

Grout AS475 Spec Sheet
and Material Safety Data Sheet



Mixing Instructions
For:
International Road Dynamics Inc.

“AS475 Grout”

For piezo sensor installation

Step 1: Make sure that you have all of the required tools to mix the formula. A corded or cordless drill and a mortar mixer.
 (Available at most hardware stores)



Step 2: Open pail and ready drill for use.

Step 3: Mix grout with drill and bit in a circular and up and down motion for not less then 1.5 minute until contents are of consistent nature without lumps.



Step 4: Add BPO (catalyst in small vials) while mixing in accordance to Table 1 below depending on ambient temperature.



Step 5: Mix thoroughly in same circular and up and down motion for another 45 seconds – 1 minutes.

Step 6: Use product! (Cure time 30 – 40 minutes)

Table 1: Based on 30 minute cure time

TEMPERATURE		AMOUNT OF BENZOL PEROXIDE POWDER (BPO)	
		to mix with 18Kg (18US qt) of grout	to mix with 9 Kg (9 US qt) of grout
<13	<55	6 x 33g Vials	3 x 33g Vials
13-24	55-75	4 x 33g Vials	2 x 33g Vials
>24	>75	2 x 33g Vials	1 x 33g Vials
		to mix with 7.5Kg (7.5US qt) of grout	to mix with 5 Kg (5 US qt) of grout
<13	<55	3 x 33g Vials	2 x 33g Vials
13-24	55-75	2 x 33g Vials	1.5 x 33g Vials
>24	>75	1 x 33g Vials	0.75 x 33g Vials

* Due to nature of grouting material please read MSDS and take precautions while using to ensure safety of the user

** For more detailed instructions please see detailed AS475 grout mixing instructions

**LAFRENTZ SYSTEM 400- EXTRUSION
FORMULA 0413 – AS-475 GROUT – IRD, INC.
MATERIAL SAFETY DATA SHEET
A COMPONENT**

SECTION 1 - PRODUCT IDENTIFICATION AND USE

Product Identifier: AS-475 Grout for IRD, Inc.

EXTRUSION LIQUID COMPONENT

Product Identification Number (PIN): UN 1866

Product Use: Installation of weight and motion sensors.

Manufactured and Supplied By: Lafrentz Road Marking
A Division of Canadian Road Builders
Inc.
Zone 4, 26120 Acheson Road
Acheson, Alberta T7X 6B3

24-Hour Emergency Telephone Number: (613) 996-6666

SECTION 2 - HAZARDS IDENTIFICATION

Emergency Overview

Appearance	Liquid
Odour	Ester-like

GHS classification in accordance with the Hazardous Products Regulations

Flammable liquid : Category 1
Skin Irritation : Category 2
Eye Irritation : Category 2B
Respiratory or Skin Sensitization : Category 1B
Carcinogenicity : Category 2
Hazardous to the Aquatic Environment : Category 1

Signal Word: WARNING

Hazard Statements: H226 Flammable liquid and vapour
H227 Combustible liquid
H303 May be harmful if swallowed
H317 May cause an allergic skin reaction
H320 Causes eye irritation
H335 May cause respiratory irritation
H351 Suspected of causing cancer
H402 Harmful to aquatic life

Precautionary Statements: **Prevention:**
P202 Do not handle until all safety precaution have been read and understood
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P261 Avoid breathing dust / fumes / gas / mist / vapors / spray
P262 Do not get in eyes, on skin, or on clothing
P280 Wear protective gloves/protective clothing / eye protection / face protection

Response:
P302+352 IF ON SKIN: Wash with plenty of water
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P370+378 In case of fire: Use water spray, foam, carbon dioxide, and dry chemical

Storage:
P403 Store in a well ventilated place
P410 Protect from sunlight
P412 Do not expose to temperatures exceeding 50°C / 122°F

Disposal:
P501 Dispose of contents adding 1% BPO powder by weight, landfill when hard

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture
Chemical nature: Flammable liquid

Hazardous ingredients	CAS-No	Concentration %
METHYL METHACRYLATE	80-62-6	8 - 10
2 ETHYLHEXYL ACRYLATE	103-11-7	4 - 6

Non-Hazardous ingredients	CAS-No	Concentration %
CALCIUM CARBONATE	471-34-1	65 -75
MAGNESIUM CARBONATE	546-93-0	1-5
W3	91082-17-7	0-10
BLACK IRON OXIDE	1309-38-2	0-5

SECTION 4 - FIRST AID MEASURES

SKIN: RINSE WITH SOAP AND WATER. REMOVE CLOTHING AND SHOES AFTER FLUSHING HAS BEGUN.

EYE: FLUSH EYES WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. SEEK MEDICAL ATTENTION.

