

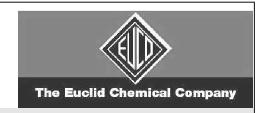
DURAL 1004C CLEAR 1:3

Version 3.0 Print Date 12/05/2013

REVISION DATE: 07/08/2012

This is a kit that contains the following components:

DURAL 1004-C 1:3 PART A DURAL 1004-C B CLEAR



DURAL 1004-C 1:3 PART A

Version 3.0 Print Date 12/05/2013

REVISION DATE: 07/08/2012

SECTION 1 - PRODUCT IDENTIFICATION

Trade name : DURAL 1004-C 1:3 PART A

Product code : TD2441404000

COMPANY : Euclid Chemical Company

19218 Redwood Road

Cleveland, OH 44110

Telephone : 1-800-321-7628

Emergency Phone: U.S. only: 1-800-424-9300

International Users Call Collect: 1-703-527-3887

Product use : Coating

SECTION 2 - HAZARDS IDENTIFICATION

Emergency Overview

Clear. Liquid. May cause drowsiness, weakness, and fatigue. Vapor and/or mist may irritate nose and throat. May cause moderate irritation to the respiratory system. May cause allergic respiratory sensitization. Move to fresh air. If required, artificial respiration or administration of oxygen can be performed by trained personnel. Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention.

Acute Potential Health Effects/ Routes of Entry

Inhalation : May cause drowsiness, weakness, and fatigue. Vapor and/or mist may irritate nose and

throat. May cause moderate irritation to the respiratory system. May cause allergic

respiratory sensitization.

Eyes : Vapor and/or mist may cause eye irritation.

Ingestion May cause irritation to the mouth, throat and stomach. May cause gastrointestinal

irritation, nausea, and vomiting.

Skin : May cause sensitization resulting in irritation, itching and redness.

Aggravated Medical Conditions

Pre-existing eye, skin, liver, kidney, and respiratory disorders may be aggravated by exposure.

Chronic Health Effects

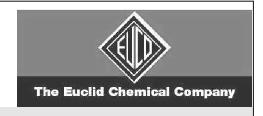
Overexposure may cause dermatitis, asthma, skin and respiratory sensitization and decreased lung function. Repeated overexposure to vapors and/or material may injure the liver, kidneys and respiratory system unless suitable engineering controls and/or personal protective equipment are used. Fillers are encapsulated and not expected to be released from product under normal conditions of use.

Target Organs: Eye, Lung, Liver, Kidney, Skin, Nerve

SECTION 3 - PRODUCT COMPOSITION

Chemical Name CAS-No. Weight %

An **RPIT** Company 3/15 00000008215 TD2441404000



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Homopolymer of HDI 28182-81-2 > 60.0

SECTION 4 - FIRST AID MEASURES

Get immediate medical attention for any significant overexposure.

Inhalation : Move to fresh air. If required, artificial respiration or administration of oxygen can be

performed by trained personnel. Leave area to breathe fresh air. Avoid further

overexposure. If symptoms persist, get medical attention.

Eye contact : Flush with water for at least 15 minutes while holding eye lids apart. Get medical

attention immediately.

Skin contact : Wash area of contact thoroughly with hand cleaner followed by soap and water. If

irritation, rash or other disorders develop, get medical attention immediately.

Ingestion : Do not induce vomiting unless advised by a physician. Call nearest Poison Control

Center or Physician immediately.

SECTION 5 - FIRE FIGHTING MEASURES

Flash point : 385 °F, 196 °C
Method : Tag Closed Cup
Lower explosion limit : Not available.

Upper explosion limit : Not available.

Autoignition temperature : Not available.

Extinguishing media : If water fog is ineffective, use carbon dioxide, dry chemical or foam.

Hazardous combustion : Carbon monoxide and carbon dioxide can form. Smoke, products : fumes. Hydrocyanic acid and nitrogen oxides can form.

Protective equipment for

firefighters

Use accepted fire fighting techniques. Wear full firefighting protective

clothing, including self-contained breathing apparatus (SCBA).

Fire and explosion conditions : Product may ignite if heated in excess of its flash point. Closed

container, may burst when exposed to extreme heat. Empty containers may contain ignitable vapors. Vapors may travel to sources of ignition

and flashback.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Use appropriate protective equipment. Avoid contact with material. Remove sources of ignition immediately. Stop flow of material if safe to do so. Contain spill and keep out of water courses. Ventilate area.

