 1,2-dichloroethane, 1,1,2-trichloroethane, 1,1,1-trichloroethane
packaging	/	PFAS (perfluoroalkyl and polyfluoroalkyl substances), phthalate, dimethyl fumarate [3]	Total content of lead+cadmium+hexavalent chromium+mercury
down	PH value, formaldehyde, decomposable carcinogenic (harmful) aromatic amine dyes [10]	Alkylphenol and alkylphenol polyoxyethylene ether	/
Glass	/	Total cadmium, total lead, extractable heavy metals (lead, cadmium)	/

[1] The total amount of arsenic and N-nitrosamine in Category I projects are only evaluated for shoe-related materials. Extractable heavy metals and chlorinated phenols are controlled according to Class II items in the service products.
[2] Prohibited flame retardants only need to be tested when all kinds of materials have flame retardant treatment.
[3] Dimethyl fumarate is only used to assess the materials, finished products and packaging of children's shoes and adult shoes that have been treated with antibacterial and mildew prevention and desiccant.
[4] N-nitrosamine only examines rubber.
[5] Acetophenone and 2-phenyl-2-propanol are only evaluated for EVA materials.
[6] Free toluene diisocyanate is only tested for polyurethane adhesive.
[7] Formamide is only used for synthetic leather and foamed plastic polymer materials, such as EVA, foam, and children's floor mats.
[8] Asbestos is only evaluated for products and materials with fire protection, insulation, high temperature resistance, special thermal insulation treatment or functions.
[9] When the ink is submitted for inspection, the category shall be indicated according to the classification of GB 38507-2020, such as solvent ink - gravure printing ink. When the adhesive is submitted for inspection, the type of adhesive shall be indicated according to the classification of GB 33372-2020, such as water-based adhesive - polyurethane. When the cleaning agent is sent for inspection, it is required to indicate its type according to the classification of GB 38508-2020, such as water-based cleaning agent.
[10] Decomposable carcinogenic (harmful) aromatic amine dyes are only examined for dyeing products.

Category I items: items that are subject to mandatory testing according to national laws and regulations. In principle, concession release is not allowed in case of unqualified testing.

Category II projects: projects with high risk, high exposure and high degree of attention required by national recommended standards, Oeko-Tex100, REACH regulations, and other requirements. In case of unqualified detection, it is necessary to assess the market risk and determine the treatment measures.

Category III projects: projects with low risk, low exposure and low attention as required by national recommended standards, Oeko-Tex100, REACH regulations, etc., are allowed to be released under concession in case of unqualified detection.

List of prohibited items

This part of the content complies with/complies with: GB31701-2015 "Infant prevention and Treatment products Safety Technical Specifications", EU REACH regulations SVHC list (updated to 2023.1.17), Oeko-TexStandard100 certification, AFIRM RSL 2023 edition and other standards.If the standards involved are updated, ANTA Sports will revise and update them simultaneously.

1 List of banned pesticides

Pesticides List of 70 Prohibited Pesticides (70 kinds)			
Name	CAS-Nr.	Name	CAS-Nr.
2,4,5-T	93-76-5	Fenvalerate	51630-58-1
2,4-D	94-75-7	Heptachlor	76-44-8
Acetamiprid	135410-20-7, 160430-64-8	Heptachloroepoxide	1024-57-3, 28044-83-9
Azinophosmethyl	86-50-0	Hexachlorobenzene	118-74-1
Azinophosethyl	2642-71-9	Hexachlorcyclohexane,α	319-84-6
Aldicarb	116-06-3	Hexachlorcyclohexane	319-85-7
Aldrine	309-00-2	Hexachlorcyclohexane	319-86-8
Bromophos-ethyl	4824-78-6	Imidacloprid	105827-78-9, 138261-41-3
Captafol	2425-6-1	Isodrine	465-73-6
Carbaryl	63-25-2	Kelevane	4234-79-1
Chlorbenzilate	510-15-6	Kepone	143-50-0
Chlordane	57-74-9	Lindane	58-89-9
Chlordimeform	6164-98-3	Malathion	121-75-5
Chlorfenvinphos	470-90-6	MCPA	94-74-6
Clothianidin	210880-92-5	MCPB	94-81-5
Coumaphos	56-72-4	Mecoprop	93-65-2
Cyfluthrin	68359-37-5	Metamidophos	10265-92-6
Cyhalothrin	91465-08-6	Methoxychlor	72-43-5
Cypermethrin	52315-07-8	Mirex	2385-85-5
DEF	78-48-8	Monocrotophos	6923-22-4
Deltamethrin	52918-63-5	Nitenpyram	150824-47-8, 120738-89-8
DDD	53-19-0, 72-54-8	Parathion	56-38-2
DDE	3424-82-6, 72-55-9	Parathion-methyl	298-00-0
DDT	50-29-3, 789-02-6	Perthane	72-56-0
Diazinon	333-41-5	Phosdrin/Mevinphos	7786-34-7
Dichlorprop	120-36-5	Phosphamidone	13171-21-6
Dicrotophos	141-66-2	Propethamphos	31218-83-4

Dieldrine	60-57-1	Profenophos	41198-08-7
Dimethoate	60-51-5	Quinalphos	13593-03-8
Dinoseb and salts	88-85-7	Strobane	8001-50-1
Dinotefuran	165252-70-0	Telodrine	297-78-9
Endosulfan, α-	959-98-8	Thiacloprid	111988-49-9
Endosulfan, β-	33213-65-9	Thiamethoxam	153719-23-4
Endrine	72-20-8	Toxaphene	8001-35-2
Esfenvalerate	66230-04-4	Trifluralin	1582-09-8

2 Phthalate test list

Phtalates PVC plasticizer (phthalate) (25 kinds)			
Name	CAS-Nr.	name	CAS-Nr.
Diisononyl ortho-phthalate	68515-48-0, 28553-12-0, 28553-12-0	Di-n-octyl ortho-phthalate	117-84-0
Bis(2-ethylhexyl)ortho-phthalate	117-81-7	Diisodecyl ortho-phthalate	26761-40-0, 68515-49-1, 68515-49-1
Benzyl-n-butyl ortho-phthalate	85-68-7	Di-n-butyl ortho-phthalate	84-74-2
Di-iso-butyl ortho-phthalate	84-69-5	Diisoheptyl phthalate	71888-89-6
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	Dihexyl phthalate	84-75-3
Dimethoxyethyl phthalate	117-82-8	Diphenyl phthalate	131-18-0
Diisopentylphthalate	605-50-5	N-pentyl-isopentyl phthalate	776297-69-9
1,2-Benzenedicarboxylic Acid, Dipentylester, Branched and Linear	84777-06-0	Di-n-hexyl phthalate	68515-50-4
Di-iso-hexyl phthalate	71850-09-4	Dicyclohexyl phthalate	84-61-7
Diethyl phthalate	84-66-2	Diisooctyl phthalate	27554-26-3
Dipropyl phthalate	131-16-8	Dinonyl phthalate	84-76-4
1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters	68515-51-5	1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters	68648-93-1
Dimethylphthalate	131-11-3	-	-

3 List of decomposable carcinogenic (harmful) aromatic amine dyes

List of the arylamines that are not allowed to be split off from dys under reductive conditions (24 kinds)			
Name	CAS-Nr.	Name	CAS-Nr.
MAK III, category 1			
4-Aminobiphenyl	92-67-1	4-Chloro-o-toluidine	95-69-2
Benzidine	92-87-5	2-Naphthylamine	91-59-8
MAK III, category 2			
o-Aminoazotoluene	97-56-3	4,4'-Methylene-bis-(2-chloroaniline)	101-14-4
2-Amino-4-nitrotoluene	99-55-8	4,4'-Oxydianiline	101-80-4
p-Chloroaniline	106-47-8	4,4'-Thiodianiline	139-65-1
2,4-Diaminoanisole	615-05-4	o-Toluidine	95-53-4
4,4'-Diaminobiphenylmethane	101-77-9	2,4-Toluylendiamine	95-80-7
3.3'-Dichlorobenzidine	91-94-1	2,4,5-Trimethylaniline	137-17-7
3,3'-Dimethoxybenzidine	119-90-4	o-Anisidine	90-04-0
3,3'-Dimethylbenzidine	119-93-7	2,4-Xylidine	95-68-1
3,3'-Dimethyl-4,4'-diaminobiphenylmethane	838-88-0	2,6-Xylidine	87-62-7
p-Cresidine	120-71-8	4-Aminoazobenzene	60-09-3

4 List of carcinogenic dyes

Dyestuff classified to be carcinogenic (18 kinds)		
C.I. Generic Name	C.I. Structure number	CAS-Nr.
C.I. Acid Red 26	C.I. 16 150	3761-53-3
C.I. Acid Red 114	/	6459-94-5
C.I. Basic Blue 26 (with≥0.1% Michler's ketone or base)	/	2580-56-5
C.I. Basic Red 9	C.I. 42 500	569-61-9
C.I. Basic Violet 3 (with≥0.1% Michler's ketone or base)	/	548-62-9
C.I. Basic Violet 14	C.I. 42 510	632-99-5
C.I. Direct Black 38	C.I. 30 235	1937-37-7
C.I. Direct Blue 6	C.I. 22 610	2602-46-2
C.I. Direct Blue 15	/	2429-74-5
C.I. Direct Brown 95	/	16071-86-6
C.I. Direct Red 28	C.I. 22 120	573-58-0
C.I. Disperse Blue 1	C.I. 64 500	2475-45-8
C.I. Disperse Orange 11	C.I. 60 700	82-28-0
C.I. Disperse Yellow 3	C.I. 11 855	2832-40-8
C.I. Solvent Yellow 1 (4-Aminoazobenzene / Aniline Yellow)	C.I. 111 00	60-09-3

C.I. Solvent Yellow 3 (o-Aminoazotoluene / o-Aminoazotoluol)	/	97-56-3
C.I. Pigment Red 104 (Lead chromate molybdate sulphate red)	C.I. 77 605	12656-85-8
C.I. Pigment Yellow 34 (Lead sulfochromate yellow)	C.I. 77 603	1344-37-2

