HAZARDS IDENTIFICATION

Envirt: Negligible unless heated to produce vapors. Vapors or finely misted materials may irritate the mucous membranes and cause irritation, dizziness, and nausea. Remove to fresh air. Eye: May cause mild irritation.

Skin: Prolonged or repeated contact is not likely to cause significant skin irritation. Material is sometimes encountered at elevated temperatures. Thermal burns are possible.

Ingestion: No hazards anticipated from ingestion incidental to industrial exposure.

3. COMPOSITION

Chemical Name Wt.% CAS No.

Acetylsalicylic Acid 100 50-78-2

4. FIRST AID MEASURES

Eyes: Protect unexposed eye. Flush exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing. Seek medical attention if irritation persists or concerned.

Skin: wash hands and exposed skin with soap and plenty of water. Seek medical attention if irritation persists or concerned.

Inhalation: Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Loosen clothing and place exposed in a comfortable position. Seek medical assistance if cough or other symptoms appear.

Ingestion: Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention if irritation, discomfort or vomiting persists.

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Most important symptoms and effects, both acute and delayed:

Irritation. Shortness of breath. Headache. Nausea. Dizziness. Vomiting occurs shortly after ingestion, followed by hyperpnea, tinnitus, and lethargy. Mixed respiratory alkalemia and metabolic acidosis are apparent when arterial blood gases are determined. With severe intoxication, coma, seizures, hypoglycemia, hyperthermia, and pulmonary edema may occur. Death is caused by CNS failure and cardiovascular collapse.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically. There is no specific antidote for salicylate intoxication. Sodium bicarbonate is given frequently both to prevent acidemia and to promote salicylate elimination by the kidneys.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Use water, dry chemical, chemical foam, carbon dioxide, or alcohol- resistant foam.

Specific Hazards: Thermal decomposition can lead to release of irritating gases and vapors. Carbon dioxide.

Special Protective Equipment: wear protective eyeware, gloves and clothing.

Further Information: Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes and clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal Precaution, Protective Equipment and Emergency Procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational. Avoid contact with skin, eyes and clothing.

Environmental Precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Steps to be Taken in Case Material is Released or Spilled:

Wear protective eyeware, gloves and clothing. Refer to section 8. Always obey local regulations. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Containerize for disposal. Refer to section 13. Keep in suitable closed containers for disposal. Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust generation.

7. HANDLING AND STORAGE

Handling:

Avoid contact with skin, eyes and clothing. Follow good hygiene procedure when handling chemical materials. Refer to section 8. Follow proper disposal methods. Refer to section 13. Do

not eat, drink, smoke or use personal products when handling chemical substances.

Storage:

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials. Keep in a dry place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

Skin: Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique outer surface. Avoid skin contact with used gloves. Wear protective clothing.

Eye protection: Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166(EU). Safety glasses or goggles are appropriate eye protection.

Appropriate Engineering controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

General hygienic measure: Perform routine housekeeping. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes and clothing. Before rewearing wash contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Aspirin

Form: solid (powder)

Color: white

Odor: odorless

Density @ 25°C: 1.4

pH: 3.5 (at 2.5 g/l at 20˚C)

HLB: 11.7

Solubility in water: 2.5 g/l (15˚C)

Melting/Freezing point: 134 – 136 ˚C

Flash point (closed cup) : 250 ˚C (482 ˚F)

Decomposition temperature: 140 ˚C (284 ˚F)

Partition coefficient (n-octanol/water): log Pow=1.19

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10. STABILITY AND REACTIVITY

Reactivity: Nonreactive under normal conditions.

Chemical stability: Stable under normal conditions. Stable in dry air. In moist air it is gradually hydrolyzed into Salicylic Acid and Acetic Acids.

Possible hazardous reactions: None under normal processing.

Conditions to avoid: Incompatible materials.

Incompatible materials: Strong acids. Strong bases. Strong oxidizing agent.

Hazardous decomposition products: Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:

Oral: 50-78-2 (Aspirin) LD50 Rat: 1500 mg/kg

Chronic Toxicity: No additional information.

Corrosion Irritation: No additional information.

Sensitization:

Single Target Organ (STO): Inhalation-May cause respiratory irritation.

Numerical measures: No additional information.

Carcinogenicity:

Not listed as a carcinogen (ACGIH, IRAC, NTP): 50-78-2

(Aspirin)

Mutagenicity: No additional information.

Reproductive Toxicity:

Overexposure may cause reproductive disorder(s)

based on tests with laboratory animals.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Fish LC50 - Leuciscus idus (Golden orfe) - > 1,000 mg/l - 48 h: 50-78-2 (Acetylsalicylic acid)

Invertebrates EC50 - Daphnia (water flea) - > 100 mg/l - 48 h: 50-78-2 (Acetylsalicylic acid)

Bacteria LC50 - Bacteria - > 10,000 mg/l - 48 h: 50-78-2 (Acetylsalicylic acid)

Persistence and degradability: No biodegradation studies were located for acetylsalicylic acid in soil; however, acetylsalicylic acid was classified as readily

biodegradable in screening tests. An aqueous hydrolysis half-life of 6.3 days at pH 7.4 and 17 ˚C,suggests hydrolysis may occur in moistsoils.

Bioaccumulative potential: bioconcentration in aquatic organisms is low

Mobility in soil: compound will primarily exist as an anion in the environment and anions generally do not adsorb as strongly to soils containing organic carbon and clay than their neutral counterparts

13. DISPOSAL CONSIDERATIONS

Waste disposal recommendations:

Contact a licensed professional waste disposalservice to dispose ofthis material. Dispose of empty containers as unused product. Product or containers must not be disposed together with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous

waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

14. TRANSPORT INFORMATION

UN-Number:

2811

UN proper shipping name:

TOXIC SOLID, ORGANIC,N.O.S. (ACETYLSALICYLIC ACID)

Transport hazard class(es):

Class:

6.1 Toxic substances

Packing group: III

15. Regulatory information

United States (USA): none of the ingredients is listed.

SARA section 311/312 (specific toxic chemical listings): none of the ingredients is listed.

SARA section 313 (specific toxic chemical listings): none of the ingredients is listed.

RCRA (Hazardous waste code): none of the ingredients is listed.

TSCA (Toxic substances control act): all ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation and Liability Act): none of the ingredients is listed.

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Proposition 65 (California):

Chemicals known to cause cancer: none of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females: 50-78-2 (Aspirin)

Chemicals known to cause reproductive toxicity for males: none of the ingredients is listed.

Chemicals known to cause developmental toxicity: 50-78-2 (Aspirin)

Canada:

Canadian Domestic Substances List (DSL): all ingredients are listed.

Canadian NPRI Ingredient Disclosure List (Limit 0.1%): none of the ingredients is listed.

Canadian NPRI Ingredient Disclosure List (Limit 1%): none of the ingredients is listed.

16. OTHER INFORMATION

This product has been classified in accordance with hazard criteria ofthe Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note: . The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautionsrequired in an individual operation to instruct employees and develop work practice proceduresfor a safe work environment.The information contained herein is, to the best of our knowledge and belief, accurate. However,since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damagesincurred by the use of this material. It isthe responsibility of the userto comply with all applicable laws and regulations applicable to this material.

Caution

The information contained in this Material Safety Data Sheet (MSDS) is believed to be correct since it was obtained from sources we believe are reliable. However no representation, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications, hazards connected with the use of the material, or the results to be obtained from the use thereof. User assumes all risks and liability of any use, processing or handling of any material, variations in methods, conditions and equipment used to store, handle, or process the material and hazards connected with the use of the material are solely the responsibility of the user and remain at his sole discretion.