SECTION 7 - HANDLING AND STORAGE

Prevent inhalation of vapor, ingestion, and contact with skin eyes and clothing. Keep container closed when not in use. Precautions also apply to emptied containers. Change soiled work clothes frequently. Clean hands thoroughly after handling. Do not smoke, weld, generate sparks, or use flame near container. To prevent



DURAL 1004-C 1:3 PART A

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generation of static discharges, use bonding/grounding connection when pouring liquid. Extinguish all ignition sources including pilot lights, non-explosion proof motors and electrical equipment until vapors dissipate. Store under dry warehouse conditions away from heat and all ignition sources.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal protection equipment

Respiratory protection : Wear appropriate, properly fitted NIOSH/MSHA approved respirator when

airborne contaminant level(s) are expected to exceed exposure limits indicated on the MSDS. Select positive pressure supplied air respirator

(TC19C or equivalent) for isocyanates.

Hand protection : Use suitable impervious nitrile or neoprene gloves and protective apparel to

reduce exposure.

Eye protection : Wear appropriate eye protection. Wear chemical safety goggles and/or face

shield to prevent eye contact. Do not wear contact lenses. Do not touch eyes with contaminated body parts or materials. Have eye washing facilities readily

available.

Skin and body protection : Prevent contact with shoes and clothing.

Protective measures : Use professional judgment in the selection, care, and use.

Engineering measures : Use only in well ventilated areas. Provide maximum ventilation in enclosed

areas. Use local exhaust when the general ventilation is inadequate.

Exposure Limits

No known components with exposure limits.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Form : Liquid
Color : Clear
Odor : Solvent

pH : Not available.

Vapour pressure : Not available.

Vapor density : Heavier than air

Melting point/range : Not available.

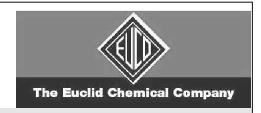
Freezing point : Not available.

Boiling point/range : Not available.

Water solubility : Negligible

Specific Gravity : 1.13

Specific Gravity : 1.13 % Volatile Weight : 0.7 %



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SECTION 10 - REACTIVITY / STABILITY

Substances to avoid : Strong acids. Strong bases. Amines. Water or moisture. Alcohols.

Stability : Material is stable under normal storage, handling, and use.

Hazardous polymerization : Will not occur under normal conditions.

SECTION 11 - TOXICOLOGICAL INFORMATION

No Data Available

SECTION 12 - ECOLOGICAL INFORMATION

No Data Available

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal Method : Subject to hazardous waste treatment, storage, and disposal requirements under

RCRA. Recycle or incinerate waste at EPA approved facility or dispose of in

compliance with federal, state and local regulations.

SECTION 14 - TRANSPORTATION / SHIPPING DATA

CFR / DOT:

Not Regulated

TDG:

Not Regulated

IMDG:

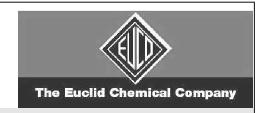
Not Regulated

SECTION 15 - REGULATORY INFORMATION

North American Inventories:

All components are listed or exempt from the TSCA inventory.

This product or its components are listed on, or exempt from the Canadian Domestic Substances List.



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U.S. Federal Regulations:

SARA 313 Components None present or none present in regulated quantities.

SARA 311/312 Hazards Based on an evaluation of the components used, this product does not

contain hazardous ingredients identified as per 29 CFR 1910.1200

OSHA Hazardous Components:

OSHA Flammability IIIB

When appropriately mixed with the other part, product has a VOC less water and exempt solvent of:

340 g/l

U.S. State Regulations:

Penn RTK Components : Homopolymer of HDI 28182-81-2

NJ RTK Components : Homopolymer of HDI 28182-81-2

WARNING! Contains chemicals known to the State of California to cause cancer, birth defects and/or other

reproductive harm: None known.