5 List of sensitized disperse dyes

Dyestuff classified to be allergenic (22 kinds)		
C.I. Generic Name	C.I. Structure number	CAS-Nr.
C.I. Disperse Blue 1	C.I. 64 500	2475-45-8
C.I. Disperse Blue 3	C.I. 61 505	2475-46-9
C.I. Disperse Blue 7	C.I. 62 500	3179-90-6
C.I. Disperse Blue 26	C.I. 63 305	/
C.I. Disperse Blue 35	/	12222-75-2
C.I. Disperse Blue 102	/	12222-97-8
C.I. Disperse Blue 106	/	12223-01-7
C.I. Disperse Blue 124	/	61951-51-7
C.I. Disperse Brown 1	/	23355-64-8
C.I. Disperse Orange 1	C.I. 11 080	2581-69-3
C.I. Disperse Orange 3	C.I. 11 005	730-40-5
C.I. Disperse Orange 37	C.I. 11 132	51811-42-8
C.I. Disperse Orange 59	C.I. 11 132	/
C.I. Disperse Orange 76	C.I. 11 132	/
C.I. Disperse Red 1	C.I. 11 110	2872-52-8
C.I. Disperse Red 11	C.I. 62 015	2872-48-2
C.I. Disperse Red 17	C.I. 11 210	3179-89-3
C.I. Disperse Yellow 1	C.I. 10 345	119-15-3
C.I. Disperse Yellow 3	C.I. 11 855	2832-40-8
C.I. Disperse Yellow 9	C.I. 10 375	6373-73-5
C.I. Disperse Yellow 39	/	/
C.I. Disperse Yellow 49	/	/

6 List of other prohibited dyes

Other banned dyes list (6 kinds)		
C.I. Generic Name	C.I. Structure number	CAS-Nr.
C.I. basic green 4（oxalate）	/	2437-29-8
C.I. basic green 4 (chloride)	/	569-64-2
C.I. basic green 4 (free)	/	10309-95-2
C.I. Navy Blue	Index-Nr.611-070-00-2	118685-33-9
	EG-Nr.405-665-4	/
C.I. Disperse Yellow 23	C.I. 26 070	6250-23-3
C.I. Disperse Orange 149	/	85136-74-9

7 List of banned organochlorine carriers

List of banned organochlorine carriers (13 kinds)
Dichlorobenzenes
Trichlorobenzenes
Tetrachlorobenzenes
Pentachlorobenzenes
Hexachlorobenzene
Chlorotoluenes
Dichlorotoluenes
Trichlorotoluenes
Tetrachlorotoluenes
Pentachlorotoluene
α-chlorotoluene
α,α,α-trichlorotoluene
α,α,α,4-tetrachlorotoluene

8 List of prohibited flame retardants

Forbidden flame retardant additives (21 kinds)			
name	CAS-Nr.	name	CAS-Nr.
Polybrominated biphenyles（PBB）	59536-65-1	Tri-(2,3-dibromopropyl)-phosphate（TRIS）	126-72-7
Tris-(aziridinyl)-phosphinoxide)（TEPA）	545-55-1	Pentabromodiphenylether（pentaBDE）	32534-81-9
Octabromodiphenylether（octaBDE）	32536-52-0	Decabromodiphenyl ether（DecaBDE）	1163-19-5
Hexabromocyclododecane（HBCDD）	25637-99-4 3194-55-6	Short chainChlorinated paraffins (C10-13)	85535-84-8
Tris(2-chloroethyl) phosphate(TCEP)	115-96-8	2,2-bis(bromomethyl)-1,3-propanediol（BBMP）	3296-90-0
Bis-(2,3-dibromopropyl)phosphate（BIS）	5412-25-9	Boric acid	10043-35-3, 11113-50-1

Diboron trioxide	1303-86-2	Disodium tetraborate,anhydrous	1303-96-4, 1330-43-4, 12179-04-3
Heptabromodiphenylethers	68928-80-3	Hexabromodiphenylether	36483-60-0
Sodium borate hydrate	12267-73-1	Tetraboromobisphenol A	79-94-7
Tetrabromodiphenylether	/	Tri(1,3-dichloroisopropyl) phosphate	13674-87-8
Trixylylphosphate	25155-23-1	-	-

9 List of chlorinated phenol(19 kinds)

name	CAS-Nr.	name	CAS-Nr.
Pentachlorophenol	87-86-5	2,3,5,6-Tetrachlorphenol	935-95-5
2,3,4,6-Tetrachlorphenol	58-90-2	2,3,4,5-Tetrachlorphenol	4901-51-3
2,3,4-Trichlorophenol	15950-66-0	2,3,5-Trichlorophenol	933-78-8
2,3,6-Trichlorophenol	933-75-5	2,4,5-Trichlorophenol	95-95-4
2,4,6-Trichlorophenol	88-06-2	3,4,5-Trichlorophenol	609-19-8
2,3-Dichlorophenol	576-24-9	2,4-Dichlorophenol	120-83-2
2,5-Dichlorophenol	583-78-8	2,6-Dichlorophenol	87-65-0
3,4-Dichlorophenol	95-77-2	3,5-Dichlorophenol	591-35-5
2-Chlorophenol	95-57-8	3-Chlorophenol	108-43-0
4-Chlorophenol	106-48-9	-	-

10 List of N-nitrosamines(9 kinds)

name	CAS-Nr.	name	CAS-Nr.
N-nitroso dimethylamine	62-75-9	N-nitroso diethylamine	55-18-5
N-nitroso dipropylamine	621-64-7	N-nitroso dibutylamine	924-16-3
N-nitroso piperidine	100-75-4	N-nitroso pyrrodine	930-55-2
N-nitroso morpholine	58-89-2	N-nitroso-Nmethylaniline	614-00-6
N-nitroso-N-ethylaniline	612-64-6	-	-

11 List of organotin compounds(10 kinds)

name	CAS-Nr.	name	CAS-Nr.
Dibutyltin(DBT)	14488-53-0	Dioctyltin(DOT)	250252-87-0
Monobutyltin(MBT)	78763-54-9	Tributyltin(TBT)	36643-28-4
Tricylcohexyltin(TCyHT)	3047-10-7	Trimethyltin(TMT)	1066-45-1
Trioctyltin(TOT)	688-73-3	Triphenyltin(TPhT)	668-34-8
Tripropyltin(TPT)	761-44-4	Monooctyltin（MOT）	3091-25-6

12 List of polycyclic aromatic hydrocarbons (PAH) (24 kinds)

name	CAS-Nr.	name	CAS-Nr.
Acenaphtene	83-32-9	Acenaphthylene	208-96-8
Anthracene	120-12-7	Benzo[a]anthracene	56-55-3
Benzo[a]pyrene	50-32-8	Benzo[b]fluoranthene	205-99-2
Benzo[e]pyrene	192-97-2	Benzo[ghi]perylene	191-24-2
Bznzo[j]fluoranthene	205-82-3	Benzo[k]fluoranthene	207-08-9
Chrysene	218-01-9	Cyclopenta[c,d]pyrene	27208-37-3
Dibenzo[a,h]anthracene	53-70-3	Dibenzo[a,e]pyrene	192-65-4
Dibenzo[a,h]pyrene	189-64-0	Dibenzo[a,i]pyrene	189-55-9
Dibenzo[a,l]pyrene	191-30-0	Fluoranthene	206-44-0
Fluorene	86-73-7	Indeno[1,2,3-cd]pyrene	193-39-5
1-Methylpyrene	2381-21-7	Naphthalene	91-20-3
Phenanthrene	85-01-8	Pyrene	129-00-0

13 List of perfluorinated and polyfluorinated compounds (33 kinds)

name	CAS-Nr.	name	CAS-Nr.
Perfluorooctane sulfonates (PFOS)	1763-23-1	Perfluorooctane sulfonamide (PFOSA)	754-91-6
Perfluorooctane sulfonfluoride (PFOSF/POSF)	307-35-7	N-Methyl perfluorooctane sulfonamide(N-Me-FOSA)	31506-32-8
N-Ethyl perfluorooctane sulfonamide (N-Et-FOSA)	4151-50-2	N-Methyl perfluorooctane sulfonamide ethanol (N-Me-FOSE)	24448-09-7
N-Ethyl perfluorooctane sulfonamide ethanol (N-Et-FOSE)	1691-99-2	Perfluoroheptanoic acids (PFHpA)	375-85-9
Perfluorooctanoic acids (PFOA)	335-67-1	Perfluorononanoic acids (PFNA)	375-95-1
Perfluorodecanoic acids (PFDA)	335-76-2 3108-42-7 3830-45-3	Henicosafluoroundecanoic acid (PFUdA)	2058-94-8
Tricosafluorododecanoic acid (PFDoA)	307-55-1	Pentacosafluorotridecanoic acid (PFTrDA)	72629-94-8
Heptacosafluorotetradecanoic acid (PFTeDA)	376-06-7	Perfluorobutanoic acid(PFBA)	375-22-4
Perfluoropentanoic acid(PFPeA)	2706-90-3	Perfluorohexanoic acid(PFPeA)	307-24-4
Perfluoro(3,7-dimethyloctanoic acid)(PF-3,7-DMOA)	172155-07-6	Perfluorobutane sulfonic acid (PFBS)	375-73-5
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	Perfluoroheptane sulfonic acid (PFBS)	375-92-8
Henicosafluorodecane sulfonic acid (PFDS)	335-77-3	7H-perfluoro heptanoic acid (7HPFHpA)	1546-95-8

2H,2H,3H,3H-Perfluoroundecanoic acid (4HPFUnA)	34598-33-9	1H,1H,2H,2H-Perfluorooctane sulfonic acid(1H,1H,2H,2H-PFOS)	27619-97-2
1H.1H.2H.2H-Perfluoro-1-hexanol(4:2 FTOH)	2043-47-2	1H.1H.2H.2H-Perfluoro-1-octanol(6:2 FTOH)	647-42-7
1H.1H.2H.2H-Perfluoro-1-decanol(8:2 FTOH)	678-39-7	1H.1H.2H.2H-Perfluoro-1-dodecanol(10:2 FTOH)	865-86-1
1H.1H.2H.2H-Perfluorooctyl acrylate(6:2 FTA)	17527-29-6	1H.1H.2H.2H-Perfluorodecyl acrylate(8:2 FTA)	27905-45-9
1H.1H.2H.2H-Perfluorododecyl acrylate(10:2 FTA)	17741-60-5	-	-

14 List of other chemical limited substances (7 kinds)

name	CAS-Nr.	name	CAS-Nr.
N-methyl-2-pyrrolidone	872-50-4	N,N-dimethylformamide; dimethyl formamide	127-19-5
Quinoline	91-22-5	4-chloro-o-toluidine hydrochloride	3165-93-3
2-Naphthylammonium acetate	553-00-4	2,4-diaminoanisole sulphate	39156-41-7
2,4,5-trimethylaniline hydrochloride	21436-97-5	-	-

VI. Manufacturing Restricted Substance List（MRSL）

This document complies with/conforms to standards such as: China GB-18401-2010 "National General Safety Technical Code for Textile Product", GB31701-2015 "Technical Specification for the Safety of [Control and Prevent] Products for Infants and Children" and other relevant regulations and market requirements, the SVHC list of EU's REACH regulation (updated to 2023.1.17), EU Biocidal Products Regulation (EU 528/2012), the US Consumer Product Safety Improvement Act (CPSIA), the Washington Children's Safe Product Act (WCSPA), California Proposition 65, 2023 AFIRM RSL, ZDHC MRSL (version 3.0), etc. ANTA Sports will conduct revision and update simultaneously with the update of the standards involved (if any).

