

SAFETY DATA SHEET

DYNA-TEK INDUSTRIES

DETOX-TUBES A

Section 1. Identification

Product name : DETOX-TUBES A
Part No. : A109A100, A102A50
Validation date : 09/30/2013.

Relevant identified uses of the substance or mixture and uses advised against

Material uses : Analytical chemistry.
100 x 2.3 ml (A109A100)
50 x 2.3 ml (A102A50)

Supplier/Manufacturer : Dyna-Tek Industries
8369 Nieman Rd
Lenexa, KS 66214
913-438-6363

In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

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

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3
ACUTE TOXICITY (oral) - Category 4
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 1B
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : Flammable liquid and vapor.
Harmful if swallowed.
Causes serious eye irritation.
Causes skin irritation.
May cause cancer.
May be fatal if swallowed and enters airways.
May cause damage to organs.
May cause drowsiness and dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Section 2. Hazards identification

Prevention	: P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P281 - Use personal protective equipment as required. P280 - Wear protective gloves. Wear eye or face protection. P210 - Keep away from heat, sparks, open flames and hot surfaces. - No smoking. P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. P242 - Use only non-sparking tools. P243 - Take precautionary measures against static discharge. P233 - Keep container tightly closed. P271 - Use only outdoors or in a well-ventilated area. P260 - Do not breathe vapor. P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling.
Response	: P314 - Get medical attention if you feel unwell. P309 + P311 - IF exposed or if you feel unwell: Call a POISON CENTER or physician. P304 + P340 + P312 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. P301 + P310 + P330 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P302 + P352 + P362-2 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. P332 + P313 - If skin irritation occurs: Get medical attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
Storage	: P405 - Store locked up. P403 - Store in a well-ventilated place. P235 - Keep cool.
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	: Avoid contact with skin and clothing. Wash thoroughly after handling.
Hazards not otherwise classified	: Defatting to the skin. Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Sodium chloride	30 - 60	7647-14-5
Dichloromethane	10 - 30	75-09-2
1,2-Dichloroethane	10 - 30	107-06-2
Heptane	10 - 30	142-82-5
Propan-2-ol	5 - 10	67-63-0
Sodium carbonate	1 - 5	497-19-8
Sodium hydrogencarbonate	1 - 5	144-55-8

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Section 3. Composition/information on ingredients

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- | | |
|---------------------|---|
| Eye contact | : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. |
| Inhalation | : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
| Skin contact | : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| Ingestion | : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |

Most important symptoms/effects, acute and delayed

Potential acute health effects

- | | |
|---------------------|---|
| Eye contact | : Causes serious eye irritation. |
| Inhalation | : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. |
| Skin contact | : Causes skin irritation. Defatting to the skin. |
| Ingestion | : Harmful if swallowed. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach. |

Over-exposure signs/symptoms

- | | |
|--------------------|---|
| Eye contact | : Adverse symptoms may include the following:
pain or irritation
watering
redness |
| Inhalation | : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness |

Section 4. First aid measures

- Skin contact** : Adverse symptoms may include the following:
irritation
redness
dryness
cracking
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
halogenated compounds
carbonyl halides
metal oxide/oxides
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Dichloromethane	ACGIH TLV (United States, 3/2012). TWA: 174 mg/m ³ 8 hours. TWA: 50 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). STEL: 125 ppm 15 minutes. TWA: 25 ppm 8 hours. OSHA PEL Z2 (United States, 11/2006). STEL: 125 ppm 15 minutes.

Section 8. Exposure controls/personal protection

1,2-Dichloroethane

TWA: 25 ppm 8 hours.
ACGIH TLV (United States, 3/2012).
 TWA: 40 mg/m³ 8 hours.
 TWA: 10 ppm 8 hours.
NIOSH REL (United States, 1/2013).
 STEL: 8 mg/m³ 15 minutes.
 STEL: 2 ppm 15 minutes.
 TWA: 4 mg/m³ 10 hours.
 TWA: 1 ppm 10 hours.
OSHA PEL 1989 (United States, 3/1989).
 STEL: 8 mg/m³ 15 minutes.
 STEL: 2 ppm 15 minutes.
 TWA: 4 mg/m³ 8 hours.
 TWA: 1 ppm 8 hours.
OSHA PEL Z2 (United States, 11/2006).
 AMP: 200 ppm 5 minutes.
 CEIL: 100 ppm
 TWA: 50 ppm 8 hours.

