Safety Data Sheet
Annatto Food Color WS 2X
Version: 6 US / EN
Revision Date: 07-10-2015

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier
Product name: Annatto Food Color WS 2X
Material No: 70482
Safety No: 708718

1.2 Relevant identified uses of the substance or mixture and uses advised against
Application: For food application.

1.3 Details of the supplier of the safety data sheet
Supplier: Chr. Hansen Inc.
9015 West Maple Street
53214-4298 Milwaukee - WI
Phone: +1 414 607-5700

Headquarters: Chr. Hansen A/S
Boge Allé 10-12
DK-2970 Horsholm
Tel. +45 45 74 74 74

1.4 Emergency telephone number
Emergency telephone: Health: 1-800-558-0802 (Monday through Friday, 7:30 AM to 5 PM CST) at other times, contact Chemtrec or the local poison control center. Transportation (Chemtrec): 1-800-424-9300 or +1-703-527-3887 (outside the U.S.)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Skin Irrit. 2; H315
Eye Irrit. 2; H319
Met. Corr. 1; H290
* The product is classified corrosive due to tests on metal surfaces: Corrosive to aluminum.

2.2 Label elements

Signal Word
Warning
Hazard statements
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H290 - May be corrosive to metals.

Precautionary statements
P280 - Wear protective clothing, gloves, eye and face protection.
P305/351/338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337/313 - If eye irritation persists: Get medical advice/attention.

Supplemental hazard information
None.

2.3 Other hazards

Physical and Chemical Hazards:
May be corrosive to metals.

Human health:
Risk of serious damage to eyes. Irritating to skin. Spray mist may irritate the respiratory system.

Substances listed as carcinogens on NTP, OSHA or IACR are marked with a “+” or indicated as such in the table below.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>NTP</th>
<th>OSHA</th>
<th>IARC</th>
</tr>
</thead>
<tbody>
<tr>
<td>potassium hydroxide</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Environment:
May lead to a local change in acidity in the aquatic environment which may have adverse effects on aquatic organisms.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures
The product contains: food ingredients.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

The following substances shall be indicated according to legislation:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>%</th>
<th>GHS</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>potassium hydroxide</td>
<td>1310-58-3</td>
<td>1 - 5</td>
<td>Acute Tox. 4; H302</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Corr. 1A; H314</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Met. Corr. 1; H290</td>
<td></td>
</tr>
</tbody>
</table>
4. FIRST-AID MEASURES

4.1 Description of first aid measures

**Inhalation:** Move injured person into fresh air and keep person calm under observation. If uncomfortable: Seek hospital and take along these instructions.

**Skin contact:** Remove contaminated clothing immediately and wash skin with soap and water. In case of rashes, wounds or other skin disorders: Seek medical attention and bring along these instructions.

**Eye contact:** Immediately flush with plenty of water. Remove any contact lenses and open eyes wide apart. Call an ambulance and continue flushing during transportation to hospital taking along these instructions.

**Ingestion:** Immediately rinse mouth and drink plenty of water. Keep person under observation. If person becomes uncomfortable take to hospital along with these instructions.

4.2 Most important symptoms and effects, both acute and delayed
Risk of serious damage to eyes. Irritating to skin. Spray mist may irritate the respiratory system.

4.3 Indication of any immediate medical attention and special treatment needed
Symptomatic treatment.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media
Use fire-extinguishing media appropriate for surrounding materials.

5.2 Special hazards arising from the substance or mixture
No specific precautions.
The explosion limits and the flash point are stated in section 9.

5.3 Advice for firefighters
Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Avoid inhalation of vapors/spray and contact with skin and eyes. Follow precautions for safe handling described in this safety data sheet.

6.2 Environmental precautions
Avoid discharge into drains, water courses or onto the ground.

6.3 Methods and material for containment and cleaning up
Flush away small spillages with plenty of water. Large quantities: Absorb spillage with suitable absorbent material. Flush contaminated area with plenty of water. Unsuitable containers: common metals (iron, aluminium, copper).

6.4 Reference to other sections
For personal protection, see section 8.
For waste disposal, see section 13.
7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Safe handling advice: Avoid inhalation of vapors/spray and contact with skin and eyes. Observe good industrial hygiene practices.

Technical measures: Keep the workplace clean.