INHALATION: INHALATION OF VAPOURS MAY CAUSE NAUSEA, MOVE INDIVIDUAL TO FRESH AIR

INGESTION: IF SWALLOWED, KEEP AT REST, SEEK MEDICAL ATTENTION.

SECTION 5 - FIRE AND EXPLOSION DATA

FLAMMABILITY: YES, SOMEWHAT FLAMMABLE

UNDER FOLLOWING CONDITIONS: WHEN AN OPEN FLAME IS INTRODUCED THE PRODUCT WILL BURN SLOWLY. FIRE GOES OUT WHEN FLAME IS REMOVED.

MEANS OF EXTINCTION: WATER SPRAY, FOAM, and CARBON DIOXIDE
DRY CHEMICAL

FLASHPOINT: 17 DEGREES C.

UPPER FLAMMABILITY LIMIT:	12.5 (% by volume)
LOWER FLAMMABILITY LIMIT:	2.1 (% by volume)
AUTOIGNITION TEMPERATURE:	280 DEGREES C.
HAZARDOUS COMBUSTION PRODUCTS:	CO ₂ ; CO
SENSITIVITY TO IMPACT:	NONE
SENSITIVITY TO STATIC DISCHARGE:	NONE

SECTION 6 – ACCIDENTAL RELEASE MEASURES

PRECAUTIONARY MAEASURES:	TAKE CARE FOR ADEQUATE VENTILATION. USE PERSONAL PROTECTIVE CLOTHING. KEEP AWAY SOURCES OF IGNITION.
ENVIRONMENTAL MAEASURES:	PREVENT PRODUCT FROM GETTING INTO DRAINS/SURFACE WATER/GROUNDWATER
LEAK AND SPILL PROCEDURE:	ADD B.P.O. 3% BY WEIGHT AND MIX IN THOROUGHLY. PEEL OFF WHEN LIKE PUTTY, THEN LANDFILL.

SECTION 7 – HANDLING AND STORAGE

HANDLING PROCEDURES AND EQUIPMENT:	DO NOT EAT, DRINK OR SMOKE WHILE WORKING WITH MATERIALS.
STORAGE REQUIREMENTS:	STORE IN COOL, VENTILATED AREA. KEEP AWAY FROM INCOMPATIBLE MATERIALS.
SPECIAL SHIPPING INFORMATION:	CONTROLLED UNDER "TRANSPORT OF DANGEROUS GOODS" LEGISLATION AS A FLAMMABLE.

SECTION 8 – EXPOSURE CONTROL/PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT:	
GLOVES:	RUBBER OR PVA
RESPIRATORY:	ORGANIC VAPOUR/ACID
EYES:	GOGGLES
FOOTWEAR:	NOT APPLICABLE
CLOTHING:	NO SPECIAL CLOTHING
OTHER:	SAFETY SHOWERS & EYE WASH SYSTEMS
VENTILATION:	USE OUTDOORS. EXHAUST VENTILATION RECOMMENDED WHEN USED INDOORS.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	THICK LIQUID
ODOUR AND APPEARANCE:	STRONG CHARACTERISTIC ODOUR THICK LIQUID, COLOUR AS ON LABEL
ODOUR THRESHOLD:	LESS THAN 1 PPM
VAPOUR PRESSURE:	47 mbar
VAPOUR DENSITY:	3.45 of MMA (AIR = 1)
EVAPORATION RATE:	not available
BOILING POINT:	100 DEGR C.
FREEZING POINT:	-48 DEGR C.
PH:	not applicable
SPECIFIC GRAVITY:	2.0 g/ml
COEFF. WATER/OIL DIST.	Not applicable

SECTION 10 – STABILITY AND REACTIVITY DATA

CHEMICAL STABILITY:	AVOID HEAT, LIGHT AND DIRECT SUNLIGHT METHYL METHACRYLATE MONOMER (MMA) TENDS TO SELF-POLYMERIZATION WITH HEAT BUILD-UP (EXOTHERMIC REACTION).
INCOMPATIBLE MATERIALS:	RADICAL SOURCES SUCH AS PEROXIDES, AZO COMPOUNDS, HEAVY METAL IONS, REDOX-SYSTEMS, AMINES, SULPHUR COMPOUNDS. MMA ACTS AS A STRONG SOLVENT AND CAN SOFTEN SOME PLASTIC, PAINT & RUBBER.
CONDITIONS OF REACTIVITY:	MMA HAS AN INHIBITOR AGAINST SELF- POLYMERIZATION. OXYGEN OF AIR IMPROVES THE EFFICIENCY OF THE INHIBITOR. AVOID STORAGE UNDER OXYGEN FREE ATMOSPHERE.
POSSIBLE HAZARDOUS DECOMPOSITION PRODUCTS:	NOT AVAILABLE