Heptane

ACGIH TLV (United States, 3/2012).
 STEL: 2050 mg/m³ 15 minutes.
 STEL: 500 ppm 15 minutes.
 TWA: 1640 mg/m³ 8 hours.
 TWA: 400 ppm 8 hours.
NIOSH REL (United States, 1/2013).
 CEIL: 1800 mg/m³ 15 minutes.
 CEIL: 440 ppm 15 minutes.
 TWA: 350 mg/m³ 10 hours.
 TWA: 85 ppm 10 hours.
OSHA PEL (United States, 6/2010).
 TWA: 2000 mg/m³ 8 hours.
 TWA: 500 ppm 8 hours.
OSHA PEL 1989 (United States, 3/1989).
 STEL: 2000 mg/m³ 15 minutes.
 STEL: 500 ppm 15 minutes.
 TWA: 1600 mg/m³ 8 hours.
 TWA: 400 ppm 8 hours.

Propan-2-ol

ACGIH TLV (United States, 3/2012).
 STEL: 400 ppm 15 minutes.
 TWA: 200 ppm 8 hours.
NIOSH REL (United States, 1/2013).
 STEL: 1225 mg/m³ 15 minutes.
 STEL: 500 ppm 15 minutes.
 TWA: 980 mg/m³ 10 hours.
 TWA: 400 ppm 10 hours.
OSHA PEL (United States, 6/2010).
 TWA: 980 mg/m³ 8 hours.
 TWA: 400 ppm 8 hours.
OSHA PEL 1989 (United States, 3/1989).
 STEL: 1225 mg/m³ 15 minutes.
 STEL: 500 ppm 15 minutes.
 TWA: 980 mg/m³ 8 hours.
 TWA: 400 ppm 8 hours.

Section 8. Exposure controls/personal protection

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid. [Clear.]
Color : Colorless.
Odor : Alcohol-like.
Odor threshold : Not available.
pH : [solid powder - 5 ml solution] 8 to 10
Melting point : Not available.
Boiling point : 58°C (136.4°F)
Flash point : Closed cup: >43°C (>109.4°F) [Tagliabue.]
Evaporation rate : Not available.

Section 9. Physical and chemical properties

Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: 1.01
Solubility	: Insoluble in the following materials: cold water and hot water.
Solubility in water	: Not available.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Not available.

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials Other: metals.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Sodium chloride	LC50 Inhalation Dusts and mists	Rat	>42 g/m ³	1 hours
	LD50 Oral	Rat	3000 mg/kg	-
Dichloromethane	LC50 Inhalation Gas.	Rat	18332 ppm	4 hours
	LC50 Inhalation Vapor	Rat	76000 mg/m ³	4 hours
	LD50 Oral	Rat	985 mg/kg	-
1,2-Dichloroethane	LC50 Inhalation Vapor	Rat	1000 ppm	4 hours
	LD50 Dermal	Rabbit	2800 mg/kg	-
	LD50 Oral	Rat	500 mg/kg	-
Heptane Propan-	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours
	LC50 Inhalation Vapor	Rat	103 g/m ³	4 hours
2-ol Sodium	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
carbonate	LD50 Oral	Rat	2390 mg/kg	-
Sodium hydrogencarbonate	LD50 Oral	Rat	4220 mg/kg	-

Section 11. Toxicological information

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Dichloromethane	Eyes - Moderate irritant	Rabbit	-	162 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
1,2-Dichloroethane	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	625 milligrams	-
Propan-2-ol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
Sodium carbonate	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Sodium hydrogencarbonate	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Dichloromethane	+	2B	Reasonably anticipated to be a human carcinogen.
1,2-Dichloroethane	-	2B	Reasonably anticipated to be a human carcinogen.
Propan-2-ol	-	3	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Dichloromethane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
1,2-Dichloroethane	Category 2 Category 3	Not determined Not applicable.	kidneys and liver Respiratory tract irritation and Narcotic effects
Heptane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propan-2-ol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Dichloromethane	Category 2	Not determined	blood system and liver
Propan-2-ol	Category 2	Not determined	gastrointestinal tract and liver