Table 1 - Manufacturing Restricted Substances List (MRSL)

1A、Akylphenol (AP) and Alkylphenol Ethoxylates (APEOs): Including All Isomers						
Potential Uses：APEOs can be used as or found in: detergents, scouring agents, spinning oils, wetting agents, softeners, emulsifier/dispersing agents for dyes and printing formulations, impregnating agents, de-gumming agents / auxiliaries for silk production, dyes and pigment preparations, polyester padding and down/feather fillings.						
Substance or Substance Group		**CAS NO.**	**Production limited material parameters**			
			Product type may be involved	**Supplier Guidance**	**Formulation Limit**	**General Techniques for Analysing Chemicals**
Nonylphenol (NP), mixed isomers	壬基酚(NP)，混合同分异构体	104-40-5	Textile	No intentional use	250 ppm	LC-MS
		11066-49-2	Leather	No intentional use	250 ppm	LC-MS
		25154-52-3	Polymers (R,F,A)	No intentional use	250 ppm	
		84852-15-3				
Octylphenol (OP), mixed isomers	辛基酚(OP)，混合同分异构体	140-66-9	Textile	No intentional use	250 ppm	LC-MS
		1806-26-4	Leather	No intentional use	250 ppm	LC-MS
		27193-28-8	Polymers (R,F,A)	No intentional use	250 ppm	

Octylphenol ethoxylates (OPEO)	辛基酚聚氧乙烯醚 (OPEO)	9002-93-1	Textile	No intentional use	250 ppm	LC-MS
		9036-19-5	Leather	No intentional use	250 ppm	LC-MS
		68987-90-6	Polymers (R,F,A)	No intentional use	250 ppm	
Nonylphenol ethylates (NPEO)	壬基酚聚氧乙烯醚 (NPEO)	9016-45-9	Textile	No intentional use	500 ppm	LC-MS
		26027-38-3	Leather	No intentional use	500 ppm	LC-MS
		37205-87-1	Polymers (R,F,A)	No intentional use	500 ppm	
		68412-54-4				
		127087-87-0				

1B、Anti-microbials and Biocides						
Potential Uses：These chemicals have antimicrobial properties, which can be used to preserve formulations, preserve articles to which they are intentionally applied, or providecustomers with benefits like odour control or insect repellency。						
Substance or Substance Group		**CAS NO.**	**Production limited material parameters**			
			Product type may be involved	**Supplier Guidance**	**Formulation Limit**	**General Techniques for Analysing Chemicals**
Dimethylfumarate (DMFu)	富马酸二甲酯	624-49-7	Textile	No intentional use	*10 mg/kg*	ISO 16186:2021
			Leather	No intentional use	*10 mg/kg*	
			Polymers (R,F,A)	No intentional use	*10 mg/kg*	
O-Phenylphenol (+salts)	邻苯基苯酚（及其盐）	90-43-7	Textile	不得有意使用	5000 mg/kg	ISO 22992-1 (Textile),
			Leather	允许作为防腐剂，直到配方限制	5000 mg/kg	EN 17134
			Polymers (R,F,A)	不适用	不适用	ISO 13365-1 (Leather)
Triclosan	三氯生	3380-34-5	Textile	No intentional use	250 mg/kg	Solvent extraction, LC MS, DAD
			Leather	No intentional use	250 mg/kg	ISO 22992-2
			Polymers (R,F,A)	No intentional use	250 mg/kg	

Permethrin	氯菊酯	52645-53-1	Textile	No intentional use	250 mg/kg	Solvent extraction, LC MS
			Leather	No intentional use	250 mg/kg	GC MS
			Polymers (R,F,A)	No intentional use	250 mg/kg	

1C、Chlorinated Paraffins

Potential Uses：These are occasionally used as flame retardants and PVC additives in certain industries. These are also used as fat liquoring agents in leather processing.

Substance or Substance Group		CAS NO.	Production limited material parameters			
			Product type may be involved	Supplier Guidance	Formulation Limit	General Techniques for Analysing Chemicals
Short-chain Chlorinated Paraffins (SCCPs) (C10-C13)	短链氯化石蜡	85535-84-8	Textile	No intentional use	250 mg/kg	ISO 22818:2021
			Leather	No intentional use	250 mg/kg	
			Polymers (R,F,A)	No intentional use	250 mg/kg	
Medium-chain Chlorinated Paraffins (MCCPs) (C14-C17)	中链氯化石蜡	85535-85-9	Textile	No intentional use	250 mg/kg	ISO 22818:2021
			Leather	No intentional use	250 mg/kg	
			Polymers (R,F,A)	No intentional use	250 mg/kg	

1D、Chlorobenzenes and Chlorotoluenes

Potential Uses：Chlorobenzenes and chlorotoluenes (chlorinated aromatic hydrocarbons) can be used as carriers in the dyeing process of polyester or wool/polyester fibres.They can also be used as solvents. Additionally, they can be found in colourants and specialty chemicals as an impurity.

Substance or Substance Group		CAS NO.	Production limited material parameters			
			Product type may be involved	Supplier Guidance	Formulation Limit	General Techniques for Analysing Chemicals
1,2-Dichlorobenzene	1,2-二氯苯	95-50-1	Textile	No intentional use	500 mg/kg	EN 17137 Confirmation analysis may be required to avoid false positives.
			Leather	No intentional use	500 mg/kg	
			Polymers (R,F,A)	No intentional use	500 mg/kg	
Monochlorobenzene	一氯苯	108-90-7	Textile	No intentional use	Total 200 mg/kg	EN 17137 Confirmation analysis may be required to avoid false positives.
1,3-Dichlorobenzene	1,3-二氯苯	541-73-1			Tetrachlorotoluene and Trichlorotoluene 10 mg/kg each	
1,4-Dichlorobenzene	1,4-二氯苯	106-46-7	Leather	No intentional use	Total 200 mg/kg	
1,2,3-Trichlorobenzene	1,2,3-三氯苯	87-61-6			Tetrachlorotoluene and Trichlorotoluene 10 mg/kg each	
1,2,4-Trichlorobenzene	1,2,4-三氯苯	120-82-1	Polymers (R,F,A)	No intentional use	Total 200 mg/kg	

1,3,5-Trichlorobenzene	1,3,5-三氯苯	108-70-3			Tetrachlorotoluene and Trichlorotoluene 10 mg/kg each	
1,2,3,4-Tetrachlorobenzene	1,2,3,4-四氯苯	634-66-2				
1,2,3,5-Tetrachlorobenzene	1,2,3,5-四氯苯	634-90-2				
1,2,4,5-Tetrachlorobenzene	1,2,4,5-四氯苯	95-94-3				
Pentachlorobenzene	五氯苯	608-93-5				
Hexachlorobenzene	六氯苯	118-74-1				
2-Chlorotoluene	2-氯甲苯	95-49-8				
3-Chlorotoluene	3-氯甲苯	108-41-8				
4-Chlorotoluene	4-氯甲苯	106-43-4				
2,3-Dichlorotoluene	2,3-二氯甲苯	32768-54-0				
2,4-Dichlorotoluene	2,4-二氯甲苯	95-73-8				
2,5-Dichlorotoluene	2,5-二氯甲苯	19398-61-9				
2,6-Dichlorotoluene	2,6-二氯甲苯	118-69-4				
3,4-Dichlorotoluene	3,4-二氯甲苯	95-75-0				
3,5-Dichlorotoluene	3,5-二氯甲苯	25186-47-4				
2,3,4-Trichlorotoluene	2,3,4-三氯甲苯	7359-72-0				
2,3,6-Trichlorotoluene	2,3,6-三氯甲苯	2077-46-5				
2,4,5-Trichlorotoluene	2,4,5-三氯甲苯	6639-30-1				
2,4,6-Trichlorotoluene	2,4,6-三氯甲苯	23749-65-7				

3,4,5-Trichlorotoluene	3,4,5-三氯甲苯	21472-86-6				
2,3,4,5-Tetrachlorotoluene	2,3,4,5-四氯甲苯	76057-12-0				
2,3,5,6-Tetrachlorotoluene	2,3,5,6-四氯甲苯	29733-70-8				
2,3,4,6-Tetrachlorotoluene	2,3,4,6-四氯甲苯	875-40-1				
Pentachlorotoluene	五氯甲苯	877-11-2				

1E、Chlorophenols

Potential Uses：Chlorophenols are polychlorinated compounds used as preservatives or pesticides. Pentachlorophenol (PCP) and tetrachlorophenol (TeCP) have been used in the past to prevent mould when storing/ transporting, raw hides and leather. They are now regulated and should not be used.

