



**DURAL 452 GEL 1:1**

Version 2.0  
REVISION DATE: 09/21/2012

Print Date 12/23/2013

This is a kit that contains the following components:

DURAL 452 GEL PART A  
DURAL 452 GEL PART B





**DURAL 452 GEL PART A**

Version 2.0  
 REVISION DATE: 09/21/2012

Print Date 12/23/2013

**SECTION 1 - PRODUCT IDENTIFICATION**

Trade name : DURAL 452 GEL PART A  
 Product code : 2DG 02

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

**SECTION 2 - HAZARDS IDENTIFICATION**

**Emergency Overview**

Light Gray. Liquid. May cause slight irritation to the respiratory system. 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 slight irritation to the respiratory system.  
 Eyes : Slightly irritating.  
 Ingestion : May cause gastrointestinal irritation, nausea, and vomiting.  
 Skin : May cause sensitization.

**Aggravated Medical Conditions**

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

**Chronic Health Effects**

May cause sensitization by contact. Prolonged or repeated contact/exposure to aromatic petroleum distillates may cause defatting, drying, and irritation of the skin, dermatitis, and central nervous system (CNS) effects. Carbon black is classified by IARC to be a known animal carcinogen and a possible human carcinogen (Group 2B). Carbon black is encapsulated by resin and not expected to have adverse effects unless made airborne. Prolonged or repeated exposure to epoxy resin can cause irritation to skin, eyes, skin sensitization, temporary eye injury. Certain epoxy resins are reported to be mutagenic in some laboratory tests. Fillers are encapsulated and not expected to be released from product under normal conditions of use.

**Target Organs:** Skin, Eye, Ingestion

**SECTION 3 - PRODUCT COMPOSITION**

Chemical Name	CAS-No.	Weight %
Bisphenol A Polyglycidyl Ether Resin	25068-38-6	> 60.0
o-Cresyl glycidyl ether	2210-79-9	5.0 - 10.0
Siloxanes and Silicones	67762-90-7	5.0 - 10.0
Inert Filler	NJ TSRN# 51721300-5376P	3.0 - 7.0

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Titanium dioxide	13463-67-7	1.0 - 5.0
Heavy aromatic naphtha	64742-94-5	1.0 - 5.0
Carbon Black	1333-86-4	0.1 - 1.0

**SECTION 4 - FIRST AID MEASURES**

Get immediate medical attention for any significant overexposure.

Inhalation	:	Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention.
Eye contact	:	Flush with water for 15 minutes. If irritation persists, get medical attention.
Skin contact	:	Wash with 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	:	> 200 °F, > 93 °C
Method	:	Setaflash Closed Cup
Lower explosion limit	:	Not available.
Upper explosion limit	:	Not available.
Autoignition temperature	:	Not available.
Extinguishing media	:	This product is not expected to burn under normal conditions of use.
Hazardous combustion products	:	Smoke, fumes.
Protective equipment for firefighters	:	Use accepted fire fighting techniques. Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA).
Fire and explosion conditions	:	This product not expected to ignite under normal conditions of use.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

Stop flow. Contain spill. Keep out of water courses. Absorb spill in sand, earth or other suitable material. Transfer to appropriate container for disposal.

**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. Store in sealed containers in a dry, ventilated warehouse location above freezing.

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**SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION****Personal protection equipment**

- Respiratory protection : Not required under normal conditions of use.
- Hand protection : Use suitable impervious rubber or vinyl gloves and protective apparel to reduce exposure.
- Eye protection : Wear appropriate eye protection.
- Skin and body protection : Not required.
- Protective measures : Use professional judgment in the selection, care, and use. Other equipment not normally required.
- Engineering measures : General ventilation is sufficient.

