

Safety Data Sheet: DUALSOLV

Supersedes Date 11/13/2013

Issuing Date 11/30/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name DUALSOLV
Recommended use Cleaning agent
Information on Manufacturer
MANTEK, DIVISION OF NCH CORP.
BOX 152170
IRVING, TEXAS 75015

Product Code 0300
Chemical nature Solvent mixture
Emergency Telephone Number
CHEMTREC® 800-424-9300
Telephone inquiry
972-579-2477

2. HAZARD IDENTIFICATION

Color Colorless

Physical State Liquid

Odor Sweet

GHS

Classification

Physical Hazards

None

Health Hazard

| | |
|---|-------------|
| Aspiration Toxicity | Category 1 |
| Acute Inhalation Toxicity - Dusts and Mists | Category 4 |
| Skin Corrosion/Irritation | Category 2 |
| Serious Eye Damage/Eye Irritation | Category 2 |
| Reproductive Toxicity | Category 1B |
| Specific target organ systemic toxicity (single exposure) | Category 3 |
| Specific target organ systemic toxicity (repeated exposure) | Category 2 |

Other hazards

None

Labeling

Signal Word

DANGER



Hazard Statements

H315 - Causes skin irritation
H320 - Causes eye irritation
H332 - Harmful if inhaled
H336 - May cause drowsiness or dizziness
H304 - May be fatal if swallowed and enters airways
H373 - May cause damage to organs through prolonged or repeated exposure
H361 - Suspected of damaging fertility or the unborn child

Precautionary Statements

P202 - Do not handle until all safety precautions have been read and understood
P280 - Wear protective gloves, protective clothing and eye protection.
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P260 - Do not breathe mist or vapors.
P271 - Use in a well-ventilated area.
P302+ P352 - IF ON SKIN: Wash with plenty of soap and water
P332 + P313 - If skin irritation occurs, get medical attention.
P362 - Take off contaminated clothing and wash before reuse
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.
P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P312 - Call a physician if unwell.
P301+ P330 + P311 - IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Call a physician if unwell.
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P501 - Dispose of contents and container in accordance with applicable regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Component | CAS-No | Weight % |
|------------------|---------------|-----------------|
| n-Propyl bromide | 106-94-5 | 60-100 |

| | | |
|---|------------|-------|
| Petroleum distillates, hydrotreated light | 64742-47-8 | 10-30 |
| Solvent naphtha (petroleum), medium aliphatic | 64742-88-7 | 10-30 |
| Isopropanol | 67-63-0 | 1-5 |

4. FIRST AID MEASURES

| | |
|---------------------------|---|
| General advice | Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists. |
| Eye Contact | Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention if irritation develops and persists. Wash contaminated clothing before re-use. |
| Inhalation | If inhaled, remove to fresh air. Get medical attention if symptoms occur. |
| Ingestion | Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention if symptoms occur. |
| Notes to physician | Aspiration hazard if swallowed - can enter lungs and cause damage. May be fatal if swallowed and enters airways. |

5. FIRE-FIGHTING MEASURES

| | | | |
|---|--------------------|-----------------------|----------------------|
| Flash Point | > 201 °F / > 94 °C | Method | Seta closed cup |
| Flammability Limits in Air % | Solvent mixture. | Upper | 12.7 |
| Suitable Extinguishing Media | | | |
| Foam. Carbon dioxide (CO ₂). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. | | | |
| Specific hazards arising from the chemical | | | |
| Solvent vapors are heavier than air and may spread along floors. Vapors may ignite and explode. Material can create slippery conditions. | | | |
| Protective Equipment and Precautions for Firefighters | | | |
| As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. | | | |
| NFPA | Health 2 | Flammability 1 | Instability 0 |
| HMIS | Health 2 | Flammability 1 | Instability 0 |

6. ACCIDENTAL RELEASE MEASURES

| | |
|----------------------------------|---|
| Personal Precautions | Use personal protective equipment. Ensure adequate ventilation. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions. |
| Environmental Precautions | Do not flush into surface water or sanitary sewer system. |
| Methods for Containment | Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). |
| Methods for Cleaning Up | Pick up and transfer to properly labeled containers. |
| Neutralizing Agent | Not applicable. |