Substance or Substance Group		CAS NO.	Production limited material parameters			
			Product type may be involved	Supplier Guidance	Formulation Limit	General Techniques for Analysing Chemicals
2- chlorophenol	2-氯酚	95-57-8	Textile	No intentional use	Total 50 mg/kg	GC-MS DIN 50009:2021 or EN ISO 17070
3- chlorophenol	3-氯酚	108-43-0	Leather	No intentional use	Total 50 mg/kg	
4- chlorophenol	4-氯酚	106-48-9	Polymers (R,F,A)	No intentional use	Total 50 mg/kg	
2,3-dichlorophenol	2,3-二氯苯酚	576-24-9				
2,4-dichlorophenol	2,4-二氯苯酚	120-83-2				
2,5-dichlorophenol	2,5-二氯苯酚	583-78-8				
2,6-dichlorophenol	2,6-二氯苯酚	87-65-0				
3,4-dichlorophenol	3,4-二氯苯酚	95-77-2				
3,5-dichlorophenol	3,5-二氯苯酚	591-35-5				

2,3,4-trichlorophenol	2,3,4-三氯苯酚	15950-66-0				
2,3,5-trichlorophenol	2,3,5-三氯苯酚	933-78-8				
2,3,6-trichlorophenol	2,3,6-三氯苯酚	933-75-5				
2,4,5-trichlorophenol	2,4,5-三氯苯酚	95-95-4				
2,4,6-trichlorophenol	2,4,6-三氯苯酚	88-06-2				
3,4,5-trichlorophenol	3,4,5-三氯苯酚	609-19-8				
2,3,4,5-tetrachlorophenol	2,3,4,5-四氯苯酚	4901-51-3	Textile	No intentional use	Total 15 mg/kg	
2,3,4,6-tetrachlorophenol	2,3,4,6-四氯苯酚	58-90-2	Leather	No intentional use	Total 15 mg/kg	
2,3,5,6-tetrachlorophenol	2,3,5,6-四氯苯酚	935-95-5	Polymers (R,F,A)	No intentional use	Total 15 mg/kg	
Pentachlorophenol	五氯苯酚 (PCP)	87-86-5	Textile	No intentional use	Total 5 mg/kg	
			Leather	No intentional use	Total 5 mg/kg	
			Polymers (R,F,A)	No intentional use	Total 5 mg/kg	

1F、Dyes - Allergenic Disperse Dyes

Potential Uses：Disperse dyes are a class of water- insoluble dyes that penetrate the fibre system of synthetic or manufactured fibres and are held in place by physical forces without forming chemical bonds. Disperse dyes are used in synthetic fibre dyeing (e.g. polyester, acetate, polyamide). Restricted disperse dyes are suspected of causing allergic reactions and should no longer be used for dyeing of textiles.

Substance or Substance Group		CAS NO.	Production limited material parameters			
			Product type may be involved	Supplier Guidance	Formulation Limit	General Techniques for Analysing Chemicals
C.I. Disperse Blue 7	分散蓝 7	3179-90-6	Textile	No intentional use	Total 250 mg/kg	DIN 54231
C.I. Disperse Blue 26	分散蓝 26	3860-63-7	Leather	Not Applicable		
C.I. Disperse Blue 35	分散蓝 35	12222-75-2	Polymers (R,F,A)	Not Applicable		
C.I. Disperse Blue 35	分散蓝 35	56524-77-7				
C.I. Disperse Blue 102	分散蓝 102	12222-97-8				
C.I. Disperse Blue 106	分散蓝 106	12223-01-7				
C.I. Disperse Blue 124	分散蓝 124	61951-51-7				
C.I. Disperse Brown 1	分散棕 1	23355-64-8				
C.I. Disperse Orange 1	分散橙 1	2581-69-3				
C.I. Disperse Orange 3	分散橙 3	730-40-5				
C.I. Disperse Orange 37/59/76	分散橙 37/59/76	13301-61-6				
C.I. Disperse Red 1	分散红 1	2872-52-8				
C.I. Disperse Red 11	分散红 11	2872-48-2				
C.I. Disperse Red 17	分散红 17	3179-89-3				

C.I. Disperse Yellow 1	分散黄 1	119-15-3				
C.I. Disperse Yellow 3	分散黄 3	2832-40-8				
C.I. Disperse Yellow 9	分散黄 9	6373-73-5				
C.I. Disperse Yellow 39	分散黄 39	12236-29-2				
C.I. Disperse Yellow 49	分散黄 49	54824-37-2				

1G、Dyes – Carcinogenic or Equivalent Concern

Potential Uses：Most of these substances are regulated and should no longer be used for dyeing of textiles and leather.For some dyes, it is not possible to directly detect the dye and it must be done by indirect methods as explained in the DIN standard.

Substance or Substance Group		CAS NO.	Production limited material parameters			
			Product type may be involved	Supplier Guidance	Formulation Limit	General Techniques for Analysing Chemicals
C.I. Direct Black 38	C.I. 直接黑 38	1937-37-7	Textile	No intentional use	Total 250 mg/kg	DIN 54231
C.I. Direct Blue 6	C.I. 直接蓝 6	2602-46-2	Leather	No intentional use	Total 250 mg/kg	
C.I. Acid Red 26	C.I. 酸性红 26	3761-53-3	Polymers (R,F,A)	Not Applicable		
C.I. Direct Red 28	C.I. 直接红 28	573-58-0				
C.I. Acid Violet 49	C.I. 酸性紫 49	1694-09-3				
C.I. Basic violet 3 (with Michler's Ketone> 0.1%)	C.I. 碱性紫 (米氏酮> 0.1%)	548-62-9	Textile	No intentional use	Total 250 mg/kg	DIN 54231
C.I. Basic Red 9	C.I. 碱性红 9	569-61-9	Leather	Not Applicable		
C.I. Basic Violet 14	C.I. 碱性紫 14	632-99-5	Polymers (R,F,A)	Not Applicable		
C.I. Disperse Blue 1	C.I. 分散蓝 1	2475-45-8				
C.I. Disperse Blue 3	C.I. 分散蓝 3	2475-46-9				

C.I. Basic Blue 26 (with Michler's Ketone > 0.1%)	C.I. 碱性蓝 26 (米氏酮 > 0.1%)	2580-56-5				
C.I. Basic Green 4 leuco base	C.I. 碱性绿 4	129-73-7				
C.I. Basic Green 4 (malachite green oxalate)	C.I. 碱性绿 4 (孔雀石绿氯化物)	569-64-2				
C.I. Basic Green 4 (malachite green)	C.I. 碱性绿 4 (孔雀石绿草酸盐)	2437-29-8				
C.I. Basic Green 4	C.I. 碱性绿 4 (孔雀石绿)	10309-95-2				
Disperse Orange 11	分散橙 11	82-28-0				

1H、Flame Retardants

Potential Uses：Flame retardant chemicals are deliberately applied to meet legal and contractual flammability standards.The use of the flame retardants listed below, or any halogenated flame retardant, is not permitted (for fashion, sport or outdoor clothing and apparel and home textiles).
It should be noted that there may be certain critical (technical textile) end uses where legally or contractually mandated standards may only be achieved using
these substances (e.g. military, medical, protective clothing, transportation). The formulations will always be deemed ZDHC MRSL NON-CONFORMANT and it is intended that the ZDHC Supplier Platform will appraise the end uses of any flame retardants within an inventory.

Substance or Substance Group		**CAS NO.**	**Production limited material parameters**			
			Product type may be involved	**Supplier Guidance**	**Formulation Limit**	**General Techniques for Analysing Chemicals**
Tris(2-chloroethyl)phosphate (TCEP)	磷酸三(2-氯乙基)酯 (TCEP)	115-96-8	Textile	No intentional use	Total 250 mg/kg	GC-MS and/or LC-MS
Decabromodiphenyl ether (DecaBDE)	十溴二苯醚 (Deca BDE)	1163-19-5	Leather	No intentional use	Total 250 mg/kg	
Tris(2,3,-dibromopropyl)-phosphate (TRIS)	磷酸三（2、3-二溴丙基）酯 (TRIS)	126-72-7	Polymers (R,F,A)	No intentional use	Total 250 mg/kg	

Pentabromodiphenyl ether (PentaBDE)	五溴二苯醚 (PentaBDE)	32534-81-9				
Octabromodiphenyl ether (OctaBDE)	八溴二苯醚 (OctaBDE)	32536-52-0				
Bis(2,3-dibromopropyl)phosphate (BIS)	双(2,3-丙基)酸盐 (BIS)	5412-25-9				
Tris(1-aziridinyl)phosphine oxide) (TEPA)	三-(氮环丙基)-膦化氧 (TEPA)	545-55-1				
Tetrabromobisphenol A (TBBPA)	四溴双酚 A (TBBPA)	79-94-7				
Hexabromocyclododecane (HBCDD)	六溴环十二烷 (HBCDD)	3194-55-6				
2,2-bis(bromomethyl)-1,3-propane-diol (BBMP)	2,2-双(溴甲基)-1,3-丙二醇 (BBMP)	3296-90-0				
Tris(1,3-dichloro-isopropyl)phosphate (TDCP)	磷酸三(1,3-二氯异丙基)酯 (TDCP)	13674-87-8				
Dibromobiphenyls (DiBB)	二溴联苯	Multiple				
Decabromobiphenyl (DecaBB)	十溴联苯	13654-09-6				
Heptabromodiphenyl ether (HeptaBDE)	七溴二苯醚	68928-80-3				
Hexabromodiphenyl ether (HexaBDE)	六溴二苯醚	36483-60-0				
Monobromobiphenyls(MonoBB)	单溴联苯	Multiple				
Monobromodiphenyl ether (MonoBDEs)	一溴二苯醚	Multiple				
Nonabromobiphenyls (NonaBB)	九溴联苯	Multiple				
Nonabromodiphenyl ether (NonaBDE)	九溴二苯醚	63936-56-1				