SECTION 16 - OTHER INFORMATION

HMIS Rating:

Health	2	0 = Minimum
Flammability	1	1 = Slight
Reactivity	1	2 = Moderate
PPE		3 = Serious
		4 = Severe

Further information:

For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

Prepared by: Rich Mikol

Legend

ACGIH - American Conference of Governmental Hygienists

CERCLA - Comprehensive Environmental Response, Compensation, and RCRA - Resource Conservation and Recovery Act

Liability Act

DOT - Department of Transportation

DSL - Domestic Substance List

EPA - Environmental Protection Agency

HMIS - Hazardous Materials Information System

IARC - International Agency for Research on Cancer

MSHA - Mine Safety Health Administration

NDSL - Non-Domestic Substance List

PEL - Permissible Exposure Limit

RTK - Right To Know

SARA - Superfund Amendments and Reauthorization Act

STEL - Short Term Exposure Limit TLV - Threshold Limit Value

TSCA - Toxic Substances Control Act TWA - Time Weighted Average

V - Volume



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NIOSH - National Institute for Occupational Safety and Health

NTP - National Toxicology Program

OSHA - Occupational Safety and Health Administration

VOC - Volatile Organic Compound WHMIS - Workplace Hazardous Materials Information System



DURAL 1004-C B CLEAR

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SECTION 1 - PRODUCT IDENTIFICATION

Trade name : DURAL 1004-C B CLEAR

Product code : TD2441404000

COMPANY : Euclid Chemical Company

19218 Redwood Road

Cleveland, OH 44110

Telephone : 1-800-321-7628

Emergency Phone: U.S. only: 1-800-424-9300

International Users Call Collect: 1-703-527-3887

Product use : Coating

SECTION 2 - HAZARDS IDENTIFICATION

Emergency Overview

Clear. Liquid. May cause drowsiness, weakness, and fatigue. Vapor and/or mist may irritate nose and throat. May cause moderate irritation to the respiratory system. May cause allergic respiratory sensitization. Move to fresh air. If required, artificial respiration or administration of oxygen can be performed by trained personnel. Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention.

Acute Potential Health Effects/ Routes of Entry

Inhalation : May cause drowsiness, weakness, and fatigue. Vapor and/or mist may irritate nose and

throat. May cause moderate irritation to the respiratory system. May cause allergic

respiratory sensitization.

Eyes : Vapor and/or mist may cause eye irritation.

Ingestion May cause irritation to the mouth, throat and stomach. May cause gastrointestinal

irritation, nausea, and vomiting.

Skin : May cause sensitization resulting in irritation, itching and redness.

Aggravated Medical Conditions

Pre-existing eye, skin, liver, kidney, and respiratory disorders may be aggravated by exposure.

Chronic Health Effects

Overexposure may cause dermatitis, asthma, skin and respiratory sensitization and decreased lung function. Repeated overexposure to vapors and/or material may injure the liver, kidneys and respiratory system unless suitable engineering controls and/or personal protective equipment are used. Prolonged or repeated exposure to xylene may cause defatting, drying, and irritation of the skin, dermatitis, central nervous system (CNS) effects, heart muscle sensitization and arrhythmia, hearing loss, and brain, liver, kidney damage. Xylene overexposure may affect fetal development. The International Agency for Research on Cancer (IARC) has evaluated ethylbenzene and classified it as a possible human carcinogen (Group 2B) based on sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans. Fillers are encapsulated and not expected to be released from product under normal conditions of use.

Target Organs: Eye, Lung, Liver, Kidney, Skin, Nerve



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SECTION 3 - PRODUCT COMPOSITION

Chemical Name	CAS-No.	Weight %
1-Methoxy-2-propanol acetate	108-65-6	40.0 - 70.0
Polyester Polyol	NJ TSRN# 51721300-5821P	40.0 - 70.0
Xylene	1330-20-7	7.0 - 13.0
Polyester Polyol	67815-82-1	7.0 - 13.0
Ethylbenzene	100-41-4	1.0 - 5.0

SECTION 4 - FIRST AID MEASURES

Get immediate medical attention for any significant overexposure.

Inhalation : Move to fresh air. If required, artificial respiration or administration of oxygen can be

performed by trained personnel.Leave area to breathe fresh air. Avoid further

overexposure. If symptoms persist, get medical attention.

Eye contact : Flush with water for at least 15 minutes while holding eye lids apart. Get medical

attention immediately.

Skin contact : Wash area of contact thoroughly with hand cleaner followed by soap and water. If

irritation, rash or other disorders develop, get medical attention immediately.

Ingestion : Do not induce vomiting unless advised by a physician. Call nearest Poison Control

Center or Physician immediately.

SECTION 5 - FIRE FIGHTING MEASURES

Flash point : 79 °F, 26 °C

Method : Tag Closed Cup

Lower explosion limit : 1.1 %(V) Solvent

Upper explosion limit : 6.1 %(V) Solvent

Autoignition temperature : 450 °F, 232 °C

Extinguishing media : If water fog is ineffective, use carbon dioxide, dry chemical or foam.