Aspiration hazard

Name	Result
Heptane	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : Causes skin irritation. Defatting to the skin.
- Ingestion** : Harmful if swallowed. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
irritation
redness
dryness
cracking

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	1465.7 mg/kg
Dermal	16460.9 mg/kg
Inhalation (gases)	101901.1 ppm

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Sodium chloride	Acute EC50 2430000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1661 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days
	Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks
	Dichloromethane	Algae - Chlamydomonas reinhardtii - Exponential growth	72 hours
	Acute EC50 242 mg/l Fresh water		

Section 12. Ecological information

1,2-Dichloroethane	Acute EC50 500000 µg/l Fresh water	phase	96 hours
	Acute EC50 1682000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	48 hours
	Acute LC50 329 ppm Marine water	Daphnia - Daphnia magna	48 hours
	Acute LC50 193000 µg/l Fresh water	Crustaceans - Americamysis bahia	96 hours
	Chronic NOEC 56000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 >443 ppm Marine water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 >433 mg/l Fresh water	Algae - Skeletonema costatum	96 hours
	Acute EC50 180000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	48 hours
	Acute LC50 110 ppm Marine water	Daphnia - Daphnia magna - Instar	48 hours
	Acute LC50 115 mg/l Marine water	Crustaceans - Americamysis bahia	96 hours
Heptane	Chronic NOEC 29000 µg/l Fresh water	Fish - Pleuronectiformes	32 days
		Fish - Pimephales promelas - Larvae	96 hours
Propan-2-ol	Acute LC50 375000 µg/l Fresh water	Fish - Oreochromis mossambicus	48 hours
	Acute LC50 1400000 to 1950000 µg/l Marine water	Crustaceans - Crangon crangon	96 hours
Sodium carbonate	Acute LC50 1400000 µg/l	Fish - Gambusia affinis	96 hours
	Acute EC50 242000 µg/l Fresh water	Algae - Navicula seminulum	48 hours
Sodium hydrogencarbonate	Acute LC50 176000 µg/l Fresh water	Crustaceans - Amphipoda	48 hours
	Acute LC50 265000 µg/l Fresh water	Daphnia - Daphnia magna	96 hours
	Acute LC50 300000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Acute EC50 650000 µg/l Fresh water	Algae - Navicula seminulum	48 hours
	Acute LC50 767.87 mg/l Marine water	Crustaceans - Americamysis bahia	96 hours
	Acute LC50 7550 ppm Fresh water	Fish - Gambusia affinis - Adult	3 weeks
	Chronic NOEC 576 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Dichloromethane	1.25	22.91	low
1,2-Dichloroethane	1.45	2	low
Heptane	4.66	552	high
Propan-2-ol	0.05	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.



Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information




Additional information : Special provisions
223, 274

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information

Section 14. Transport information

DOT	UN1993	Flammable liquids, n. o.s. (Propan-2-ol, Heptane) RQ (1, 2-Dichloroethane, Dichloromethane)	3	III	 <p>This product may be re-classified as "Combustible Liquid," unless transported by vessel or aircraft. Non-bulk packages (less than or equal to 119 gal) of combustible liquids are not regulated as hazardous materials in package sizes less than the product reportable quantity.</p> <p>Reportable quantity 587.89 lbs / 266.9 kg [69.81 gal / 264.26 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.</p> <p>Limited quantity Yes.</p> <p>Packaging instruction Passenger aircraft Quantity limitation: 60 L</p> <p>Cargo aircraft Quantity limitation: 220 L</p> <p>Special provisions B1, B52, IB3, T4, TP1, TP29</p>
TDG	UN1993	FLAMMABLE LIQUID, N.O.S. (Propan-2-ol, Heptane)	3	III	 <p>Explosive Limit and Limited Quantity Index 5</p> <p>Passenger Carrying Road or Rail Index 60</p> <p>Special provisions 16</p>