Octabromobiphenyls (OctaBB)	八溴联苯	Multiple				
Tetrabromobisphenol A bis(2,3-dibromopropylether)	四溴双酚A-双-(2,3-二溴丙基) 醚	21850-44-2				
Tetrabromodiphenyl ether (TetraBDE)	四溴二苯醚	40088-47-9				
Tri-o-cresyl phosphate	磷酸三邻甲酚酯	78-30-8				
Tribromodiphenyl ethers (TriBDEs)	三溴二苯醚	Multiple				
Trimethyl phosphate	磷酸三甲酯	512-56-1				
Tris (2-chloro-1-methylethyl) phosphate (TCPP)	磷酸三 (2-氯丙基) 酯	13674-84-5				
Trixylyl phosphate (TXP)	磷酸三 (二甲苯) 酯	25155-23-1				
Boric acid	硼酸	10043-35-3	Textile	No intentional use	Total 250 mg/kg	Methanol extraction, ICP
		11113-50-1	Leather	No intentional use	Total 250 mg/kg	
Diboron trioxide	三氧化二硼	1303-86-2	Polymers (R,F,A)	No intentional use	Total 250 mg/kg	
Disodium octaborate	氧化硼钠	12008-41-2				
Disodium tetraborate, anhydrous	无水四硼酸钠盐	1303-96-4				
		1330-43-4				
Tetraboron disodium heptaoxide, hydrate	四硼酸二钠	12267-73-1				

1I、Glycols / Glycol Ethers						
Potential Uses：In apparel and footwear, glycol ethers / glycol esters have a wide range of uses including as solvents for finishing/cleaning, printing agents and dissolving and diluting fats, oils and adhesives (e.g. in degreasing or cleaning operations).						
Substance or Substance Group		**CAS NO.**	**Production limited material parameters**			
			Product type may be involved	**Supplier Guidance**	**Formulation Limit**	**General Techniques for Analysing Chemicals**
2-ethoxyethyl acetate	乙二醇乙醚醋酸酯	111-15-9	Textile	No intentional use	50 mg/kg	LC-MS, GC-MS
2-Ethoxyethanol	乙二醇二单乙醚	110-80-5	Leather	No intentional use	50 mg/kg	
Bis (2-methoxyethyl) ether	二甘醇二甲醚	111-96-6	Polymers (R,F,A)	No intentional use	50 mg/kg	
2-methoxyethylacetate	乙二醇甲醚乙酸酯	110-49-6				
2-methoxyethanol	乙二醇甲醚	109-86-4				
Triethylene glycol dimethyl ether	三乙二醇二甲醚	112-49-2				
Ethylene glycol dimethyl ether	乙二醇二甲醚	110-71-4				
2-Methoxypropanol	甲氧基丙醇	1589-47-5	Textile	No intentional use	50 mg/kg	LC-MS, GC-MS
			Leather	SEE CANDIDATE LIST	SEE CANDIDATE LIST	
			Polymers (R,F,A)	No intentional use	50 mg/kg	

2-methoxypropylacetate	2-甲基丙醇乙酸酯	70657-70-4	Textile	No intentional use	50 mg/kg	LC-MS, GC-MS
			Leather	No intentional use	50 mg/kg, 1000 mg/kg (Finishing formulations)	
			Polymers (R,F,A)	Not Applicable	Not Applicable	

1J、Halogenated Solvents

Potential Uses：In apparel and footwear, halogenated solvents are used as finishing/ cleaning and printing agents, for dissolving/ diluting fats, oils and adhesives (e.g. in degreasing or cleaning operations).

Substance or Substance Group		CAS NO.	Production limited material parameters			
			Product type may be involved	Supplier Guidance	Formulation Limit	General Techniques for Analysing Chemicals
1,2-dichloroethane	1,2-二氯乙烷	107-06-2	Textile	No intentional use	5 mg/kg	GC-MS
Methylene chloride	二氯甲烷	75-09-2	Leather	No intentional use	5 mg/kg	
Tetrachloroethylene	四氯乙烷	127-18-4	Polymers (R,F,A)	No intentional use	5 mg/kg	
Benzyl chloride	氯化苄	100-44-7	Textile	No intentional use	50 mg/kg and 100 mg/kg for dyes	GC-MS with confirmatory LC-MS in the event of a positive detection
			Leather	No intentional use	50 mg/kg and 100 mg/kg for dyes	
			Polymers (R,F,A)	No intentional use	50 mg/kg and 100 mg/kg for dyes	

Trichloroethylene	三氯乙烷	79-01-6	Textile	No intentional use	40 mg/kg	GC-MS
			Leather	No intentional use	40 mg/kg	
			Polymers (R,F,A)	No intentional use	40 mg/kg	
1K、Organic Solvents VOC						
Potential Uses **In apparel and footwear, VOCs / solvents are used in processes such as coatings and glues/adhesives.**						
Substance or Substance Group		**CAS NO.**	**Production limited material parameters**			
			Product type may be involved	**Supplier Guidance**	**Formulation Limit**	**General Techniques for Analysing Chemicals**
Benzene	苯	71-43-2	Textile	No intentional use	50 mg/kg	GC-MS
			Leather	No intentional use	50 mg/kg	
			Polymers (R,F,A)	No intentional use	50 mg/kg	
Cresol (all isomers)	甲酚(所有异构体)	1319-77-3	Textile	No intentional use	50 mg/kg	GC-MS
o-cresol	邻甲苯酚	95-48-7	Leather	No intentional use	50 mg/kg	
p-cresol	对甲苯酚	106-44-5	Polymers (R,F,A)	No intentional use	50 mg/kg	
m-cresol	间甲苯酚	108-39-4				

N,Ndimethylacetamide (DMAC)	N,N-二甲基乙酰胺	127-19-5	Textile	No intentional use /EC* (Solvent based PU coating)	1000 mg/kg	GC-MS
			Leather	No intentional use /EC* (Solvent based PU coating)	1000 mg/kg	
			Polymers (R,F,A)	No intentional use /EC* (Solvent based PU coating)	1000 mg/kg	
N,NDimethylformamide (DMFa)	二甲基甲酰胺；N, N-二甲基甲酰胺 (DMFa)	68-12-2	Textile	No intentional use /EC* (Solvent based PU coating)	1000 mg/kg	GC-MS
			Leather	No intentional use /EC* (Solvent based PU coating)	1000 mg/kg	
			Polymers (R,F,A)	No intentional use /EC* (Solvent based PU coating)	1000 mg/kg	

N-Ethyl-2 pyrrolidone (NEP)	N-乙基-2-吡咯烷酮	2687-91-4	Textile	No intentional use /EC* (Solvent based PU coating)	1000 mg/kg	GC-MS
			Leather	No intentional use /EC* (Solvent based PU coating)	1000 mg/kg	
			Polymers (R,F,A)	No intentional use /EC* (Solvent based PU coating)	1000 mg/kg	
N-Methyl-2-Pyrrolidone (NMP)	N-甲基吡咯烷酮; 1-甲基-2-吡咯烷酮 (NMP)	872-50-4	Textile	No intentional use /EC* (Solvent based PU coating)	1000 mg/kg	GC-MS; ISO 19070 (GC-MS)
			Leather	No intentional use /EC* (Solvent based PU coating)	1000 mg/kg	
			Polymers (R,F,A)	No intentional use /EC* (Solvent based PU coating)	1000 mg/kg	

Toluene	甲苯	108-88-3	Textile	No intentional use /EC* (Solvent based PU coating)	500 mg/kg	GC-MS ISO 19070 (GC-MS)
			Leather	No intentional use /EC* (Solvent based PU coating)	500 mg/kg	
			Polymers (R,F,A)	No intentional use /EC* (Solvent based PU coating)	500 mg/kg	
Xylene (all isomers)	二甲苯	1330-20-7	Textile	No intentional use	500 mg/kg	GC-MS
o-Xylene	邻二甲苯	95-47-6	Leather	No intentional use	500 mg/kg	
m-Xylene	间二甲苯	108-38-3	Polymers (R,F,A)	No intentional use	500 mg/kg	
p-Xylene	对二甲苯	106-42-3				

1L、Organotin Compounds

Potential Uses：Organotins are a class of chemicals combining tin and organics such as butyl and phenyl groups. Organotins are predominantly found in the environment as antifoulants in marine paints, but they can also be used as biocides (e.g. antibacterials), catalysts in plastic and glue production and heat stabilisers in plastics/rubber. In textiles and apparel, organotins are associated with plastics/rubber, inks, paints, metallic glitter, polyurethane products and heat transfer material.

Substance or Substance Group		CAS NO.	Production limited material parameters			
			Product type may be involved	Supplier Guidance	Formulation Limit	General Techniques for Analysing Chemicals
Dibutyltin (DBT)	二丁基锡化物	Multiple, including 683-18-1	Textile	No intentional use	20 mg/kg	Solvent extraction, GC MS, ISO TS 16179, ISO 22744-1
			Leather	No intentional use	20 mg/kg *EXCEPTION - 100 mg/kg for Polyurethane based thickeners - See notes below)	
			Polymers (R,F,A)	No intentional use	20 mg/kg	
Dipropyltin compounds(DPT)	二丙基锡化物	Multiple, including 867-36-7	Textile	No intentional use	5 mg/kg	Solvent extraction, GC MS, ISO TS 16179
Mono- and tri- butyltin derivatives	单丁基锡和三丁基锡衍生物	Multiple, including 1118-46-3 1461-22-9	Leather	No intentional use	5 mg/kg	Solvent extraction,GC MS, ISO TS 16179
Mono-, di- and trimethyltin derivatives	一甲基锡、二甲基锡和三甲基锡衍生物	Multiple, including 993-16-8 753-73-1 1066-45-1	Polymers (R,F,A)	No intentional use	5 mg/kg	Solvent extraction, GC MS, ISO TS 16179

Mono-, di- and trioctyltin derivatives	单辛基锡、二辛基锡和三辛基锡衍生物	Multiple, including 3091-25-6 3542-36-7 2587-76-0				Solvent extraction,GC MS, ISO TS 16179
Mono-, di- and triphenyltin derivatives	单苯基锡、二苯基锡和三苯基锡衍生物	Multiple, including 1124-19-2 1135-99-5 639-58-7				Solvent extraction, GC MS, ISO TS 16179
Tetrabutyltin compounds (TeBT)	四丁基锡化合物	Multiple, including 1461-25-2	Textile	No intentional use	1 mg/kg	Solvent extraction,GC MS, ISO TS 16179
Tetraethyltin compounds (TeET)	四乙基锡化物	Multiple, including 597-64-8	Leather	No intentional use	1 mg/kg	Solvent extraction, GC MS, ISO TS 16179
Tetraoctyltin compounds (TeOT)	四正辛基锡化合物	Multiple including 3590-84-9	Polymers (R,F,A)	No intentional use	1 mg/kg	Solvent extraction,GC MS, ISO TS 16179
Tricyclohexyltin (TCyHT)	三环己基锡化合物	Multiple including 3091-32-5				Solvent extraction, GC MS, ISO TS 16179
Tripropyltin Compounds (TPT)	三正丙基锡化合物	Multiple including 2279-76-7				Solvent extraction, GC MS, ISO TS 16179