SECTION 11 - TOXICOLOGICAL PROPERTIES

ROUTES OF ENTRY	
SKIN CONTACT:	YES
SKIN ABSORPTION:	YES
EYE CONTACT:	YES
INHALATION:	YES
INGESTION:	YES
ACUTE OVER EXPOSURE EFFECTS:	MAY BE IRRITATING AFTER SWALLOWING, SKIN ONTACT OR INHALATION
CHRONIC OVER EXPOSURE EFFECTS:	DERMATITIS
EXPOSURE LIMITS:	NOT AVAILABLE
IRRITANCY OF PRODUCT:	EYES, SKIN, RESPIRATORY TRACT, and GASTROINTESTINAL TRACT
SENSITIZATION TO PRODUCT:	BY SKIN CONTACT
CARCINOGENICITY:	NONE REPORTED
TERATOGENICITY:	NONE REPORTED
REPRODUCTIVE TOXICITY:	NONE REPORTED
MUTAGENICITY:	NONE REPORTED
SYNERGISTIC PRODUCTS:	NONE REPORTED

SECTION 12 – ECOLOGICAL INFORMATION

Information on elimination (persistence and degradability)

Biodegradability:

biodegradable
(monomer constituent)

Ecotoxicological effect

Fish toxicity:

LC50 Oncorhynchus mykiss, rainbow trout, OECD 203, flow through, GLP, 96 h > 79 mg/l

Related to substance: methyl methacrylate

LC50 rainbow trout, 96 h 2 mg/l

Related to substance: trimethylol propane trimethacrylate

Daphnia toxicity:

EC50 Daphnia magna, OECD 202, flow through, 48 h 69 mg/l

Related to substance: methyl methacrylate

NOEC Daphnia magna, OECD 202 part 2, flow through, 21 d 37 mg/l

Related to substance: methyl methacrylate

EC50 Daphnia magna, OECD 202 / ISO 6341 / 84/449/EEC V, C2, 48 h 17,5 mg/l

Related to substance: 2-ethylhexyl acrylate

Algae toxicity:	EC3 Scenedesmus quadricauda, cell proliferation inhibition test, 8 d	37 mg/l
	Related to substance: methyl methacrylate	
Bacteria toxicity:	EC0 Pseudomonas putida	100 mg/l
	Related to substance: methyl methacrylate	

SECTION 13 – DISPOSAL CONSIDERATIONS

Procedures

Waste must be disposed of in accordance with federal, state and local regulations. Incineration is the preferred method. Empty containers must be handled with care due to product residue. DO NOT HEAT OR CUT THE EMPTY CONTAINER WITH ELECTRIC OR GAS TORCH.

Do not reuse containers.

WASTE DISPOSAL: ADD 1% B.P.O. POWDER SPREAD OUT NOT MORE THAN 3 CM. THICK, LANDFILL WHEN HARD.

SECTION 14 – TRANSPORT INFORMATION

US DOT Hazard Classification

Proper Shipping Name:	RESIN SOLUTION, flammable
Hazard Class:	3
ID/UN Number:	UN 1866
Packing Group:	II
ERG:	127

Canadian TDG Classification

Refer to the classification US DOT

Shipment by sea IMDG/GGVSee

Class 3	EmS 3-05	UN number 1866
Marine pollutant	Packed (+/0): 0	
Packaging group	II	
Proper Shipping Name	RESIN SOLUTION, flammable	
Hazardous constituent:	methyl methacrylate	

Air transport ICAO/IATA

Class 3	UN number 1866
Packaging Group	II
Proper Shipping Name	RESIN SOLUTION, flammable

SECTION 15 – REGULATORY INFORMATION

Labelling in accordance with Canadian Transportation of Dangerous Goods Regulations

Hazardous component(s) for labelling

Contains methyl methacrylate
2-ethylhexyl acrylate

SECTION 16 – OTHER INFORMATION

Miscellaneous Information: THE PRODUCT IS NORMALLY SUPPLIED IN A STABILIZED FORM. IF THE PERMISSIBLE STORAGE PERIOD AND/OR STORAGE TEMPERATURE IS EXCEEDED, THE PRODUCT MAY POLYMERIZE WITH HEAT EVOLUTION.

References: RELEVANT MANUALS AND PUBLICATIONS
OWN EXAMINATIONS
TOXICOLOGICAL AND ECOTOXICOLOGICAL STUDIES OF OTHER MANUFACTURERS

PREPARED BY: LAFRENTZ ROAD MARKING, A Division of Canadian Road Builders Inc. –
Production Department

DATE: December 1, 2018

PHONE NUMBER: (780) 962-7800

Notice

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