**Exposure Limits**

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Regulation</u>	<u>Limit</u>	<u>Form</u>
Titanium dioxide	13463-67-7	ACGIH TWA: OSHA PEL: OSHA TWA: OSHA TWA:	10 mg/m3 15 mg/m3 15 mg/m3 5 mg/m3	Total dust. Total dust. Respirable fraction.
Carbon Black	1333-86-4	ACGIH TWA: OSHA PEL: OSHA TWA: OSHA TWA:	3.5 mg/m3 3.5 mg/m3 15 mg/m3 5 mg/m3	Total dust. Respirable fraction.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

- Form : Liquid
- Color : Light Gray
- Odor : Epoxy
- 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 : Miscible
- Specific Gravity : 1.13
- % Volatile Weight : 2.0 %



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**SECTION 10 - REACTIVITY / STABILITY**

Substances to avoid : Acids and bases.Amines.Epoxy curing agents.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

No Data Available

**SECTION 12 - ECOLOGICAL INFORMATION**

No Data Available

**SECTION 13 - DISPOSAL CONSIDERATIONS**

Disposal Method : Not regulated under RCRA. Dispose of in compliance with state and local regulations. Do not incinerate.

**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.

**U.S. Federal Regulations:**

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

SARA 311/312 Hazards : Acute Health Hazard



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Chronic Health Hazard

OSHA Hazardous Components :

Titanium dioxide 13463-67-7  
 Carbon Black 1333-86-4

OSHA Status: Considered : Irritant  
 hazardous based on the Carcinogen  
 following criteria:

OSHA Flammability : Not Regulated

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

Chemical is listed as an IARC, NTP, OSHA, or ACGIH Carcinogen:

Carbon Black 1333-86-4

**U.S. State Regulations:**

MASS RTK Components : Titanium dioxide 13463-67-7

Penn RTK Components : Bisphenol A Polyglycidyl Ether Resin 25068-38-6  
 o-Cresyl glycidyl ether 2210-79-9  
 Siloxanes and Silicones 67762-90-7  
 Inert Filler NJ TSRN# 51721300-5376P  
 Titanium dioxide 13463-67-7  
 Heavy aromatic naphtha 64742-94-5

NJ RTK Components : Bisphenol A Polyglycidyl Ether Resin 25068-38-6  
 o-Cresyl glycidyl ether 2210-79-9  
 Siloxanes and Silicones 67762-90-7  
 Inert Filler NJ TSRN# 51721300-5376P  
 Titanium dioxide 13463-67-7  
 Carbon Black 1333-86-4

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

13463-67-7 Titanium dioxide  
 1333-86-4 Carbon Black

**SECTION 16 - OTHER INFORMATION**

**HMIS Rating :**

Health	1
Flammability	1
Reactivity	0
PPE	

0 = Minimum  
 1 = Slight  
 2 = Moderate  
 3 = Serious  
 4 = Severe



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**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 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



**DURAL 452 GEL PART B**

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**SECTION 1 - PRODUCT IDENTIFICATION**

Trade name : DURAL 452 GEL PART B  
 Product code : 2DG 02

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 : Curative

**SECTION 2 - HAZARDS IDENTIFICATION**

**Emergency Overview**

Black. Liquid solution. May cause slight irritation to the respiratory system. 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 slight irritation to the respiratory system.  
 Eyes : Vapors or liquid may cause tearing, blurred vision, severe irritation, and possible chemical burns.  
 Ingestion : May cause irritation to the mouth, throat and stomach. May cause chemical burns to stomach, mouth, nose, and throat.  
 Skin : May cause moderate irritation. May cause sensitization resulting in irritation, itching and redness.

**Aggravated Medical Conditions**

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

**Chronic Health Effects**

May aggravate persons sensitized to amines. Prolonged skin contact may cause irritation, burns or dermatitis. Polyamines are reported to cause liver and kidney damage in experimental animals on prolonged and repeated overexposure. Repeated inhalation of nonyl phenol may cause lung damage. Repeated skin contact with nonyl phenol may cause skin irritation and dermatitis. Fillers are encapsulated and not expected to be released from product under normal conditions of use.

**Target Organs:** Skin, Eye, Lung

**SECTION 3 - PRODUCT COMPOSITION**

Chemical Name	CAS-No.	Weight %
Isophoronediamine	2855-13-2	30.0 - 60.0



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Non-Hazardous Proprietary	NJ TSRN# 51721300-6179P	15.0 - 40.0
Benzyl alcohol	100-51-6	15.0 - 40.0
4-Nonylphenol	84852-15-3	7.0 - 13.0
Siloxanes and Silicones	67762-90-7	5.0 - 10.0
Inert Filler	NJ TSRN# 51721300-5376P	3.0 - 7.0

**SECTION 4 - FIRST AID MEASURES**

Get immediate medical attention for any significant overexposure.