1M、Other/Miscellaneous Chemicals						
Potential Uses：These are other chemicals / substances / process with a usage ban.						
Substance or Substance Group		**CAS NO.**	**Production limited material parameters**			
			Product type may be involved	**Supplier Guidance**	**Formulation Limit**	**General Techniques for Analysing Chemicals**
(Free) Aniline	苯胺	62-53-3	Textile	No intentional use	Indigo 2000 mg/kg Other dyes 500 mg/kg	Indigo - Reductive method (ISO 14362) Other - Non-reductive (ISO 14362 without reductive step) (ISO 14362)
			Leather	No intentional use	Indigo 2000 mg/kg Other dyes 500 mg/kg	
			Polymers (R,F,A)	Not Applicable	Not Applicable	
2- (2-Aminoethylamino) ethanol (AEEA)	羟乙基乙二胺	111-41-1	Textile	No intentional use	100 mg/kg	Solvent extraction, LC MS/MS or GC-MS (Substance is not stable in aqueous matrices or solutions)
			Leather	No intentional use	100 mg/kg	
			Polymers (R,F,A)	No intentional use	100 mg/kg	

Bisphenol A (BPA)	双酚 A	80-05-7	Textile	No intentional use	100 mg/kg	Solvent extraction, LC MS/MS, GC MS
			Leather	No intentional use	100 mg/kg	
			Polymers (R,F,A)	Not Applicable	Not Applicable	
Borate, zinc salt	硼酸锌盐	1332-07-6	Textile	No intentional use	1000 mg/kg	Acid digestion, ICP
D4 (Octamethylcyclotetrasiloxane)	八甲基环四硅氧烷	556-67-2	Leather	No intentional use	1000 mg/kg	TEGEWA method, Chloroform extraction, GC/MS
D5 (Decamethylcyclopentasiloxane)	环五聚二甲基硅氧烷	541-02-6	Polymers (R,F,A)	No intentional use	1000 mg/kg	TEGEWA method, Chloroform extraction, GC/MS
D6 (Dodecamethylcyclohexasiloxane)	十二甲基环六硅氧烷	540-97-6				TEGEWA method, Chloroform extraction, GC/MS
Thiourea	硫脲	62-56-6				Solvent extraction, LC MS/MS, LC-DAD MS
Diazene-1,2-dicarboxamide [C,C`-azodi (formamide)] (ADCA)	二氮烯-1,2-二甲酰胺 [偶氮二甲酰胺, ADCA]	123-77-3				LC/MS, LC/DAD

Perboric acid, sodium salt	过硼酸钠	Multiple, including 11138-47-9 15120-21-5 7632-04-04 16940-66-2 13517-20-9 125022-34-6 90568-23-3				Methanol extraction, ICP
Quinoline	喹啉	91-22-5				DIN 54231, LC-MS
Silica (particles of respirable size)	二氧化硅(可吸入大小的颗粒)	14464-46-1	Textile	No intentional use of silica-based materials for sandblasting		Process due diligence, no test method available
			Leather	No intentional use of silica-based materials for sandblasting		
			Polymers (R,F,A)	No intentional use of silica-based materials for sandblasting		
Titanium Dioxide	二氧化钛	13463-67-7	Textile	No intentional use of solid mixtures of TiO2 in powder form where >1% (w/w) of TiO2 particles have aerodynamic diameter ≤10 µm.	1% (w/w) of TiO2 particles have aerodynamic diameter ≤10 µm. (Liquid mixtures or emulsions or pastes containing TiO2,having proper GHS/CLP classification, are allowed for use.)	For powder mixtures containing TiO2, the formulator should provide confirmed data to demonstrate conformance with particle size requirements for TiO2.

			Leather	No intentional use of solid mixtures of TiO2 in powder form where >1% (w/w) of TiO2 particles have aerodynamic diameter ≤10 µm.	1% (w/w) of TiO2 particles have aerodynamic diameter ≤10 µm. (Liquid mixtures or emulsions or pastes containing TiO2,having proper GHS/CLP classification, are allowed for use.)	
			Polymers (R,F,A)	No intentional use of solid mixtures of TiO2 in powder form where >1% (w/w) of TiO2 particles have aerodynamic diameter ≤10 µm.	1% (w/w) of TiO2 particles have aerodynamic diameter ≤10 µm. (Liquid mixtures or emulsions or pastes containing TiO2,having proper GHS/CLP classification, are allowed for use.)	

1N、Perfluorinated and Polyfluorinated Chemicals (PFCs)

Potential Uses：Formulations containing PFAS (Per and Polyfluorinated alkylated substances) are often used for water or stain repellency.The use of any formulation based on, or including PFAS, including those listed below, is not permitted (for fashion, sport or outdoor clothing and apparel andhome textiles).
It should be noted that there may be certain critical (technical textile) end uses where legally or contractually mandated standards may only be achieved using
these substances (e.g. military, medical, protective clothing, transportation). The formulations will always be deemed ZDHC MRSL NON-CONFORMANT and it is intended that the ZDHC Supplier Platform will appraise the end uses of any PFAS within an inventory.Note on PFAS and testing: There are thousands of individual chemicals that are categorised as PFAS but only a few are actually useful in terms of oil / water repellency and their use is always accompanied by the presence of common, known 'marker' chemicals such as those listed below. ZDHC approved MRSL certifiers will check for the deliberate use of PFAS or high levels of contamination of PFAS by testing for the marker chemicals listed below and ,at their discretion, use a screening test for total fluorine (quantification limit: 50mg/kg) followed by confirmatory testing for specific series e.g. the other PFAS mentioned in the PFAS ZDHC Guidance Sheet. ZDHC approved MRSL certifier reserves the right to request or carry out test for any specific PFAS chemical using appropriate test method to check MRSL conformance.

Substance or Substance Group		CAS NO.	Production limited material parameters			
			Product type may be involved	Supplier Guidance	Formulation Limit	General Techniques for Analysing Chemicals
Perfluorobutane sulfonic acid (PFBS)	全氟丁基磺酸盐	375-73-5	Textile	No intentional use	1000 µg/kg	LC-MS or GC-MS
Perfluorohexane sulfonic acid (PFHxS)	全氟己烷磺酸	355-46-4	Leather	No intentional use	1000 µg/kg	
Perfluorodecane sulfonic acid (PFDS)	全氟癸烷磺酸	335-77-3	Polymers (R,F,A)	No intentional use	1000 µg/kg	
Perfluorobutanoic acid (PFBA)	七氟丁酸	375-22-4				
Perfluorodecanoic acid (PFDA)	全氟癸酸	335-76-2				
4:2 Fluorotelomer alcohols (4:2 FTOH)	4:2 全氟辛基乙醇	2043-47-2				
6:2 Fluorotelomer alcohols (6:2 FTOH)	6:2 全氟辛基乙醇	647-42-7				
8:2 FTOH	8:2 全氟辛基乙醇	678-39-7				

10:2 Fluorotelomer alcohols (10:2 FTOH)	10:2 全氟辛基乙醇	865-86-1				
Perfluorooctane sulfonic acid (PFOS) and related susbstances	全氟辛烷磺酸及其相关物质	Multiple including 1763-23-1	Textile	No intentional use	2000 µg/kg	LC-MS or GC-MS
			Leather	No intentional use	2000 µg/kg	
			Polymers (R,F,A)	No intentional use	2000 µg/kg	
Perfluorohexanoic acid (PFHxA) and related substances	全氟己酸及其相关物质	Multiple, including 307-24-4	Textile	No intentional use	PFHxA = 25 µg/kg PFHxA related substances =1000µg/kg	LC-MS or GC-MS
			Leather	No intentional use	PFHxA = 25 µg/kg PFHxA related substances =1000µg/kg	
			Polymers (R,F,A)	No intentional use	PFHxA = 25 µg/kg PFHxA related substances =1000µg/kg	
PFOA	全氟辛酸	Multiple including 335-67-1	Textile	No intentional use	PFHxA = 25 µg/kg PFHxA related substances =1000µg/kg	LC-MS or GC-MS
			Leather	No intentional use	PFHxA = 25 µg/kg PFHxA related substances =1000µg/kg	
			Polymers (R,F,A)	No intentional use	PFHxA = 25 µg/kg PFHxA related substances =1000µg/kg	

1O、Phthalates – including all other esters of ortho-phthalic acid						
Potential Uses：Esters of ortho-phthalic acid (phthalates) are a class of organic compounds commonly added to plastics to increase flexibility. They sometimes are used to facilitate moulding of plastic by decreasing its melting temperature.Phthalates can be found in:Flexible plastic components (e.g. PVC),Print pastes,Adhesives,Plastic buttons,Plastic sleevings,Polymeric coatings.All esters of ortho-phthallic acid are restricted including those listed below.						
Substance or Substance Group		**CAS NO.**	**Production limited material parameters**			
			Product type may be involved	**Supplier Guidance**	**Formulation Limit**	**General Techniques for Analysing Chemicals**
Di(ethylhexyl) phthalate (DEHP)	邻苯二甲酸二(2-乙基己)酯(DEHP)	117-81-7	Textile	No intentional use	2000 μg/kg	GC-MS ISO 14389
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	邻苯二甲酸正戊异戊酯(含支链和直链)	68515-50-4	Leather	No intentional use	2000 μg/kg	
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	邻苯二甲酸正戊异戊酯	84777-06-0	Polymers (R,F,A)	No intentional use	2000 μg/kg	
Di-iso-pentyl phthalates (DIPP)	邻苯二甲酸二异戊酯	605-50-5				
Di-n-pentyl phthalate (DnPP)	邻苯二甲酸二戊酯	131-18-0				
Bis(2-methoxyethyl) phthalate (DMEP)	邻苯二甲酸二甲氧乙酯(DMEP)	117-82-8				
Di-n-octyl phthalate (DNOP)	邻苯二甲酸二正辛酯(DNOP)	117-84-0				
Di-iso-decyl phthalate (DIDP)	邻苯二甲酸二异癸酯(DIDP)	26761-40-0				
Di-isononyl phthalate (DINP)	邻苯二甲酸二异壬酯(DINP)	28553-12-0				