7. HANDLING AND STORAGE

| | |
|----------------------------|---|
| Handling | Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists. |
| Storage | Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. |
| Storage Temperature | Minimum 35 °F / 2 °C Maximum 120 °F / 49 °C |
| Storage Conditions | Indoor X Outdoor Heated Refrigerated X |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| | | | |
|---|-------------------------------|--|---|
| Exposure Guidelines | *** | | |
| Component | ACGIH TLV | OSHA PEL | NIOSH |
| n-Propyl bromide | TWA: 0.1 ppm | No data available | No data available |
| Petroleum distillates, hydrotreated light | 525 mg/m ³ TWA | No data available | No data available |
| Isopropanol | TWA: 200 ppm STEL: 400 ppm | TWA: 400 ppm TWA: 980 mg/m ³ | 2000 ppm STEL 500 ppm STEL 1225 mg/m ³ TWA: 400 ppm TWA: 980 mg/m ³ |

| | |
|--------------------------------------|--|
| Engineering Measures | Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. |
| Personal Protective Equipment | |
| Eye/Face Protection | Safety glasses with side-shields. |

| | |
|---------------------------------------|---|
| Skin Protection | Wear suitable protective clothing, Impervious gloves. |
| Respiratory Protection | In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. |
| General Hygiene Considerations | Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|-------------------------------------|---------------------------|----------------------------------|-------------------|
| Physical State | Liquid | Viscosity | Non viscous |
| Color | Colorless | Odor | Sweet |
| Odor Threshold | Not applicable | Appearance | Transparent |
| pH | Not applicable | Specific Gravity | 1.14 |
| Evaporation Rate | 7.4 (Butyl acetate=1) | Percent Volatile (Volume) | 100 |
| VOC Content (%) | 100 | VOC Content (g/L) | 1140 |
| Vapor Pressure | 74.3 mmHg @ 70°F | Vapor Density | 4.2 (Air = 1.0) |
| Solubility | Insoluble | n-Octanol/Water Partition | No data available |
| Melting Point/Range | No data available | Decomposition Temperature | No data available |
| Boiling Point/Range | 167 °F / 75 °C | Flammability (solid, gas) | No data available |
| Flash Point | > 201 °F / > 94 °C | Method | Seta closed cup |
| Autoignition Temperature | No information available. | | |
| Flammability Limits in Air % | Solvent mixture. | | |
| | | Upper 12.7 Lower 0.7 | |

10. STABILITY AND REACTIVITY

| | |
|---|--|
| Chemical Stability | Stable. Hazardous polymerization does not occur. |
| Conditions to Avoid | None known |
| Incompatible Products | Strong oxidizing agents, Strong bases. |
| Hazardous Decomposition Products | Carbon oxides |
| Possibility of Hazardous Reactions | None under normal processing |

11. TOXICOLOGICAL INFORMATION

| | |
|---|--|
| Product Information | No information available. |
| The following values are calculated based on chapter 3.1 of the GHS document (Rev. 3, 2009): | |
| Oral LD50 | 3,911.23 |
| Dermal LD50 | 2,436.07 |
| Inhalation LC50 | |
| Gas | 9,700.00 |
| Mist | 19.79 |
| Vapor | 32.74 |
| Principle Route of Exposure | Skin contact, Eye contact, Inhalation. |
| Primary Routes of Entry | Inhalation, Skin Absorption. |
| Acute Effects | |
| Eyes | Causes eye irritation. |
| Skin | Causes skin irritation. Product may be absorbed through the skin in harmful amounts. |
| Inhalation | May cause irritation of respiratory tract. Inhalation may cause central nervous system effects. May cause central nervous system depression. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. |
| Ingestion | Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration hazard if swallowed - can enter lungs and cause damage. May be fatal if swallowed and enters airways. |
| Chronic Toxicity | Repeated exposure may cause skin dryness or cracking. Prolonged or repeated inhalation may cause damage to the lungs. Liver and kidney injuries may occur. Contains a known or suspected reproductive toxin. |
| Target Organ Effects | Central nervous system, Peripheral Nervous System (PNS), Heart, Liver, Kidney, Reproductive System, Respiratory system, Skin. |
| Aggravated Medical Conditions | Neurological disorders, Heart disease, Liver disorders, Kidney disorders, Respiratory disorders, Skin disorders. |