Hazardous combustion : Carbon monoxide and carbon dioxide can form. Smoke, products : fumes. Hydrocyanic acid and nitrogen oxides can form.

Protective equipment for

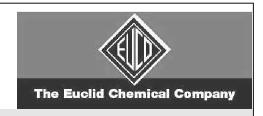
firefighters

Use accepted fire fighting techniques. Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA).

Fire and explosion conditions : Product may ignite if heated in excess of its flash point. Closed

container, may burst when exposed to extreme heat. Empty containers may contain ignitable vapors. Vapors may travel to sources of ignition

and flashback.



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SECTION 6 - ACCIDENTAL RELEASE MEASURES

Use appropriate protective equipment. Avoid contact with material. Remove sources of ignition immediately. Stop flow of material if safe to do so. Contain spill and keep out of water courses. Ventilate area.

SECTION 7 - HANDLING AND STORAGE

Prevent inhalation of vapor, ingestion, and contact with skin eyes and clothing. Keep container closed when not in use. Precautions also apply to emptied containers. Change soiled work clothes frequently. Clean hands thoroughly after handling. Do not smoke, weld, generate sparks, or use flame near container. To prevent generation of static discharges, use bonding/grounding connection when pouring liquid. Extinguish all ignition sources including pilot lights, non-explosion proof motors and electrical equipment until vapors dissipate. Store under dry warehouse conditions away from heat and all ignition sources.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal protection equipment

Respiratory protection : Wear appropriate, properly fitted NIOSH/MSHA approved respirator when

airborne contaminant level(s) are expected to exceed exposure limits indicated on the MSDS. Select positive pressure supplied air respirator

(TC19C or equivalent) for isocyanates.

Hand protection : Use suitable impervious nitrile or neoprene gloves and protective apparel to

reduce exposure.

Eye protection : Wear appropriate eye protection. Wear chemical safety goggles and/or face

shield to prevent eye contact. Do not wear contact lenses. Do not touch eyes with contaminated body parts or materials. Have eye washing facilities readily

available.

Skin and body protection : Prevent contact with shoes and clothing.

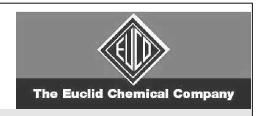
Protective measures : Use professional judgment in the selection, care, and use.

Engineering measures : Use only in well ventilated areas. Provide maximum ventilation in enclosed

areas. Use local exhaust when the general ventilation is inadequate.

Exposure Limits

Chemical Name	CAS Number	Regulation	<u>Limit</u>	<u>Form</u>
Xylene	1330-20-7	ACGIH TWA: ACGIH STEL: OSHA PEL:	100 ppm 150 ppm 435 mg/m3	
Ethylbenzene	100-41-4	ACGIH TWA: ACGIH STEL: OSHA PEL:	100 ppm 125 ppm 435 mg/m3	



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SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Form : Liquid
Color : Clear
Odor : Solvent

pH : Not available.

Vapour pressure : 3.64 mmHg at 68 °F
Vapor density : Heavier than air
Melting point/range : Not available.
Freezing point : Not available.

Boiling point/range : 300 - 390 °F, 149 - 199 °C

Water solubility : Negligible Specific Gravity : 0.9 % Volatile Weight : 51.4 %

SECTION 10 - REACTIVITY / STABILITY

Substances to avoid : Strong acids.Strong bases.Amines.Water or moisture.Alcohols.

Stability : Material is stable under normal storage, handling, and use.

Hazardous polymerization : Will not occur under normal conditions.

SECTION 11 - TOXICOLOGICAL INFORMATION

Xylene, CAS-No.: 1330-20-7

Acute oral toxicity (LD-50 oral)

4,300 mg/kg (Rat) 1,590 mg/kg (Mouse) 6,670 mg/kg (Rat) 3,523 - 8,600 mg/kg (Rat) 5,627 mg/kg (Mouse)

Acute oral toxicity (LD-50 oral)

4,300 mg/kg (Rat) 1,590 mg/kg (Mouse) 6,670 mg/kg (Mouse) 8,000 mg/kg (Rat) 2,007 mg/l for 6 h (Mouse) 8,000 mg/kg (Rat) 3,000 mg/kg (Rat