Di-n-hexyl phthalate (DnHP)	邻苯二甲酸二己酯(DnHP)	84-75-3				
Dibutyl phthalate (DBP)	邻苯二甲酸二丁酯(DBP)	84-74-2				
Butyl benzyl phthalate (BBP)	邻苯二甲酸丁苄酯(BBP)	85-68-7				
Dinonyl phthalate (DNP)	邻苯二甲酸二壬酯(DNP)	84-76-4				
Diethyl phthalate (DEP)	邻苯二甲酸二乙酯(DEP)	84-66-2				
Di-n-propyl phthalate (DPRP)	邻苯二甲酸二丙酯(DPRP)	131-16-8				
Di-isobutyl phthalate (DIBP)	邻苯二甲酸二异丁酯(DIBP)	84-69-5				
Di-cyclohexyl phthalate (DCHP)	邻苯二甲酸二环己酯(DCHP)	84-61-7				
Di-iso-octyl phthalate (DIOP)	邻苯二甲酸二异辛酯(DIOP)	27554-26-3				
1,2-benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	邻苯二酸-二(C7-11 支链与直链)烷基酯(DHNUP)	68515-42-4				
Diisohexyl phthalate	邻苯二甲酸二烷基酯	71850-09-4				
n-Pentyl-isopentyl phthalate	邻苯二甲酸正戊基异戊基酯	776297-69-9				

1,2-benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	邻苯二酸-二(C6-8 支链)烷基酯（富C7）(DIHP)	71888-89-6				

1P、Polycyclic Aromatic Hydrocarbons (PAHs)

Potential Uses：Oil containing PAHs are added to rubber and plastics as a softener or extender and may be found in rubber, plastics, lacquers, and coatings. Within the footwear producing industry, PAHs are often found in the outsoles of footwear and in printing pastes for screen prints. PAHs can be present as impurities in carbon black dyestuffs.

Substance or Substance Group		CAS NO.	Production limited material parameters			
			Product type may be involved	Supplier Guidance	Formulation Limit	General Techniques for Analysing Chemicals
Benzo[a]pyrene (BaP)	苯并芘(BaP)	50-32-8	Textile	No intentional use	20 mg/kg	GC-MS AfPS GS 2019
			Leather	No intentional use	20 mg/kg	
			Polymers (R,F,A)	No intentional use	20 mg/kg	
Naphthalene 3	萘	91-20-3	Textile	No intentional use	Total (3) = 200 mg/kg	GC-MS AfPS GS 2019
			Leather	No intentional use	200 mg/kg	
			Polymers (R,F,A)	No intentional use	Total (3) = 200 mg/kg	
Acenaphthene 3,4	萘嵌戊烷	83-32-9	Textile	No intentional use	Total (3) = 200 mg/kg	GC-MS AfPS GS 2019
Acenaphthylene 3,4	苊	208-96-8	Leather	No intentional use	Total (4) = 200 mg/kg	

Anthracene 3,4	蒽	120-12-7	Polymers (R,F,A)	No intentional use	Total (3) = 200 mg/kg	
Benzo[a]anthracene 3,4	1,2-苯并蒽	56-55-3				
Benzo[b]fluoranthene 3,4	苯并(b)荧蒽	205-99-2				
Pyrene 3,4	芘	129-00-0				
Benzo[ghi]perylene 3,4	1,12-苯并苝	191-24-2				
Benzo[e]pyrene 3,4	苯并[e]芘	192-97-2				
Indeno[1,2,3-cd]pyrene 3,4	茚并(1,2,3-cd)芘	193-39-5				
Benzo[j]fluoranthene 3,4	苯并[j]荧蒽	205-82-3				
Fluoranthene 3,4	荧蒽	206-44-0				
Benzo[k]fluoranthene 3,4	苯并(k)荧蒽	207-08-9				
Chrysene 3,4	屈	218-01-9				
Dibenz[a,h]anthracene 3,4	二苯蒽	53-70-3				
Phenanthrene 3,4	菲	85-01-8				
Fluorene 3,4	芴	86-73-7				

1Q、Restricted Aromatic Amines (Cleavable from Azo-colourants)						
Potential Uses：Azo dyes and pigments are colourants that incorporate one or several azo groups (-N=N-) bound with aromatic compounds. Thousands of azo dyes exist, but only those that degrade to form the listed cleavable amines are restricted. Azo dyes that release these amines are regulated and should no longer be used for dyeing of textiles or leather.The four substances listed below highlighted with an asterisk are salts.						
Substance or Substance Group		**CAS NO.**	**Production limited material parameters**			
			Product type may be involved	**Supplier Guidance**	**Formulation Limit**	**General Techniques for Analysing Chemicals**
2-Naphthylamine	2-萘胺	91-59-8	Textile	No intentional use	100 mg/kg	ISO 14362
2,4-Xylidine	2,4-二甲基苯胺	95-68-1	Leather	No intentional use	100 mg/kg	
2,4,5-Trimethylaniline	2,4,5-三甲基苯胺	137-17-7	Polymers (R,F,A)	No intentional use	100 mg/kg	
2,6-Xylidine	2,6-二甲基苯胺	87-62-7				
3,3'-Dichlorobenzidine	3,3'-二氯联苯胺	91-94-1				
3,3'-Dimethoxylbenzidine	3,3'-二甲氧基联苯胺	119-90-4				
3,3'-Dimethylbenzidine	3,3'-二甲基联苯胺	119-93-7				
4-Aminoazobenzene	4-氨基偶氮苯	60-09-3				
4-Aminobiphenyl	4-氨基联苯	92-67-1				
4-Chloro-o-toluidine	4-氯-邻甲苯胺	95-69-2				
4-Chloroaniline	对氯苯胺	106-47-8				
2,4-Diaminoanisol	4-甲氧基间苯二胺	615-05-4				
2,4-Toluenediamine	2,4-二氨基甲苯	95-80-7				

4,4'-Methylene-bis-(2-chloroaniline)	4,4'-亚甲基-二-(2-氯苯胺)	101-14-4				
4,4'-Methylenedi-otoluidine	3,3'-二甲基-4,4'-二氨基二苯甲烷	838-88-0				
4,4'-Diaminodiphenylmethane	4,4'-二氨基二苯甲烷	101-77-9				
4,4'-Oxydianiline	4,4'-二氨基二苯醚	101-80-4				
4,4'-Thiodianiline	4,4'-二氨基二苯硫醚	139-65-1				
2-Amino-4-nitrotuluene	5-硝基-邻甲苯胺	99-55-8				
Benzidine	联苯胺	92-87-5				
p-Cresidine	2-甲氧基-5-甲基苯胺	120-71-8				
o-Aminoazotoluene	邻氨基偶氮甲苯	97-56-3				
o-Anisidine	邻甲氧基苯胺	90-04-0				
o-Toluidine	邻甲苯胺	95-53-4				
Salt of 2-Naphthylammonium acetate*	2-萘胺乙酸盐	553-00-4				
Salt of 2,4,5-trimethylaniline hydrochloride*	2,4,5-三甲基苯胺盐酸盐	21436-97-5				
Salt of 4-chloro-otoluidinium chloride*	4-氯-邻甲苯胺盐酸盐	3165-93-3				
Salt of 4-methoxy-mphenylene diammonium sulphate*	4-甲氧基-间苯二胺硫酸盐	39156-41-7				

1R、Total Heavy Metals

The formulation limits for As, Cd, Hg, Pb, and Cr (VI) in the list below apply to all types of formulation. When a limit for pigments is specific and differs from the general limit, it is denoted by brackets. The formulation limits for Sb, Cr, Ba, Se, Sn, Ni, Cu, Co and Ag only apply to dye and/or pigment formulations. Any differences between limits for dyes and pigments are indicated in the formulation limit column. The limits for the heavy metals do not apply to colourants containing a listed metal as an inherent compositional part (e.g. metal-complex colourants, the double salts of certain cationic colourants or extenders like barium sulfate). Wet processors must be aware of the metal limits in the ZDHC wastewater guidelines as well as the brand RSL limits with regard to extractable metals from dyed materials when using any colourant that has listed metals as an inherent compositional part. Where RSL and/or wastewater issues are observed, wet processors should discuss this with supply chain partners. Potential Uses：Although typically associated with leather tanning, chromium VI also may be used in the dyeing of wool (after chroming process).