Component Information

Acute Toxicity

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation | Draize Test | Other |
|---|----------------------|-------------------------|---------------------------------------|-------------------|-------------------|
| n-Propyl bromide | no data available | no data available | = 253 g/m ³ (Rat) 30 min | no data available | no data available |
| Petroleum distillates, hydrotreated light | > 5000 mg/kg (Rat) | > 2000 mg/kg (Rabbit) | no data available | no data available | no data available |
| Solvent naphtha (petroleum), medium aliphatic | > 5000 mg/kg (Rat) | = 3000 mg/kg (Rabbit) | > 5.28 mg/L (Rat) 4 h | no data available | no data available |
| Isopropanol | = 1870 mg/kg (Rat) | = 4059 mg/kg (Rabbit) | = 72600 mg/m ³ (Rat) 4 h | no data available | no data available |

| Component | Mutagenicity | Sensitization | Developmental Toxicity | Reproductive Toxicity | Target Organ Effects |
|---|-------------------|-------------------|------------------------|-----------------------|---|
| n-Propyl bromide | no data available | no data available | no data available | X | CNS, PNS, heart, liver, kidney, respiratory system, reproductive system |
| Petroleum distillates, hydrotreated light | no data available | no data available | no data available | no data available | Respiratory system, CNS, Liver, Kidney |
| Solvent naphtha (petroleum), medium aliphatic | no data available | no data available | no data available | no data available | CNS, liver, kidneys |
| Isopropanol | no data available | no data available | no data available | no data available | eyes, respiratory system, skin, liver, kidney, CNS |

Carcinogenicity

| Component | ACGIH | IARC | NTP | OSHA | Other |
|------------------|----------------|----------------|----------------|----------------|----------------|
| n-Propyl bromide | A3 | not applicable | not applicable | not applicable | not applicable |
| Isopropanol | not applicable |

12. ECOLOGICAL INFORMATION

Product Information

No information available.

Component Information

| Component | Toxicity to Algae | Toxicity to Fish | Microtox | Water Flea | log Pow |
|---|--|---|-------------------------|-------------------------------------|---------|
| n-Propyl bromide | no data available | LC50 = 67.3 mg/L Pimephales promelas 96 h | no data available | no data available | 2.1 |
| Petroleum distillates, hydrotreated light | no data available | LC50 = 2.2 mg/L Lepomis macrochirus 96 h LC50 = 2.4 mg/L Oncorhynchus mykiss 96 h LC50 = 45 mg/L Pimephales promelas 96 h | no data available | no data available | N/A |
| Solvent naphtha (petroleum), medium aliphatic | EC50 = 450 mg/L Pseudokirchneriella subcapitata 96 h | LC50 = 800 mg/L Pimephales promelas 96 h | no data available | 100: 48 h Daphnia magna mg/L EC50 | N/A |
| Isopropanol | EC50 > 1000 mg/L Desmodesmus subspicatus 72 h EC50 > 1000 mg/L Desmodesmus subspicatus 96 h | LC50 = 11130 mg/L Pimephales promelas 96 h LC50 = 9640 mg/L Pimephales promelas 96 h LC50 > 1400000 µg/L Lepomis macrochirus 96 h | EC50 = 35390 mg/L 5 min | 13299: 48 h Daphnia magna mg/L EC50 | 0.05 |

Persistence and Degradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

13. DISPOSAL CONSIDERATIONS**Product Disposal**

Dispose of in accordance with local regulations.

Container Disposal

Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION**DOT**

Not regulated

TDG

Not regulated

ICAO

Not regulated

IATA

Not regulated

IMDG/IMO

Not regulated

15. REGULATORY INFORMATION**Inventories****TSCA**

Complies

DSL

Complies

U.S. Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Component | CAS-No | Weight % | SARA 313 - Threshold Values |
|-------------|---------|----------|-----------------------------|
| Isopropanol | 67-63-0 | 1-5 | 1.0 |

SARA 311/312 Hazardous Categorization

| Acute Health Hazard | Chronic Health Hazard | Fire Hazard | Sudden Release of Pressure Hazard | Reactive Hazard |
|---------------------|-----------------------|-------------|-----------------------------------|-----------------|
| Yes | Yes | No | No | No |

CERCLA

16. OTHER INFORMATION

Prepared By Adrienne McKee
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Reason for Revision No information available.
Glossary No information available.
List of References No information available.

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