Section 14. Transport information

Mexico	UN1993	LIQUIDO INFLAMABLE, N.E.P. (Propan-2-ol, Heptane)	3	III		Special provisions 223, 274
IMDG	UN1993	FLAMMABLE LIQUID, N.O.S. (Propan-2-ol, Heptane)	3	III		Emergency schedules (EmS) F-E, _S-E_ Special provisions 223, 274, 955
IATA	UN1993	Flammable liquid, n.o. s. (Propan-2-ol, Heptane)	3	III		Passenger and Cargo Aircraft Quantity limitation: 60 L Packaging instructions: 355 Cargo Aircraft Only Quantity limitation: 220 L Packaging instructions: 366 Limited Quantities - Passenger Aircraft Quantity limitation: 10 L Packaging instructions: Y344 Special provisions A3 Remarks Excepted Quantity

PG* : Packing group

Section 15. Regulatory information

U.S. Federal regulations : TSCA 8(a) PAIR: 1,2-Dichloroethane; Heptane
 TSCA 12(b) one-time export: Heptane
 United States inventory (TSCA 8b): All components are listed or exempted.
 Clean Water Act (CWA) 307: Dichloromethane; 1,2-Dichloroethane
 Clean Water Act (CWA) 311: 1,2-Dichloroethane

Clean Air Act Section 112 : Listed
 (b) Hazardous Air
 Pollutants (HAPs)

Clean Air Act Section 602 : Not listed
 Class I Substances

Clean Air Act Section 602 : Not listed
 Class II Substances

DEA List I Chemicals : Not listed
 (Precursor Chemicals)

Section 15. Regulatory information

DEA List II Chemicals : Not listed
(Essential Chemicals)

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard
Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Sodium chloride	30 - 60	No.	No.	No.	Yes.	No.
Dichloromethane	10 - 30	No.	No.	No.	Yes.	Yes.
1,2-Dichloroethane	10 - 30	Yes.	No.	No.	Yes.	Yes.
Heptane Propan-2-ol Sodium carbonate	10 - 30	Yes.	No.	No.	Yes.	No.
	5 - 10	Yes.	No.	No.	Yes.	Yes.
	1 - 5	No.	No.	No.	Yes.	No.
Sodium hydrogencarbonate	1 - 5	Yes.	No.	No.	Yes.	No.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Dichloromethane	75-09-2	10 - 30
	1,2-Dichloroethane	107-06-2	10 - 30
	Propan-2-ol	67-63-0	5 - 10
Supplier notification	Dichloromethane	75-09-2	10 - 30
	1,2-Dichloroethane	107-06-2	10 - 30
	Propan-2-ol	67-63-0	5 - 10

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: METHYLENE CHLORIDE; 1, 2-DICHLOROETHANE; HEPTANE (N-HEPTANE); ISOPROPYL ALCOHOL

New York : The following components are listed: Dichloromethane; Methylene chloride; Ethylene dichloride; 1,2-Dichloroethane

New Jersey : The following components are listed: METHYLENE CHLORIDE; DICHLOROMETHANE; 1,2-DICHLOROETHANE; ETHANE, 1,2-DICHLORO-; n-HEPTANE; HEPTANE; ISOPROPYL ALCOHOL; 2-PROPANOL

Pennsylvania : The following components are listed: METHANE, DICHLORO-; ETHANE, 1, 2-DICHLORO-; HEPTANE; 2-PROPANOL; ALUMINUM SOLUBLE SALTS

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Section 15. Regulatory information

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Dichloromethane	Yes.	No.	200 µg/day (inhalation)	No.
1,2-Dichloroethane	Yes.	No.	Yes.	No.

Canada inventory : All components are listed or exempted.

International regulations

International lists :

- Australia inventory (AICS)**: All components are listed or exempted.
- China inventory (IECSC)**: All components are listed or exempted.
- Japan inventory**: Not determined.
- Korea inventory**: All components are listed or exempted.
- Malaysia Inventory (EHS Register)**: Not determined.
- New Zealand Inventory of Chemicals (NZIoC)**: All components are listed or exempted.
- Philippines inventory (PICCS)**: All components are listed or exempted.
- Taiwan inventory (CSNN)**: Not determined.

Chemical Weapons : Not listed

Convention List Schedule I Chemicals

Chemical Weapons : Not listed

Convention List Schedule II Chemicals

Chemical Weapons : Not listed

Convention List Schedule III Chemicals

Section 16. Other information

History

Date of issue : 09/30/2013.

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Version : 2

☑ Indicates information that has changed from previously issued version.

Notice to reader

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