

Safety Data Sheet: DUALSOLV

Supersedes Date 11/13/2013

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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
Acute Inhalation Toxicity - Dusts and Mists
Skin Corrosion/Irritation
Serious Eye Damage/Eye Irritation
Reproductive Toxicity
Specific target organ systemic toxicity (single exposure)
Specific target organ systemic toxicity (repeated exposure)

Category 1
Category 4
Category 2
Category 2
Category 1B
Category 3
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 + P331 - 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	Lower 0.7
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
Respiratory Protection

Wear suitable protective clothing, Impervious gloves.

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	not applicable	not applicable	not applicable	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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