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**TOXICOLOGICAL RISK ASSESSMENT (TRA) &  
LHAMA REVIEW (ASTM D-4236)**

**Client:** **Nova Color Inc.**  
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**Director:** Dr. Dildar Ahmad, M.D., ERT.

**Product:** **Nova Color** (7 Colors). Consumer package 5 gallons (Maximum)  
102 Cadmium Yellow Medium  
123 Cadmium Yellow Light  
124 Cadmium Orange  
125 Cadmium Red Medium  
145 Cadmium Red Light  
146 Cadmium Orange Deep

**Intended Use:** Painting and Creation of Art. For Adults only.

**Introduction**

The formulations of the "Paints", (referenced above), were submitted to InfoTox International, Inc. on June 9, 2021 for the Toxicological Risk Assessments (TRA) and

LHAMA review. The Toxicological Risk Assessments (TRA) and LHAMA review were conducted according to the US Consumer Product Safety Commission's (CPSC) Regulation in 16 CFR 1500.3 for "**Acute Toxicity**", and according to 16 CFR 1500.14(b) 8 {Labeling of the Hazardous Art Materials Act (LHAMA)} for "**Chronic Toxicity**", by using the criteria outlined in **ASTM D-4236**.

The following Toxicological Risk Assessments (TRA) and LHAMA reviews are based on the general principals of toxicology which take into account, the available toxicological literature, anticipated exposures to users, the total quantities of each of the paints per consumer package (5 gallons maximum), the compositions of the paints and the intended and foreseeable conditions of use. The final conclusion is made on the basis of Consumer Product Safety Commission's Regulations, referenced above, by using professional judgment.

While conducting these Toxicological Assessments, InfoTox utilized its best professional capability and resources available to it at the time of this assessment. Therefore, if the client wishes to use this opinion, InfoTox, any of its employees, and/or owners including the **US Board Certified Toxicologist(s)**, will not be held liable for any injury, and/or damage resulting from the use of this product, due to misinformation.

These Toxicological Risk Assessments (TRA) and LHAMA review are required to be updated every five years or upon any change in the formulations or knowledge of new significant Toxicological information. Moreover, in the event of any additional guidance, and/or recommendation from the CPSC, the client shall have to comply with that guidance in all respects.

### **Exposures Assessment**

While assessing possible exposures to chemicals of concern, routes usually considered include, inhalation, eye contact, dermal contact, and ingestion. Considering the physicochemical properties, toxicological characteristics of the ingredients, and the intended use of the paints the exposures to the users are expected to occur mainly through skin contact and inhalation. The exposures through eye contact and ingestion are also possible, however, such exposures are expected to be minimal (non-significant), when the paints are used as intended.

### **Regulatory Background**

No information could be found to suggest that any of the chemicals (ingredients) used in paints are prohibited or banned by the CPSC for such a use.

## **Toxicological Assessment**

### Oral Toxicity {FHSA Act {16 CFR 1500.3(c)(2) (i)(A)}.

The LD50s (oral, rat) of each of the paints are estimated to be between 2000 mg/kg and 5,000 mg/kg body weight. As such, the paints can be considered as “Slightly Toxic” through ingestion (Hodge and Sterner Scale).

### Skin Irritation {FHSA at 16 CFR 1500.3(c)(4)}

Considering the compositions, the physico-chemical and toxicological characteristics of the ingredients, direct contact of the paints with the skin is not expected to cause irritation of any significance among general consumer population. However, it may cause irritation among individuals with sensitive and/or with damaged/broken skin.

### Eye Irritation {FHSA at 16 CFR 1500.3(c)(4)}

Considering the compositions, the physico-chemical and toxicological characteristics of the ingredients of the paints, direct contact with the eyes can cause irritation, predominantly of mechanical in nature.

### Respiratory tract Irritation {FHSA at 16 CFR 1500.3(c)(4)}

Considering the compositions, the physico-chemical and toxicological characteristics of the ingredients, no respiratory tract irritation is expected to occur when the paints are used with brushes or rollers. However, inhalation of the mist generated during spraying or inhalation of the airborne dust generated during sanding of the dry paints may cause respiratory tract irritation or even serious injury.

### Corrosion {FHSA 16 CFR 1500.3 (b)(7)}

Considering the compositions, the physico-chemical and toxicological characteristics of the ingredients of the paints, direct contact of the paints with the soft tissue is not expected to cause corrosion.

### Sensitization {FHSA at 16 CFR-1500.3(c)(5)}

Considering the compositions, the physico-chemical and toxicological characteristics of the ingredients of the paints, exposure to users is not expected to cause allergic reaction among general consumer population, however, it may cause allergic reaction among certain sensitized individuals.

Chronic Toxicity {FHSA 16 CFR 1500.14(b) 8} (ASTM D-4236)

The paints (referenced above) contain Cadmium which is considered as a cancer-causing agent by IARC, NTP, ACGIH and OSHA and is also listed under California Prop-65 a Carcinogen and male Reproductive toxin. However, based on the total quantity of the available Cadmium per consumer package (5 gallon), the estimated exposure among general consumer population is expected to be minimal, when the paints are used by adopting recommended precautions.

**Summary of the Toxicological Risk Assessment and LHAMA review.**

Considering the compositions, the physico-chemical and toxicological characteristics of the ingredients, and that of the final products, the following toxicological effects are expected to occur among general consumer population, when the paints are used by adopting recommended precautions.

Oral Toxicity (16 CFR 1500.3(c) (2) (i)(A):	Not Expected
Eye Irritation (16 CFR 1500.3(c)(4)	Not Expected
Skin Irritation (16 CFR 1500.3(c)(4)	Not Expected
Respiratory Irritation (16 CFR 1500.3(c)(4)	Not Expected
Allergic reaction (16 CFR 1500.3(c)(5)	Possible among certain sensitized individuals
Corrosion per 16CFR 1500.3 (b)(7)	Not Expected
Chronic Toxicity {FHSA 16 CFR 1500.14(b) 8}	Not Expected



Nova Colors (referenced above)

## CONCLUSION OF THE TRAs & LHAMA (ASTM D-4236) REVIEWS.

### 1. Conclusion of the TRA

No “**Acute Toxicity**” of any significance is anticipated among general consumer population when <5 gallons of the “**Nova Color Paints**”, referenced above, are used as intended by adopting recommended precautions. Consequently, the paints can be considered as “**Reasonably Safe**” for their intended use. However, these paints may cause allergic reaction among certain sensitized individuals.

### 2. Conclusion of LHAMA (ASTM-D4236) Review

The “**Nova Color Paints**”, referenced above, contain Cadmium or Cadmium Compounds which are listed as cancer-causing agents by IARC, NTP, ACGIH and OSHA or also as cancer causing agents and male reproductive toxins under California Prop-65. As such the recommended precautions must be adopted. These paints can be labeled as “**Conforms to ASTM D-4236**”.

**Recommended Precautions:** Avoid spray painting but when spray painting is unavoidable, use negative pressure fume hood. Do not sand dry paints and do not generate airborne dust. Do not ingest. Avoid breathing mist and dust. Avoid Contact with eyes and skin. Use in well-ventilated areas. Wash hands after use and observe standard hygiene practices. When working with large quantity (<5 gallon approximately), wear protective equipment specified in section 8, such as proper goggles, and proper gloves. If any symptom occurs discontinue use. If the symptom persists consult your physician.



**End of the Report**

Important note:

*This report can only be used in its entirety. Partial use of this report will make the entire report invalid.*