- Inhalation : Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention.
- Eye contact : Flush with water for 15 minutes. If irritation persists, get medical attention.
- 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 : > 200 °F, > 93 °C
- Method : Setaflash 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 products : Carbon monoxide, carbon dioxide, and nitrogen oxides.
- 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.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

Stop flow. Contain spill. Keep out of water courses. Absorb spill in sand, earth or other suitable material. Transfer to appropriate container for disposal.

**SECTION 7 - HANDLING AND STORAGE**

Store under normal warehouse conditions. Handle in compliance with common hygienic practices. Clean hands thoroughly after handling. 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.

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**SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION****Personal protection equipment**

- Respiratory protection : Use full engineering controls before relying on personal protective equipment. Wear NIOSH/MSHA approved vapor respirator with appropriate cartridge when the vapor concentration is expected to exceed exposure limits indicated on the MSDS. Follow manufacturer's directions for respirator use.
- Hand protection : Protect hands with impervious gloves.
- 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.
- Protective measures : Use professional judgment in the selection, care, and use.
- Engineering measures : 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 solution
- Color : Black
- Odor : Amine
- pH : Not available.
- Vapour pressure : Not available.
- Vapor density : Not available.
- Melting point/range : Not available.
- Freezing point : Not available.
- Boiling point/range : Not available.
- Water solubility : Not available.
- Specific Gravity : 1.007
- % Volatile Weight : 29.4 %

**SECTION 10 - REACTIVITY / STABILITY**

- Substances to avoid : Acids.
- Stability : Stable under normal conditions. Avoid welding arcs, flames or other high temperature sources.
- Hazardous polymerization : Will not occur under normal conditions.



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**SECTION 11 - TOXICOLOGICAL INFORMATION**

Benzyl alcohol, CAS-No.: 100-51-6  
Acute oral toxicity (LD-50 oral) 1,580 mg/kg ( Mouse ) 1,940 mg/kg ( Rabbit ) 3,100 mg/kg ( Rat )  
Acute inhalation toxicity (LC-50) 200 - 300 mg/l for 8 h ( Rat ) 1,000 mg/l for 8 h ( Rat )

**SECTION 12 - ECOLOGICAL INFORMATION**

No Data Available

**SECTION 13 - DISPOSAL CONSIDERATIONS**

Disposal Method : Waste not regulated under RCRA. Incinerate at EPA approved facility or dispose of waste in compliance with state and local regulations.

**SECTION 14 - TRANSPORTATION / SHIPPING DATA**

**CFR / DOT:**

Not Regulated

**TDG:**

Not Regulated

**IMDG:**

Not Regulated

**SECTION 15 - REGULATORY INFORMATION**

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OSHA Flammability : Not Regulated

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

**U.S. State Regulations:**

MASS RTK Components : Benzyl alcohol 100-51-6  
 Benzene 71-43-2

Penn RTK Components : Isophoronediamine 2855-13-2  
 Non-Hazardous Proprietary NJ TSRN# 51721300-6179P  
 Benzyl alcohol 100-51-6  
 4-Nonylphenol 84852-15-3  
 Siloxanes and Silicones 67762-90-7  
 Inert Filler NJ TSRN# 51721300-5376P

NJ RTK Components : Isophoronediamine 2855-13-2  
 Non-Hazardous Proprietary NJ TSRN# 51721300-6179P  
 Benzyl alcohol 100-51-6  
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 Siloxanes and Silicones 67762-90-7

WARNING! Contains chemicals known to the State of California to cause cancer, birth defects and/or other reproductive harm:  
 1333-86-4 Carbon Black

**SECTION 16 - OTHER INFORMATION**

**HMIS Rating :**

Health	3
Flammability	1
Reactivity	0
PPE	

0 = Minimum  
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**Further information:**

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**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