Substance or Substance Group		CAS NO.	Production limited material parameters			
			Product type may be involved	Supplier Guidance	Formulation Limit	General Techniques for Analysing Chemicals
Antimony (Sb)	锑	7440-36-0	Textile	No intentional use	Dye 50 mg/kg Pigment 250 mg/kg	Acid digestion, ICP/AAS
			Leather	No intentional use	Dye 50 mg/kg Pigment 250 mg/kg	
			Polymers (R,F,A)	No intentional use	Dye 50 mg/kg Pigment 250 mg/kg	
Arsenic (As)	砷	7440-38-2	Textile	No intentional use	50mg /kg	Acid digestion, ICP/AAS
			Leather	No intentional use	50mg /kg	
			Polymers (R,F,A)	No intentional use	50mg /kg	
Barium (Ba)	钡	7440-39-3	Textile	No intentional use	Dyes and Pigments 100 mg/kg	Acid digestion, ICP/AAS
			Leather	No intentional use	Dyes and Pigments 100 mg/kg	

			Polymers (R,F,A)	No intentional use	Dyes and Pigments 100 mg/kg	
Cadmium (Cd)	镉	7440-43-9	Textile	No intentional use	20 mg/kg (50 mg/kg for pigments)	Acid digestion, ICP/AAS
			Leather	No intentional use	20 mg/kg (50 mg/kg	
			Polymers (R,F,A)	No intentional use	for pigments)	
Chromium (Cr)	铬	7440-47-3	Textile	No intentional use	Dyes and Pigments 100 mg/kg	Acid digestion, ICP/AAS
			Leather	No intentional use	Dyes and Pigments 100 mg/kg	
			Polymers (R,F,A)	No intentional use	Dyes and Pigments 100 mg/kg	
Chromium (VI)	六价铬	18540-29-9	Textile	No intentional use	10mg /kg	Acid digestion, ICP/AAS
			Leather	No intentional use	10mg /kg	
			Polymers (R,F,A)	No intentional use	10mg /kg	
Cobalt (Co)	钴	7440-48-4	Textile	No intentional use	Dyes 500mg /kg	Acid digestion, ICP/AAS
			Leather	No intentional use	Dyes 500mg /kg	
			Polymers (R,F,A)	No intentional use	Dyes 500mg /kg	

Copper (Cu)	铜	7440-50-8	Textile	No intentional use	Dyes 250mg /kg	Acid digestion, ICP/AAS
			Leather	No intentional use	Dyes 250mg /kg	
			Polymers (R,F,A)	No intentional use	Dyes 250mg /kg	
Lead (Pb)	铅	7439-92-1	Textile	No intentional use	100mg /kg	Acid digestion, ICP/AAS
			Leather	No intentional use	100mg /kg	
			Polymers (R,F,A)	No intentional use	100mg /kg	
Mercury (Hg)	汞	7439-97-6	Textile	No intentional use	4 mg/kg (25 mg/kg for pigments)	Acid digestion, ICP/AAS
			Leather	No intentional use	4 mg/kg (25 mg/kg for pigments)	
			Polymers (R,F,A)	No intentional use	4 mg/kg (25 mg/kg for pigments)	
Nickel (Ni)	镍	7440-02-0	Textile	No intentional use	Dyes 250mg /kg	Acid digestion, ICP/AAS
			Leather	No intentional use	Dyes 250mg /kg	
			Polymers (R,F,A)	No intentional use	Dyes 250mg /kg	

Selenium (Se)	硒	7782-49-2	Textile	No intentional use	Dyes 20 mg/kg Pigments 100 mg/kg	Acid digestion, ICP/AAS
			Leather	No intentional use	Dyes 20 mg/kg Pigments 100 mg/kg	
			Polymers (R,F,A)	No intentional use	Dyes 20 mg/kg Pigments 100 mg/kg	
Silver (Ag)	银	7440-22-4	Textile	No intentional use	Dyes 100mg /kg	Acid digestion, ICP/AAS
			Leather	No intentional use	Dyes 100mg /kg	
			Polymers (R,F,A)	No intentional use	Dyes 100mg /kg	
Tin (Sn)	锡	7440-31-5	Textile	No intentional use	Dyes 250mg /kg	Acid digestion, ICP/AAS
			Leather	No intentional use	Dyes 250mg /kg	
			Polymers (R,F,A)	No intentional use	Dyes 250mg /kg	

1S. UV Absorbers						
Potential Uses：To make the formulations stable to the effects of UV light or sunlight, UV absorbers are used.						
Substance or Substance Group		**CAS NO.**	**Production limited material parameters**			
			Product type may be involved	**Supplier Guidance**	**Formulation Limit**	**General Techniques for Analysing Chemicals**
2-Benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	2-(2'-羟基-3'-异丁基-5'-叔丁基苯基)苯并三唑 (UV-320)	3846-71-7	Textile	No intentional use	1000mg /kg	Solvent extraction, LC MS/MS, GC MS
2,4-Di-tert-butyl-6-(5-chlorobenzotriazole-2-yl) phenol (UV-327)	2-(2'-羟基-3',5'-二叔丁基苯基)-5-氯代苯并三唑 (UV-327)	3864-99-1	Leather	No intentional use	1000mg /kg	
2-(2Hbenzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	2-(2'-羟基-3',5'-二叔戊基苯基)苯并三唑 (UV-328)	25973-55-1	Polymers (R,F,A)	No intentional use	1000mg /kg	
2-(2Hbenzotriazol-2-yl)-4-(tert-butyl)-6-(secbutyl) phenol (UV-350)	2-(2'-羟基-3'-异丁基-5'-叔丁基苯基)苯并三唑 (UV-350)	36437-37-3				

Table 2 - Manufacturing Restricted Substances List(MRSL) Candidate List

2A、Bisphenols			
Substance or Substance Group		**CAS NO.**	**Remark**
Bisphenol AF	双酚 AF	1478-61-1	Numerous bisphenols, including those listed, are under investigation; based on the information available and their legal status, they may be added to the main list of ZDHC MRSL version 4.0 in the future.
Bisphenol F	双酚 F	620-92-8	
Bisphenol S	双酚 S	80-09-1	
2B、Ethoxylated Tallow Amine			
Substance or Substance Group		**CAS NO.**	**Remark**
Polyethoxylated tallow amine	牛脂胺聚氧乙烯醚	61791-26-2	More information is required on specific substances in this group of chemicals to make a jugment on restrictions.
2C、Formaldehyde			
Potential Uses：Formaldehyde can be used or present in many types of formulations such as fixatives, resins and binders.			
Substance or Substance Group		**CAS NO.**	**Remark**
Formaldehyde	甲醛	50-00-0	Where formulations that contain formaldehyde are used, it is expected that appropriate exposure and emission controls are employed. In version 4 of the ZDHC MRSL, it is intended to introduce a maximum allowable limit of 250 mg/kg formaldehyde for the majority of formulations and appropriate test methods for leather and textile formulations will need to be determined. For formulations that are known to contain formaldehyde at higher levels but represent state-of-the-art technology, such as non-iron and easy to iron finish formulations or reactive organic / resin tanning agents, it is intended to introduce a limit of 1000 mg/kg in conformance with hazard labelling obligations.

2D、Phenol			
Potential Uses：Phenol is not deliberately used in textiles or footwear but trace amounts of phenol can be found in many chemical formulations.			
Substance or Substance Group		**CAS NO.**	**Remark**
Phenol	苯酚	108-95-2	ZDHC is looking for safe limits for phenol as a contaminant in textile chemical formulations.
2E、Potassium Permanganate			
Potential Uses：Potassium Permanganate is primarily used for localised bleaching of denim using a spraying process.			
Substance or Substance Group		**CAS NO.**	**Remark**
Phenol	高锰酸钾	7722-64-7	Potassium permangante must never be used without appropriate engineering controls (such as water curtains and localised extraction) and workers must always use appropriate personal protective equipment. Suppliers are strongly encouraged to evaluate alternatives to manual spraying of potassium permanganate - such as lasers, robotised spraying or safer chemical alternatives
2F、Solvents			
Potential Uses： There are many uses of solvents including cleaning, coatings, prints.Many solvents are restricted in the main list of the ZDHC MRSL. It is strongly advised that suppliers actively seek safer alternatives to the solvents listed in the candidate list as these may be placed on the main list in future versions of the ZDHC MRSL.			
Substance or Substance Group		**CAS NO.**	**Remark**
2-Methoxypropanol	甲氧基丙醇	1589-47-5	It is intended to introduce a limit for leather formulations in the ZDHC MRSL version.
Methanol	甲醇	67-56-1	Methanol is a concern because of its toxicity and in ZDHC MRSL version 4.0 it is intended to introduce maximum allowable limits and encourage substitution by safer solvents, which in many cases will be ethanol. However,we are aware that human consumption of industrial ethanol can be a problem and there is a requirement in some jurisdictions for industrial ethanol to be deliberately 'tainted' with methanol to make it undrinkable. This will need to be considered as we draw up recommendations.

2G、Total Heavy Metals			
Potential Uses：In addition to being used in dyes and pigments, metals are used as raw material for trims and other components.			
Substance or Substance Group		**CAS NO.**	**Remark**
Multiple	多种	金属（非染料/色素）	Studies on usage patterns of metal containing chemicals and formulations and the potential effect of restrictions are will be monitored on an on-going basis and additions made to the main list as appropriate.

Table 3 - Manufacturing Restricted Substances List(MRSL) Archived Substances

3A、 Dyes - Carcinogenic or Equivalent Concern			
Potential Uses：Most of these substances are regulated and should no longer be used for the dyeing of textiles.			
Substance or Substance Group		**CAS NO.**	**Remark**
C.I. Solvent Yellow 14	C.I.溶剂黄 14	842-07-9	No intentional use
C.I. Solvent Yellow 2	C.I.溶剂黄 2	60-11-7	No intentional use
D&C Red No. 19		81-88-9	No intentional use
3B、Dyes - Navy Blue Colourant			
Potential Uses：Navy Blue Colourant is regulated and should no longer be used for the dyeing of textiles.			
Substance or Substance Group		**CAS NO.**	**Remark**
Component 1: C39H23 ClCrN7O12S.2Na	海军蓝着色剂 (结构 1)	118685-33-9	No intentional use
Component 2: C46H30 CrN10O20S2.3Na	海军蓝着色剂 (结构 2)	不适用	No intentional use

3C、Other/Miscellaneous chemicals			
Potential Uses：Dye			
Substance or Substance Group		**CAS NO.**	**Remark**
Auramine hydrochloride	盐酸苯胺	2465-27-2	No intentional use
3D、Solvents			
Potential Uses：In the past, it was used to make several types of polymers, resins and textiles, but its use is now highly restricted.			
Substance or Substance Group		**CAS NO.**	**Remark**
Bis (chloromethyl) ether	二氯甲基醚	542-88-1	No intentional use

VII. Reference Documents

The following documents are referenced in this manual:

1. Regulations on the Safety Management of Hazardous Chemicals
2. Management Rules for Labor Protection Supplies of Employers
3. Law of the People's Republic of China on Work Safety
4. National General Safety Technical Code for Textile Products.
5. Technical Specification for the Safety of [Control and Prevent] Products for Infants and Children
6. EU Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals
7. EU Biocidal Products Regulation
8. US Consumer Product Safety Improvement Act
9. Washington Child Safety Products Act
10. Proposition 65, California, USA
11. AFIRM RSL
12. ZDHC Manufacturing Restricted Substances List (ZDHC MRSL)
13. ZDHC Chemicals Management - Technical Industry Guide