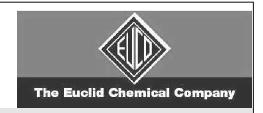
Acute inhalation toxicity (LC-50) 6,350 mg/l for 4 h (Rat) 3,907 mg/l for 6 h (Mouse) 8,000

mg/I for 4 h (Rat)

Ethylbenzene, CAS-No.: 100-41-4

Acute oral toxicity (LD-50 oral) 5,460 mg/kg (Rat) 3,500 mg/kg (Rat)

Acute dermal toxicity (LD-50 dermal) 17,800 mg/kg (Rabbit)



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SECTION 12 - ECOLOGICAL INFORMATION

No Data Available

SECTION 13 - DISPOSAL CONSIDERATIONS

RCRA Class : D001: Reportable Quantity = 100 lbs. (Characteristic of ignitability)

This classification applies only to the material as it was originally produced.

Disposal Method : Subject to hazardous waste treatment, storage, and disposal requirements under

RCRA. Recycle or incinerate waste at EPA approved facility or dispose of in

compliance with federal, state and local regulations.

SECTION 14 - TRANSPORTATION / SHIPPING DATA

CFR / DOT:

UN1993, Flammable liquids, n.o.s. (Xylene), 3, PG III

TDG:

UN1993, FLAMMABLE LIQUID, N.O.S. (Xylene), 3, PG III

IMDG:

UN1993, FLAMMABLE LIQUID, N.O.S. (Xylene), 3, PG III

Further Information:

The above shipping description may not be accurate for all container sizes and all modes of transportation. Please refer to Bill of Lading.

SECTION 15 - REGULATORY INFORMATION

North American Inventories:

All components are listed or exempt from the TSCA inventory.

This product or its components are listed on, or exempt from the Canadian Domestic Substances List.

U.S. Federal Regulations:

SARA 313 Components : Xylene 1330-20-7

Ethylbenzene 100-41-4

SARA 311/312 Hazards : Acute Health Hazard

Fire Hazard

OSHA Hazardous Components:

Xylene 1330-20-7

An **RPITI** Company 13/15 00000008446 TD2441404000



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Ethylbenzene 100-41-4

OSHA Status: Considered

hazardous based on the

following criteria:

: Irritant

: IC **OSHA Flammability**

When appropriately mixed with the other part, product has a VOC less water and exempt solvent of: 400 g/l

U.S. State Regulations:

MASS RTK Components 1330-20-7 **Xylene**

Ethylbenzene 100-41-4

Penn RTK Components 1-Methoxy-2-propanol acetate 108-65-6

Polyester Polyol NJ TSRN# 51721300-5821P

Xylene 1330-20-7 Polyester Polyol 67815-82-1 Ethylbenzene 100-41-4

NJ RTK Components 1-Methoxy-2-propanol acetate 108-65-6

> Polyester Polyol NJ TSRN# 51721300-5821P

Xylene 1330-20-7 Polyester Polyol 67815-82-1 Ethylbenzene 100-41-4

WARNING! Contains chemicals known to the State of California to cause cancer, birth defects and/or other reproductive harm:

100-41-4 Ethylbenzene 108-88-3 Toluene

SECTION 16 - OTHER INFORMATION

HMIS Rating:

Health	2	0 = Minimum
Flammability	3	1 = Slight
Reactivity	0	2 = Moderate
PPE		3 = Serious
		4 = Severe

Further information:

For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

Prepared by: Rich Mikol

Legend



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ACGIH - American Conference of Governmental Hygienists

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

DOT - Department of Transportation

DSL - Domestic Substance List

EPA - Environmental Protection Agency

HMIS - Hazardous Materials Information System

IARC - International Agency for Research on Cancer

MSHA - Mine Safety Health Administration

NDSL - Non-Domestic Substance List

NIOSH - National Institute for Occupational Safety and Health

NTP - National Toxicology Program

OSHA - Occupational Safety and Health Administration

PEL - Permissible Exposure Limit

RCRA - Resource Conservation and Recovery Act

RTK - Right To Know

SARA - Superfund Amendments and Reauthorization Act

STEL - Short Term Exposure Limit

TLV - Threshold Limit Value

TSCA - Toxic Substances Control Act

TWA - Time Weighted Average

V - Volume

VOC - Volatile Organic Compound

WHMIS - Workplace Hazardous Materials Information

System