Technical precautions: Provide easy access to water supply and eye wash facilities.

7.2 Conditions for safe storage, including any incompatibilities
Store in tightly closed original container. Store at refrigerated temperature conditions. For detailed information consult the PI sheet. Protect against direct sunlight. Store in a dry place.

Technical measures for safe storage: No special precautions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Exposure limits are listed below. No data - no exposure limits noted for ingredient(s).

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Exposure limits (OSHA)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>potassium hydroxide</td>
<td>C: 2 MGM3</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Exposure limits (ACGIH)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>potassium hydroxide</td>
<td>C: 2 MGM3</td>
<td></td>
</tr>
</tbody>
</table>

8.2 Exposure controls
Engineering measures: Provide adequate ventilation. Observe occupational exposure limits and minimise the risk of inhalation of vapors and mist. An eye wash bottle must be available at the work site.

Respiratory equipment: In case of inadequate ventilation: Use respiratory equipment with particle filter, type P1. The use of filtering respirators should be limited to max. 3 hours per day.

Hand protection: Wear protective gloves. The product consists of substances for which it is not possible to suggest a common suitable glove material. Therefore, a suitable type of gloves cannot be recommended without knowing the actual usage of the product. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

Eye protection: Wear goggles/face shield.

Skin protection: Wear apron or protective clothing in case of splashes.

Hygiene measures: Wash hands after contact.

Environmental Exposure Controls: None.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
9.2 Other information
No information available.

10. STABILITY AND REACTIVITY

10.1 Reactivity
None known.

10.2 Chemical stability
Stable under normal temperature conditions and recommended use.

10.3 Possibility of hazardous reactions
None known.

10.4 Conditions to avoid
Avoid exposure to high temperatures or direct sunlight.

10.5 Incompatible materials
Metals.

10.6 Hazardous decomposition products
None known.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

**Inhalation:** Spray mist may irritate the respiratory system.

**Skin contact:** Irritating to skin.

**Eye contact:** Risk of serious damage to eyes. Immediate first aid is necessary.

**Ingestion:** May irritate and cause malaise.

**Specific effects:** None known, unless listed below.

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12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity
May lead to a local change in acidity in the aquatic environment which may have adverse effects on aquatic organisms.

12.2 Persistence and degradability
The product is expected to be biodegradable.

12.3 Bioaccumulative potential
Bioaccumulation: Is not expected to be bio-accumulable.

12.4 Mobility in soil
The product is water soluble and may spread in water systems.

12.6 Other adverse effects
None known.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Dispose of waste and residues in accordance with local authority requirements.
14. TRANSPORT INFORMATION

14.1 UN number
1814

14.2 UN proper shipping name
POTASSIUM HYDROXIDE SOLUTION

Air (ICAO/IATA):
14.3 Transport hazard class(es) 8
14.4 Packing group III

Sea (IMDG):
14.3 Transport hazard class(es) 8
14.4 Packing group III
EmS F-A, S-B
MFAG 1

Inland waterways: To be handled locally.

Land (DOT):
14.3 Transport hazard class(es) 8
14.4 Packing group III

US exemption:
Road transportation is exempted from the dangerous goods regulation due to 49 CFR 173.154d(1).

14.5 Environmental hazards
Marine pollutant (IMDG): No

14.6 Special precautions for user
None known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

<table>
<thead>
<tr>
<th>NFPA:</th>
<th>Health: 1</th>
<th>Fire: 1</th>
<th>Reactivity: 0</th>
<th>Other: COR - Corrosive.</th>
</tr>
</thead>
</table>

Information on TSCA, CERCLA, SARA 313 and 302, CAA:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TSCA</th>
<th>CERCLA</th>
<th>SARA 313</th>
<th>SARA 302</th>
<th>CAA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium hydroxide</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
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</tr>
</tbody>
</table>

Specific Provisions: State and local regulations may apply.
16. OTHER INFORMATION

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.

The following sections contain revisions or new statements : 14.

Wording of Hazard Statements
H290 - May be corrosive to metals.
H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.

The information in this Safety Data Sheet has been obtained from current and reliable sources. However, the data is provided without warranty, express or implied, regarding its correctness or accuracy. It is the user’s responsibility to determine safe conditions for use of this product and to assume liability for loss injury, damage, or expense resulting from improper use of this product.